



Charter Schools Institute  
State University of New York

# OUR WORLD NEIGHBORHOOD CHARTER SCHOOL

**FINAL CHARTERED AGREEMENT**

Sec. 2852(5) Submission to the Board of Regents

VOLUME 1 OF 9

**REDACTED COPY**

# OUR WORLD NEIGHBORHOOD CHARTER SCHOOL

Section 2852(5) Submission to the Board of Regents

## FIRST AMENDMENT TO THE CHARTER

This agreement is executed on this the 16<sup>th</sup> day of March, 2001 by and between the undersigned to amend the charter agreement between them entered onto on or about the 1<sup>st</sup> day of February, 2001.

### WITNESSETH:

**WHEREAS**, the undersigned have previously entered into an agreement, known before its issuance by the Board of Regents (the "Regents") as a proposed charter, and known thereafter as a provisional charter (either as a proposed or provisional charter, the "Charter"), pursuant to the provisions of the New York Charter Schools Act of 1998, Article 56 of the Education Law (the "Act"); and

**WHEREAS**, the Charter incorporates the Application submitted earlier to the Board of Trustees of the State University of New York, such that the Application is an integral part of the Charter; and

**WHEREAS**, pursuant to section 2852, subdivision 5 of the Act, the Charter, with the Application, was submitted to the Regents for its review and approval; and

**WHEREAS**, the State Education Department, in its review of the Charter for the Regents, has recommended certain changes be made to the Charter and/or the Application; and

**WHEREAS**, the undersigned are in agreement that some or all of such changes should be adopted; and

**WHEREAS**, the Charter requires that all amendments to it be in a writing signed by both parties thereto;

**NOW, THEREFORE**, the undersigned hereby agree to amend the Charter as follows:

1. Paragraph 1.4 is amended by adding the italicized sentence set forth below immediately after the last sentence of such paragraph:

*The Trustees will provide the Regents with a copy of any New Information it receives and any statement described by this paragraph within 5 days of the receipt of such New Information or the issuance of such statement.*

2. The Application is amended in the form and manner as set forth in the pages attached hereto as Exhibit A.

Capitalized terms used in this amendment are defined as set forth in the Charter unless otherwise indicated, as is the use and validity of facsimile signatures and the execution of this amendment to the Charter by counterpart.

BOARD OF TRUSTEES OF THE  
STATE UNIVERSITY OF NEW YORK

4

Robert J. Bellafiore 3/16/01  
Date

By: Robert J. Bellafiore, acting for the Board of  
Trustees of the State University of New York

Title: President, Charter Schools Institute,  
State University of New York

OUR WORLD NEIGHBORHOOD CHARTER SCHOOL

Lisa Caballero 3/6/01  
Date

By: Lisa Caballero

Title: Applicant

Michael Buonasora 3/7/01  
Date

By: Michael Buonasora

Title: Applicant

Mary Huner Bogle 3/3/01 Dana Cotton 3/8/01  
Date Date

By: Mary Huner Bogle

Title: Applicant

By: Dana Cotton

Title: Applicant

*D. Galacatos* 3/8/01  
Date

By: Dora Galacatos

Title: Applicant

*Tammy Kao* March 7, 2001  
Date

By: Tammy Kao

Title: Applicant

*Anastasia Marcis* 3/8/01  
Date

By: Anastasia Marcis

Title: Applicant

\_\_\_\_\_ Date

By: Yuri Ono

Title: Applicant

*Yuri Ono* March 7, 2001  
Date

By: Lauren Garay Vicuna *Lauren Garay Vicuna* March 7, 2001

Title: Applicant

# Exhibit A

74 NORTH PEARL STREET, 4<sup>TH</sup> FLOOR  
ALBANY, NEW YORK 12207  
PHONE: 518-433-8277  
FAX: 518-427-6510  
www.newyorkcharters.org

ROBERT J. BELLAFIORE  
PRESIDENT

March 13, 2001

**VIA FACSIMILE AND FEDERAL EXPRESS**

Shelia Evans-Tranumn  
Associate Commissioner  
New York State Education Department  
NYC School and Community Services  
55 Hanson Place, Suite 400  
Brooklyn, New York 11217

APR 20 2001

Dear Ms. Evans-Tranumn:

Please find enclosed the responses to the Department's request for information, dated March 12, 2001 from the applicants for the following proposed schools: Our World Neighborhood Charter School, RiverView Academy Charter School and The Icahn Charter School. The applicants for Family Life Academy Charter School informed this office that they sent their responses directly to your office. We were also informed by the applicants for Family Life that they would forward to you the addendum to the response on March 14, 2001.

Should you have any questions or concerns please do not hesitate to contact my office.  
Thank you.

Sincerely,



Robert J. Bellafiore  
President

RJB/jes

Enclosures

8

**THE STATE EDUCATION DEPARTMENT / THE UNIVERSITY OF THE STATE OF NEW YORK / ALBANY, NY 12234**

Office for Elementary, Middle, Secondary and Continuing Education  
Office of New York City School and Community Services

Office of the Associate Commissioner  
55 Hanson Place, Brooklyn New York 11217  
Telephone: (718) 722-2796  
Fax: (718) 722-4559

1. Item 7 requested that the applicant cite how curriculum is aligned, by grade level, with State learning standards. The applicant submitted curriculum only for a few content areas and for Grades K-5 instead of K-8. Alignment was provided with Bloom's Taxonomy, National Standards and the ITBS. The applicant's submission of March 6, 2001 was not responsive to the request. Please show how the curriculum will be aligned with the New York State Learning Standards.

The alignment of the OWN Charter School curriculum for Mathematics, English Language Arts, Science & Technology and Social Studies is detailed in the appendices as described below:

Subject Area	Appendix	Level
Mathematics	A	Elementary
English Language Arts	B	Elementary
Science & Technology	C	Elementary
Social Studies	D	Elementary
Mathematics	E	Intermediate
English Language Arts	F	Intermediate
Science	G	Intermediate
Social Studies	H	Intermediate

2. Applicant response to item#13 needs clarification in one area referred to on p. 14 - math and science curriculum and materials for grades 6-8.

The Math curriculum for grades 6-8 is described in Appendix E and the Science curriculum for grades 6-8 in Appendix G. The OWN Charter School will use Impact Mathematics by Everyday Learning and SciencePlus by Holt, Rinehart and Winston. In addition, these materials will be supplemented with Compass Learning, an integrated computer-based learning system that provides additional skill building as well as enrichment programs based on individual student need.

3. In the second to last paragraph, in response to item 25, we recommend changing the phrase "authorized employees" to "school officials with legitimate educational interests."

Although the Board of OWN Charter School can only speculate on the number of students it will be serving with specific types of disabilities, it hopes to use the following guideline for determining when the school will provide a given service, when the school

will turn to the school district for the service and when a outside service provider will be engaged. OWN Charter School will ensure that whoever provides special education services is properly licensed and/or certified. References to providing services according to a student's disability will be deleted.

OWN will ensure sufficient staffing to meet the unpredictable and changing needs of our special education population. As part of start-up activities, OWN Charter School will reach out to Nellie R. Korb, the Chairperson of District 30's Committee on Special Education (CSE) to ensure a good working relationship with the district. The CAO/principal shall personally monitor the School's compliance with all IEPs and designate one key staff person to serve as the liaison to the district's CSE.

The school will employ a full-time, certified Special Education teacher, a full-time licensed Social Worker/Counselor and a full-time licensed School Nurse (in addition to a Basic Skills and certified ESL/ELL teacher.)

<b>Types of Services</b>	<b>Who Will Provide</b>
- Audiology Services	School District
- Counseling Services	OWN Charter School
- Early identification and assessment of disabilities in children	OWN Charter School
- Medical Services	School District
- Occupational Therapy	School District
- Orientation and Mobility Services	School District
- Physical Therapy	School District
- Psychological Services	School District/OWN
- Recreation	OWN Charter School
- Rehabilitation Counseling Services	School District
- School Health Services	OWN Charter School
- Social Work Services in Schools	OWN Charter School
- Speech/Language Pathology Services	School district
- Transportation	Contracted service

Parents/guardians of students with disabilities will be advised of student progress through parent conferences, report cards, updated personalized learning plans and via grade updates that will be provided via "back pack express" just as parents/guardians of students

without disabilities. These communications will occur periodically throughout the school year as noted below:

<u>Parent Conferences</u> – required meetings in which the student's progress is discussed and samples of work provided	Every 13 weeks
<u>Report Cards</u> – distributed at the parent conference (only mailed home on exception basis)	Every 13 weeks
<u>Personalized Learning Plans</u> – either mailed home, given to parent or guardian when child is picked up, or sent home via back pack	Every 4 weeks
<u>Grade Updates</u> – although not specific to the achievement of a an individual child, provides parents and guardians with curriculum updates	Every 2 to 3 weeks
<u>Paragon Night Performances</u> - the culminating event that after each Paragon unit that allows parents and guardians to see student portfolios and performances and provides for informal conversations between teachers and parents/guardians	8 times a year

In addition, OWN charter school will strive to include parents/guardians of students with disabilities throughout the process. Specifically, the meetings involving discussion of the needs of individual student will disabilities will be scheduled so that parents/guardians will be able to attend. These at which parents/guardians will be involved include:

the initial review and discussion about the individual student with the Home Study Team as OWN charter school recognizes that the parent/guardian knows the child better than anyone  
 each monthly meeting with District 30's Committee on Special Education when their child's IEP is being developed and/or progress discussed. Once again, OWN charter school believes that the school and the family must be working in concert to have maximum impact on the child's development and, therefore, will strive to ensure that both parents/guardians are in attendance at this meeting so that their understanding of the child and his/her needs are discussed as a critical input to the development of the IEP.

the monthly personalized learning plan will also provide valuable information to parents/guardians as to how the student is progressing in meeting academic goals in each subject as well as achieving goals that are unique to their special needs.

Also, the Parent Satisfaction Survey that OWN charter school intends to use asks specific questions for parents/guardians of students with special needs. Parents/guardians are asked how they felt about: their degree of involvement in the development of the IEP, the extent to which their opinions have helped shape the special services their child is receiving, communication with the school and Special Education teacher, and the progress being made in carrying out the special education plan for their child. Although this survey is confidential, parents/guardians are provided with the opportunity to give their name and phone number if they want the CAO/Principal or another individual to contact them to discuss their comments.

Personal information about a child with a disability may not be released without written parental consent unless it is:

Given to school officials or teachers with a legitimate educational interest, State and local educational authorities, or certain individuals designated under Federal Law.

Used to meet a requirement under Federal Law

Personal information includes the following:

The name of the child and the names of family members

The home address of the child

Personally identifiable information such as the child's social security number or description of the child

The school will keep a record of who has looked at the child's educational records. The record will include the person's name, the date permission was given, and the reason the person asked for the records. However, the school does not need to keep these records for school officials with legitimate educational interests.

Each student with a disability will be assigned an identification number for purposes of internal record keeping. A special education database will be used for ISIS reports.

For details on discipline for students with disabilities, see question #21 above.

4. In the second paragraph, in response to item 22(b), please change the last sentence to read "The Principal shall personally monitor..."

CAO is the acronym for Chief Administrative Officer. At Our World Neighborhood Charter School the Principal will be called the CAO. We use CAO/Principal as a convenience to others who may not be familiar with our nomenclature.

5. In response to item 25, on page 28, the proposed charter school must ensure that whoever provides special education services is properly licensed and/or certified. Please modify.

See #3 above for our amended response to item 25.

6. There is a discrepancy in the response to item 25. Please clarify the statement on page 30, "The chairperson of the CSE will serve...." and the last statement in item 22, second paragraph, page 26, "...and designate one staff person to serve as the liaison to the district's CSE."

See #3 above for our amended response to item 25.

7. In the third paragraph of the response to item 25, on page 31, the language that states "...keep these records for authorized employees" should be changed to read "... keep these records for legitimate employees. Please modify.

There is a discrepancy between your suggested rewordings of this sentence as indicated in #3 and #7. We are amenable to either rewording, and have chosen the one suggested in item 3.

See #3 above for our amended response to item 25.

8. "With respect to your response to item 29, under the FERPA regulations, the disclosure may only be to "school officials." Upon further consideration of the issue, SED has concluded that an MEI employee may be a "school official." Thus, please revise page 16 of the second amendments to read:

"Parents/guardians and eligible students will be provided their right to consent to any disclosures of personally identifiable information contained in a student's educational record, except if the disclosure is to school officials who need the information for legitimate and sound educational reasons. OWN Charter School considers such "school officials" to be one or more of the following: the CAO/Principal, the student's classroom teacher/paraprofessional, a learning specialist/therapist, the school nurse, Board member, Board attorney, and designated MEI employees. Furthermore, a school official must be fulfilling his/her professional responsibility to have a legitimate educational interest to review a student's educational record. In its annual notification required by the FERPA regulations, OWN Charter School will specify criteria for determining who constitutes a school official and what constitutes

a legitimate educational interest as required by 34 CFR 99.7  
(a)(3)(iii).

We agree that designated MEI employees be considered "school officials" in this context and accept this amendment to item 16 of second amendments.

9. In response to item 35, on page 34, it was stated that OWN would delete the last sentence in the second to last paragraph on page 309 of the charter, which states, "OWN will work with the district CSE..." However, the sentence still appears in the revised document on page 27. Please note that the proposed charter school will have no part in reviewing or revising a student's IEP. This is the sole responsibility of the CSE.

The last sentence stating "OWN will work with the district CSE..." has been deleted from our response to item 22 of the previous RFA. We understand that OWN may have no part in reviewing or revising a student's IEP. The response to item 22 is reprinted:

Methods And Strategies For Educating Students With Disabilities In Compliance  
With Applicable Federal Laws And Regulations

A. Philosophy and Approach

OWN Charter School's admissions philosophy welcomes children of diverse backgrounds and all abilities. Our admission criteria will not discriminate on the basis of race, socio-economic status, gender, national origin, religion, English language proficiency, special education needs, disability, intellectual ability, or academic achievement. Based on recent District statistics, we expect approximately 5 to 8 percent of children to require special education assessment and/or services.

According to the Board of Education 1998-1999 Annual School Report, in 1999 in School District 30:

- 5.6% of special education students received resource room, consultant teacher, and related services;
- 4.3% or 1222 special education students received instruction in self-contained classes; and
- staff made initial referrals for special education services for 3.2% of district students.

We believe in maximizing inclusion of all children and placing them in the least restricted environment (LRE) possible. Inclusion and LRE policies help all students learn actively and collaboratively. While inclusion creates opportunities conducive to positive self-identification for struggling students, all children benefit from learning with peers of differing talents. The MEI model is particularly suited to inclusion and LRE. The SchoolHouse arrangement with

its smaller, more intimate schools within a school makes inclusion more workable by allowing a team of educators to know the dynamics of individual class groups and their member students over long periods of time. In addition, Paragon's interdisciplinary curriculum capitalizes on children's "multiple intelligences"—teaching cultural literacy experientially. OWN'S rich, integrated use of technology provides us with yet another opportunity to tailor our school-wide program to students' unique skills and interests. The integrated high-tech/humanities approach helps students to realize their full potential, whether their needs are traditionally categorized as "at-risk," "disabled," "ESL," or "gifted and talented." Students who need additional and/or separate special education services, however, will receive them as needed.

#### B. Staffing and Training Related to Special Education Services

Pre- and in-service training for all teachers will cover successful inclusion strategies to ensure all children truly learn in their diverse classrooms. More specifically, trainers will focus on how best to address children's learning difficulties with for example basic reading (including comprehension), writing, math, critical thinking, and oral expression in the general classroom. Training will address ways in which to integrate special instruction into the class-wide curriculum. Training will also emphasize the importance of early detection, referral, assessment, and appropriate services for children with special educational needs and review all procedures and requirements associated with IEPs.

OWN will ensure sufficient staffing to meet the unpredictable and changing needs of our special education population. As part of start-up activities, OWN Charter School will reach out to Nellie R. Korb, the Chairperson of District 30's Committee on Special Education (CSE) to ensure a good working relationship with the district. The CAO/principal shall personally monitor the School's compliance with all IEPs and designate one key staff person to serve as the liaison to the district's CSE.

The professionals and other relevant service providers who know and work with special-needs students on a regular basis will employ a formalized team approach to ensure that each special-need child's educational goals are met, consistent with the child's IEP. This formalized team approach will involve the child's family to the greatest extent possible and provide regular reports to the child's family.

OWN Charter School will fully comply with federal laws and regulations governing children with disabilities, particularly the Individuals with Disabilities Education Act (IDEA) and meet the standards and guidelines established by the U.S. and New York State Charter School Law. OWN will avail itself of the exemption from complying in large part with Article 89 of the Education Law and Parts 100 and 200 of the Commissioner's regulations.

OWN's special education and regular education programs will represent equal partners among free, appropriate education offerings at the school. Faculty and support staff will work together to meet the challenges of providing all students with an appropriate education in the least restrictive environment. As detailed in the budget, OWN will employ

in year one a full-time, certified Special Education teacher, a Social Worker/Counselor and paraprofessionals and/or aides as needed to meet students' IEP requirements. Contracted professionals such as occupational and physical therapists and speech-language pathologists will support the special education program. These individuals will work collegially with regular classroom teachers, the social worker/counselor, the school nurse and building administrators to promote the success of students with special needs.

OWN Charter School will contact District 30 as soon as we know the complete enrollment list at the school so that we can identify any students who have been previously classified and recommended for special education services. (In addition, for any students who enroll in OWN from outside District 30, a similar contact will be made to the appropriate district.)

Given that it is our understanding that the evaluation and the development of the IEP is the district's responsibility, OWN will proactively work with District 30's Committee on Special Education to access these IEPs and consult with those most knowledgeable about the individual students involved so that the key people at OWN have a solid understanding of the child's needs and the progress that has been made to date.

The following individuals from OWN will attend these reviews with the district CSE: the CAO, the student's primary teacher, the Special Education teacher and, at times, the Social Worker as well as the LEP/ELL teachers. Also, wherever appropriate the student and a contractor of specific services would attend. (Note: The primary teacher will be relieved from classroom responsibilities so that he/she will be able to attend these meetings.) Together with the district CSE, this team will review the current IEP and provide comments about the student's progress and an opinion on whether the recommendation remains the same, or if the revisions to the IEP are needed.

This OWN team will consult with the district CSE on a regular basis regarding the progress of any students with an IEP.

10. Please provide all of the assurances (2 – 4) that were requested in item 48: The proposed charter makes a number of references to before and after school programs and child care (e.g. pp. 30, 37, 38; First Amendment pp. 302; Second Amendment p. 14). Provide an assurance that any charter school programs will be consistent with the following principles a charter school corporation is not authorized to provide before or after school child care; (2) a charter school corporation may arrange to have an outside entity, including a management company, provide before and/or after school child care if such entity is licensed by the Department of Social Services, has the corporate authority to provide such services, and the fee for the child care is not paid by the charter school; (3) a charter school corporation may provide tutoring to its students, but may not charge a fee for such tutoring; (4) an outside agency, including a management company, may provide tutoring services to charter school students, but charter school students may not be charged any fee for any tutoring that is an essential component of the charter school's program.

Our World Neighborhood Charter School realizes that charter schools are not authorized to provide before or after school child care. OWN Charter School will apply for grants and private funding to provide before and after school programs to be offered to all OWN Charter School students, free of charge. The programs will include tutoring and study time for homework assignments, as needed, as well as other activities. OWN will not charge students a fee for these programs.

If an outside agency provides tutoring services, OWN students will not be charged a fee for any tutoring that is an essential component of the charter school's program.

OWN understands that a charter school corporation may arrange to have an outside entity, including a management company, provide before and/or after school child care, if such entity is licensed by the Department of Social Services, and has the corporate authority to provide such services. If such an arrangement is entered, OWN Charter School will not pay a fee for any child care provided by the entity.

11. A response was not provided for item 54, please respond: Page 422 of the proposed charter states that judicial and quasi-judicial proceedings, and deliberations of political conferences and caucuses, need not be discussed at open meetings because such discussions are exempted by the Open Meetings Law. This misinterprets the law. Open Meetings Law Section 108 provides that the Open Meetings Law does not apply to judicial and quasi-judicial proceedings, and deliberations of political conferences and caucuses. This does not mean that discussions of such matters at Board meetings are exempt from the Open Meetings Law. Accordingly these provisions should be deleted.

**Mathematics Alignment to New York State Learning Standards**  
**Elementary Level**

**Standard #1 Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions.**

**A. Mathematical Analysis**

**1. Abstraction and symbolic representation are used to communicate mathematically.**

**Students:**

- **use special mathematical notation and symbolism to communicate in mathematics and to compare and describe quantities, express relationships, and relate mathematics to their immediate environments.**

- a) Identify written numbers from 0 to 31 (K)
- b) Select and write the correct numeral to indicate a quantity from 0 to 9 (K)
- c) Identify ordinal positions from first to fifth using concrete objects (K)
- d) Identify one more and one less for numbers from 1 to 9 (K)
- e) Recognize and correctly use the + and - signs, and understand the meaning of adding to and taking away from (K)
- f) Tell time to the hour using analog and digital clocks (K)
- g) Know the days of the week and the months of the year in order (K)
- h) Recognize a penny, nickel, dime, quarter and one dollar bill (K)
- i) Identify the dollar sign and cents sign, and write amounts to 9 cents using the cents sign (K)
- j) Identify, describe, and make basic plane figures — square, rectangle, triangle, circle — and identify them in a variety of common objects, regardless of their orientation (K)
- k) Read and write numbers from 0 through 100 (1)
- l) Identify one dozen and one pair (1)
- m) Use the symbols  $<$ ,  $>$ , and  $=$  to compare two sets or pictures of sets of up to 12 objects and two numbers from 0 to 100 (1)

- n) Associate temperature in degrees Fahrenheit with weather (1)
- o) Know the days of the week and the months of the year, both in order and out of sequence (1)
- p) Tell time to the half-hour, using an analog and digital clocks (1)
- q) Recognize and use dollars and cents signs (1)
- r) Write two- and three-digit numbers in expanded form (such as writing  $500 + 60 + 7$  for 567) (2)
- s) Count with tally marks in groups of 5 (2)
- t) Compare two whole numbers between 0 and 1,000, using symbols and words ( $>$ ,  $<$ , or  $=$ , “greater than,” “less than,” or “equal to”) (2)
- u) Identify one more, one less, ten more, ten less, one hundred more, and one hundred less than a given number (solution in the range 0 to 1,000) (2)
- v) Recognize the multiplication sign, know what the terms factor and product mean in multiplication, and understand that multiplication represents repeated addition (2)
- w) Use the symbols  $<$ ,  $>$ , and  $=$  to compare two sets or pictures of sets of up to 12 objects and two numbers from 0 to 1,000 (2)
- x) Know abbreviations: ft, in, cm (2)
- y) Know abbreviations: lb., kg (2)
- z) Measure and record temperature in degrees Fahrenheit (to the nearest 2 degrees) (2)
- aa) Tell and write time to the quarter hour, using analog and digital clocks (2)
- ba) Use a.m. and p.m.; noon and midnight (2)
- ca) Write the date using words and numbers, and only numbers (2-3)
- da) Read and write amounts of money using dollar and cents signs and the decimal point (2)
- ea) Use names for lines and line segments (for example, line AB; segment CD) (2)
- fa) Read and write numbers from 0 to 999,999 with digits and words (3)
- ga) Write numbers in expanded form to 999,999 (3)

- ha) Compare two whole numbers between 0 and 999,999, using symbols ( $>$ ,  $<$ , or  $=$ ) and words (“greater than,” “less than,” or “equal to”). (3)
- ia) Know the meaning of dividend, divisor, and quotient (3)
- ja) Identify the remainders in division problems (3)
- ka) Identify perfect squares to 100 and recognize the squared exponent (3)
- la) Compare fractions with like denominators, using the signs  $<$ ,  $>$ , and  $=$  (3)
- ma) Know abbreviations: lb., oz, g, kg (3)
- na) Measure and record temperature in degrees Fahrenheit and Celsius (3)
- oa) Know the degree sign (3)
- pa) Read a clock face and tell time to the minute, tell time in terms of both minutes before and minutes after the hour, and use a.m. and p.m. (3)
- qa) Write amounts of money using dollar and cents signs, and the decimal point (3)
- ra) Read and write positive numbers to 999,999,999. (4)
- sa) Write numbers in expanded form to 999,999,999.(4)
- ta) Compare two whole numbers between 0 and 999,999,999, using symbols ( $>$ ,  $<$ , or  $=$ ) and words (“greater than,” “less than,” or “equal to”). (4)
- ua) Compare the value of two decimals through thousandths using the symbols  $>$ ,  $<$ , and  $=$  (4)
- va) Compare fractions with like and unlike denominators of 12 or less, using the signs  $<$ ,  $>$ , and  $=$  (4-5)
- wa) Add and subtract with fractions having like and unlike denominators of 12 or less (4)
- xa) Compare the value of two negative or positive decimals through ten-thousandths using the symbols  $>$ ,  $<$ , or  $=$  (By End of Grade 5)
- ya) Compare fractions with like and unlike denominators, using the signs  $<$ ,  $>$ , and  $=$  (By End of Grade 5)
- za) Determine and express simple ratios (By End of Grade 5)

**2. Deductive and inductive reasoning are used to reach mathematical conclusions.**

**Students:**

- **use simple logical reasoning to develop conclusions, recognizing that patterns and relationships present in the environment assist them in reaching these conclusions.**
  - a) Sort a set of objects based on one attribute (size, shape, color, and quantity), identify the common property of the elements of a set, and identify the item that does not belong in a given set when all other items share a common property (K)
  - b) Sort concrete objects according to two attributes (such as color and shape) (1)
  - c) Classify objects by size, color, or other significant characteristic (K-2)
  - d) Identify, describe, and extend a simple repeating pattern found in common objects and pictures (such as increasing size, alternating colors, etc) (K)
  - e) Identify the common property of the elements of a set (including function), select matching additions to the set, and identify the item that does not belong in a set (1)
  - f) Extend a given pattern, using concrete materials and tables and solve problems involving pattern identification and completion of patterns (4-5)

### 3. **Critical thinking skills are used in the solution of mathematical problems.**

#### **Students:**

- **explore and solve problems generated from school, home, and community situations, using concrete objects or manipulative materials when possible.**
  - a) Use discussions with teachers and other students to understand problem solving approaches (2-5)
  - b) Use a variety of strategies to understand problem situations (e.g., discussing with peers, stating problems in own words, modeling the problem with diagrams or physical objects, identifying a pattern) (3-5)
  - c) Know that some ways of expressing a problem are more helpful than others (3-5)
  - d) Use trial and error and the process of elimination to solve problems (3-5)

**Standard #3. Students will understand mathematics and become mathematically confident by communicating and reasoning mathematically, by applying mathematics in real-world settings, and by solving problems through the integrated study of number systems, geometry, algebra, data analysis, probability, and trigonometry.**

**1. Students use mathematical reasoning to analyze mathematical situations, make conjectures, gather evidence, and construct an argument.**

**Students:**

- **Use models, facts, and relationships to draw conclusions about mathematics and explain their thinking.**
  - a) Compare and sort objects according to attributes such as size and shape (K)
  - b) Compare objects using at least two categories at a time (1)
  - c) Understand statements that use 'and' and 'or' (3-4)
  - d) Make an organized list or table of information necessary for solving a problem (K-5)
  - b) Draw pictures, charts and graphs to describe problems and forge a solution (K-5)
- **Use patterns and relationships to analyze mathematical situations.**
  - a) Begin to recognize a number sequence (K)
  - b) Sequence events in time (before vs. after, first vs. last) (K)
  - c) Indicate the ordered position of each of three items in an ordered set from left-to-right, right-to-left, top-to-bottom, and bottom-to-top using both physical objects and pictures (K)
  - d) Recognize and create patterns of numbers that add up to a specific sum. (1)
  - e) Understand the relationships between numbers in a sequence/series and be able to predict the next number in the grouping (3-5)
  - f) Know how to solve a word problem that describes distance relationships between three or more people or objects (3-5)
- **Justify their answers and solution processes.**
  - a) Explain answers through language, pictures or manipulative materials (k)
  - b) Use pictures and spoken language to explain an answer (1)
  - c) Use pictorial representation, logical reasoning, oral and written language to communicate understanding of mathematical ideas (2-5)
  - d) Analyze how others have approached the same (or a different) problem and determine if the approach was sound (2-5)
- **Use logical reasoning to reach simple conclusions.**
  - a) Provide a coherent answer (though not necessarily a convincing one) when asked to explain how he/she arrived at an answer (K-1)

- b) Use manipulative materials, diagrams, charts, tables and number lines to help solve problems
  - c) Identify missing information in a problem
2. **Students use number sense and numeration to develop an understanding of the multiple uses of numbers in the real world, the use of numbers to communicate mathematically, and the use of numbers in the development of mathematical ideas.**

**Students:**

- **Use whole numbers and fractions to identify locations, quantify groups of objects, and measure distances.**
  - a) Count out loud (k)
  - b) Understand place value of numbers up to 100 (1)
  - c) Compare the size of groups of objects using one- to- one correspondence (1)
  - d) Know ordinal numbers (1)
  - e) Identify the part of a set and/or region that represents one-half, one-third, one-fourth, one-eighth, and one-tenth and write the corresponding fraction (2)
  - f) Read and write whole number to hundred millions (4)
- **Use concrete materials to model numbers and number relationships for whole numbers and common fractions, including decimal fractions.**
  - a) Divide a set of 2, 4, 6, or 8 concrete objects into two equal halves (K)
  - b) Compare two sets of 10 or fewer concrete items to identify one as containing more, less, or the same as the other set. (K)
  - c) Explore fractions using real objects (1)
  - d) Group concrete objects by ones and tens and recognize place values for ones, tens and hundreds (1)
  - e) Identify the ordinal positions first through tenth using concrete objects and pictures (1)
  - f) Identify one half, one third, and one fourth using concrete materials or pictures, and divide concrete object sets to 12 into equal halves, thirds, and fourths (1)
  - g) Skip count by 2's, 5's and 10's (2)

- g) Compare the volumes of two given containers by using concrete materials (e.g., jelly beans, sand, water, and rice) (1)
- h) Count and report the value of a set of pennies, nickels, or dimes whose total value is up to 100 cents (1)
- i) Identify the number of pennies equivalent to a nickel, a dime, and a quarter (1)
- j) Show different combinations of coins that equal the same amount of money (1)
- k) Count, compare, and make change, using a collection of coins and one-dollar bills (2)
- l) Show different combinations of coins that equal the same amount of money (2)
- m) Add and subtract with decimals expressed as tenths, using concrete materials and paper and pencil (3)
- n) Identify fractions represented by drawings or concrete materials to ninths, and represent a given fraction using both concrete materials and symbols (3)
- o) Compare the numerical value of two fractions having like and unlike denominators, using concrete materials (3)
- p) Add and subtract with proper fractions having like denominators of 10 or less (3)
- q) Determine by counting the value of a collection of bills and coins up to \$5.00, compare the value of the coins or bills, and make change using as few coins as possible (3)
- r) Add and subtract with decimals through thousandths (4)
- s) Solve problems involving making change in amounts up to \$100.00 (4)
- t) Relate fractions to decimals, using concrete objects (4)
- u) Identify prime numbers less than 50 (By End of Grade 5)
- v) Determine the greatest common factor and the least common multiple of given numbers (By End of Grade 5)
- w) Add and subtract decimals through ten-thousandths (By End of Grade 5)

- x) Determine the least common denominator (LCD) of fractions with unlike denominators (By End of Grade 5)
- y) Add and subtract with fractions and mixed numerals (with like and unlike denominators), with and without regrouping, and express answers in simplest form (By End of Grade 5)
- **Relate counting to grouping and to place-value.**
  - a) Using counting, explore the cardinal number of a set of materials (K)
  - b) Recognize relative value of penny, nickel, dime, quarter, and dollar (2)
  - c) Understand the meaning of zero in the place value system (1-2)
  - d) Recognize the meaning of each digit in a three-digit number (2)
  - e) Regroup (2)
  - f) Identify, orally and in writing, the place value for each digit in a whole number expressed through hundred-millions (4)
  - g) Identify place value of decimals to thousandths (4)
  - h) Plot pairs of points on a coordinate grid using positive whole numbers (4)
  - i) Read and write decimals on a number line (4)
- **Recognize the order of whole numbers and commonly used fractions and decimals.**
  - a) Count in various ways including counting objects up to 12, counting by ones up to thirty-one and backwards from ten, counting by fives and tens to 50 and by twos up to ten (2 to 10 and 1 to 9) (K)
  - b) Develop the concept of first, last and middle (K)
  - c) Count forward and backward in the range from 0 to 1,000 (1-2)
  - d) Use words to describe order such as 'first', 'last', 'middle' (1-2)
  - e) Order whole numbers to millions (3-4)
  - f) Order fractions with denominators 2,3,4,5,6,7,10 and 12 (3-4)
  - g) Order decimals to thousandths (4)
- **Demonstrate the concept of ratio and percent through problems related to actual situations.**
  - a) Recognize the percent sign and understand percent as per hundred (3)

- b) Use percents that are multiples of 5 (4)
- c) Explore the concept of ration in real-world situations (4)

**3. Students use mathematical operations and relationships among them to understand mathematics.**

**Students:**

- **Add, subtract, multiply, and divide whole numbers.**
  - a) Add and subtract whole numbers using up to 10 manipulative materials or other concrete items (K)
  - b) Add 3 single digit numbers with pencil and paper (1)
  - c) Add and subtract two-digit numbers without regrouping (1) and with regrouping (2)
  - d) Develop strategies for mental arithmetic such as doubles, doubles plus one and number families (2)
  - e) Multiply single digit numbers by 0, 1, 2, and 10 (2)
  - f) Complete addition problems with and without regrouping (up to 10,000) of any two whole numbers, and the corresponding subtraction problems (3)
  - g) Add and subtract numbers of any size (3)
  - h) Know multiplication facts to  $12 \times 12$  (3)
  - i) Multiply, by 10, 100, and 1,000 mentally (3)
  - j) Multiply two whole numbers, with and without regrouping, in which one factor is 9 or less and the other is a multi-digit number up to three digits (3)
  - k) Multiply three-digit numbers by two-digit numbers (3)
  - l) Divide two- and three-digit dividends by one-digit divisors (3)
  - m) Divide three-digit numbers by one-digit numbers without remainders (4)
  - n) Multiply two three-digit numbers (4)
  - o) Multiply mentally by 10, 100, 1,000, and 10,000 (4)
  - p) Solve multiplication and division problems with money (3-4)

- q) Solve multiplication and division equations in the form of  $\_\_\_ \times 9 = 63$ ;  
 $81 \div \_\_\_ = 9$  (4)
- r) Multiply two factors of up to four digits each (By end of Grade 5)
- s) Know what it means for one number to be divisible by another (By end of Grade 5)
- t) Divide dividends up to four-digits by one-digit, two-digit, and three-digit divisors (By end of Grade 5)
- u) Move the decimal point when dividing by 10, 100, or 1,000 (By end of Grade 5)
- **Develop strategies for selecting the appropriate computational and operational method in problem-solving situations.**
    - a) Use manipulative materials, pictures and number lines to represent and solve problems (1-2)
    - b) Solve story and picture problems involving one-step solutions, using basic addition and subtraction facts (1)
    - c) Round a whole number, 999 or less, to the nearest ten and hundred (3)
    - d) Use mental computation strategies to simplify addition and subtraction problems (3)
    - e) Use diagrams, charts and tables to understand problems (3-4)
    - f) Use open sentences to represent problems (3-4)
    - g) Look for patterns and break problems into parts (3-4)
    - h) Round decimals (and decimal quotients) to the nearest tenth; to the nearest hundredth; to the nearest thousandth (By End of Grade 5)
    - i) Solve division problems with remainders by rounding a decimal quotient (By End of Grade 5)
    - j) Multiply mixed numbers and fractions (By End of Grade 5)
    - k) Solve problems on speed as a ratio, using the formula  $S = d / t$  (or  $D = r \times t$ ) (By End of Grade 5)
    - l) Convert to common units of measurement in problems involving addition and subtraction of different units (By end of Grade 5)
    - m) Determine an amount of elapsed time in hours and minutes to 24 hours, including crossing noon or midnight (By end of Grade 5)

- **Know single digit addition, subtraction, multiplication, and division facts.**
  - a) Count on (K)
  - b) Recall basic addition facts, sums to 18 or less, and subtraction facts with differences 0-9 (1-2)
  - c) Explore the meaning of multiplication and division using sets (2)
  - d) Recall basic addition and subtraction facts quickly (not just reconstruct them) (3)
  - e) Know multiplication facts up to  $12 \times 12$  (3)
  - f) Know basic division facts to 144 by 12 (3-4)
  - g) Know that you cannot divide by 0 (3)
  - h) Know that any number divided by 1 equals the original number (3)
  - i) Understand the inverse relationship of multiplication and division (4)
- **Understand the commutative and associative properties.**
  - a) Explore how the cardinal number of a set of objects remains unchanged no matter how the components are arranged (K)
  - b) Identify the commutative and associative properties for addition, and the commutative, associative, and distributive properties for multiplication (by end of Grade 5)
  - c) Illustrate an understanding of the commutative and associative properties by usage and identifying examples and counter examples. For example,  $6 \times 4$  is the same as  $4 \times 6$  (By end of Grade 5)
- 4. **Students use mathematical modeling/multiple representation to provide a means of presenting, interpreting, communicating, and connecting mathematical information and relationships.**

**Students:**

- **Use concrete materials to model spatial relationships.**
  - a) Using blocks or other materials, develop an understanding of the positions of top, middle, inside and outside (K)
  - b) Make designs using congruent and non-congruent shapes (1-2)
  - c) Use materials to explore the properties of plane figures and solid figures (vertices, edges, etc.) (3)

- **Construct tables, charts, and graphs to display and analyze real-world data.**
  - a) Organize information into simple graphs using manipulative materials (e.g. blocks, cut-outs) (K)
  - b) Interpret simple pictorial graphs (1)
  - c) Record information with tally marks (1)
  - d) Plot pairs of points on a coordinate grid using positive whole numbers (4)
  - e) Draw a bar graph, line graph and pictograph to describe and display information (3-5)
  - f) Use ratios to create a simple scale drawing (4-5)
  - g) Identify the ordered pair for a point and locate the point for an ordered pair in the first quadrant of a coordinate plane (5)
  - h) Create data summaries in graphic form (i.e., bar, line and circle graphs) using classroom/school materials (3-5)
  - i) Solve problems requiring interpretive and application of graphically displayed data (3-5)
  - j) Draw conclusions from graphs (3-5)
- **Use multiple representations (simulations, manipulative materials, pictures, and diagrams) as tools to explain the operation of everyday procedures.**
  - a) Compare dimensions of objects using correct vocabulary (e.g. shorter than) (1-2)
  - b) Compare the volume of two different containers by using the concrete materials (e.g., jelly beans, Sand water and rice) (1)
  - c) Determine the perimeter, area and volume of shapes and solids by counting units (3-4)
  - d) Determine the circumference of a circle by using string (3-4)
- **Use variables such as height, weight, and hand size to predict changes over time.**
  - a) Measure and graph students' height at various times during the year and discuss how the rankings may change (K-2)
  - b) Compare temperature over time (3-4)

- **Use physical materials, pictures, and diagrams to explain mathematical ideas and processes and to demonstrate geometric concepts.**
  - a) Order objects according to size (K)
  - b) Name shapes (circle, rectangle, square, triangle) and locate them in the environment (K)
  - b) Identify solid figures: sphere, cube, pyramid, cone, cylinder and associate solid figures with planar shapes: sphere (circle), cube (square), pyramid (triangle) (2)
  - c) Identify a line of symmetry and create simple symmetric figures using concrete materials. (2)
  - d) Define the term vertex (plural: vertices) and identify them (3)
  - e) Identify sides of a polygon as line segments (3)
  - f) Identify a regular pentagon, hexagon, and octagon (3)
  - g) Identify right angles and know there are four in a square or rectangle (3)
  - h) Identify and draw representations of line segments and angles, using a ruler or straightedge (3)
  - i) Identify and draw points, segments, rays, lines (4)
  - j) Identify and draw lines -- horizontal, vertical, perpendicular, parallel, and intersecting — and angles — right, acute, and obtuse (4)
  - k) Identify polygons — triangle, quadrilateral, pentagon, hexagon, octagon (regular), parallelogram, trapezoid, rectangle, square — and identify and draw diagonals of quadrilaterals (4)
  - l) Identify the radius (plural: radii) and diameter of a circle and know that radius is half of the diameter (4)
  - m) Measure angles in degrees and know the meaning of right angle, acute angle, obtuse angle, and straight angle (By end of Grade 5)
  - n) Identify and construct different kinds of triangles -- equilateral, right, and isosceles (By end of Grade 5)
  - o) Define what it means for triangles to be congruent (Bye end of Grade 5)
  - p) Know that regular polygons have sides of equal length and angles of equal measure (By end of Grade 5)

- q) Identify and draw diagonals of polygons (By end of Grade 5)
- r) Work with circles to identify arc, chord, radius and diameter (By end of Grade 5)

**5. Students use measurement in both metric and English measure to provide a major link between the abstractions of mathematics and the real world in order to describe and compare objects and data.**

**Students:**

- **Understand that measurement is approximate, never exact**
  - a) Develop an understanding of the need for standard units of measure (1-2)
  - b) Make quantitative estimates of familiar linear dimensions, weights, and time intervals and check them against measurements (3-5)
  - c) Understand that measurement may give slightly different numbers when measured multiple times (3-5)
- **Select appropriate standard and nonstandard measurement tools in measurement activities.**
  - a) Estimate and measure length, weight, and volume of two- and three-dimensional figures in the classroom and at home using standard and non-standard measurement tools (K)
  - b) Measure and draw line segments in inches and centimeters (1)
  - c) Translate time between analog and digital clocks (1-2)
  - d) Use a balance scale (1-2)
  - e) Measure and draw line segments in inches (to  $\frac{1}{4}$  inch), and in centimeters (to 1 cm) (3)
  - f) Identify situations representing the use of perimeter and use measuring devices to find perimeter in both standard and nonstandard units of measure (4)
  - g) Choose an appropriate measuring device and unit of measure to solve problems involving measurement of length in parts of an inch, inches, feet, yards, miles, millimeters, centimeters, meters, and kilometers; weight/mass in ounces, pounds, tons, grams, and kilograms; liquid volume in cups, pints, quarts, gallons, milliliters, and liters; area in square units of length; and temperature in degrees Celsius and Fahrenheit (By end of Grade 5)
  - g) Use a compass, draw circles with a given diameter or radius (By end of Grade 5)

- h) Use specific strategies to estimate quantities and measurements (e.g., estimate the whole by estimating its parts) (3-5)
- **Understand the attributes of area, length, capacity, weight, volume, time, temperature, and angle.**
  - a) Use correct terms to make quantitative comparisons (e.g. lighter, heavier, taller, shorter) (K-2)
  - b) Know that one foot = 12 inches (2)
  - c) Compare U.S. and metric liquid volumes: quart and liter (one liter is a little more than one quart) (2-3)
  - d) Know that one yard = 36 inches = 3 feet; 1 meter = 100 centimeters; 1 meter is a little more than one yard (3)
  - e) Know that 1 quart = 2 pints; 1 gallon = 4 quarts (3)
  - f) Identify freezing point of water in Fahrenheit and Celsius (3)
  - g) Identify equivalent periods of time, including relationships among days, months, and years, as well as minutes and hours (3)
  - h) Compute area of rectangles in square inches and square centimeters using repeated addition and simple multiplication (3)
  - i) Know the following equivalents among U. S. customary units of measurement, and solve problems involving changing units of measurement: 1 ft = 12 in., 1 yd = 3 ft = 36 in., 1 mi. = 5,280 ft, 1 mi. = 1,760 yd, 1 lb. = 16 oz, 1 ton = 2,000 lb., 1 cup = 8 fl oz, 1 pt = 2 c, 1 qt = 2 pt, 1 gal = 4 qt (4)
  - j) Know the following equivalents among metric units of measurement, and solve problems involving changing units of measurement: 1 cm = 10 mm, 1 m = 1,000 mm, 1 m = 100 cm, 1 km = 1,000 m, 1 cg = 10 mg, 1 g = 1,000 mg, 1 g = 100 cg, 1 kg = 1,000 g, 1 cl = 10 ml, 1 liter = 1,000 ml, 1 liter = 100 cl (4)
  - k) Compute the area of a rectangle and solve problems involving finding area in a variety of square units (mi.; yd; ft; in; km; m; cm; mm) (4)
  - l) Explore the connection between factors and multiplication facts and area and volume (3-4)
  - m) Compute volume of rectangular prisms in cubic units (cm, in) (4)
  - n) Determine the perimeter of a polygon and the area of a square, rectangle, and triangle, given the appropriate measures (By End of Grade 5)

- o) Identify right angles and know that there are four in a square or rectangle (4)
- **Estimate and find measures such as length, perimeter, area, and volume using both nonstandard and standard units.**
  - a) Measure objects using non-standard units (K-1)
  - b) Estimate and measure length in inches and weight in pounds (1)
  - c) Estimate and measure volume in cups and identify a cup, a quart and a gallon (1)
  - d) Estimate and measure volumes in cups, pints, quarts, gallons and liters, compare these volumes using the concepts of more, less, and equivalent (2)
  - e) Estimate and measure weight in pounds and kilograms (2)
  - f) Measure perimeters in inches of squares and rectangles (2)
  - g) Estimate and measure liquid volume in cups, pints, quarts, gallons, and liters (3)
  - h) Estimate and measure weight in pounds and ounces; grams and kilograms (3)
  - i) Estimate and make linear measurements in yards, in feet and inches (to  $\frac{1}{16}$  in.), and in meters, centimeters, and millimeters (By end of Grade 5)
  - j) Identify the diameter, radius, chord, and circumference of a circle (By end of Grade 5)
  - k) Differentiate between area and perimeter and identify whether the application of the concept of perimeter or area is appropriate for a given problem (By end of Grade 5)
  - l) Find the circumference of a circle using the formulas  $C = \pi d$ , and  $C = 2\pi r$ , using 3.14 as the value of  $\pi$  (By end of Grade 5)
  - m) Find the area of a rectangle, triangle, and parallelogram in a variety of square units (mi., yd, ft, in, km, m, cm, mm) (By end of Grade 5)
  - n) Find the area of an irregular polygon by dividing it into regular figures (By end of Grade 5)
  - o) Compute volume and surface area of a rectangular prism (By end of Grade 5)

- **Collect and display data.**
    - a) Gather information to understand rankings (e.g., the number of times cookies were served at lunch vs. apples for a month) and plot bar graph/line graph or pie chart adding information daily, as appropriate (K-3)
    - b) Determine classroom preferences and performance (e.g., number of library books read) via class-based graphs designed and updated by students (2-5)
  - **Use statistical methods such as graphs, tables, and charts to interpret data.**
    - a) Use concrete materials to develop the concept of average (3-4)
    - b) Find the range and mean in a collection of data (4)
6. **Students use ideas of uncertainty to illustrate that mathematics involves more than exactness when dealing with everyday situations.**

**Students:**

- **Make estimates to compare to actual results of both formal and informal measurement.**
  - a) Estimate and then count the number of square units needed to cover a given surface using grid paper (2)
  - b) Estimate and then count the number of cubes in a rectangular box (2)
  - c) Round number using number lines and measuring instruments (3-4)
  - d) Estimate before measuring (3-4)
- **Make estimates to compare to actual results of computations.**
  - a) Estimate or predict the outcomes of problems/experiments, complete the task, and compare the results with the prediction (4-5)
- **Recognize situations where only an estimate is required.**
  - a) Participate in activities that require anticipating outcomes (K)
  - b) Know if the following problem requires an exact answer, for example: Your school has 317 girls and 289 boys. A family friend asks how many students attend your school. (4)
  - c) Know if the following problem requires an exact answer, for example: Suppose you saved \$15.00 to purchase a school jacket. The jacket costs \$39.95. How much more must you save to get the jacket? (4)
  - d) Discuss real-world examples of when estimates would be acceptable (4)

- **Develop a wide variety of estimation skills and strategies.**
  - a) Practice estimating (guessing) sizes and outcomes of experiments (color of a jelly bean pulled from a jar) (K-2)
  - b) Estimate conversion between ounces and grams, pounds and kilograms, inches and centimeters, yards and meters, miles and kilometers, and quarts and liters (4)
  - c) Use a variety of strategies for estimating addition, subtraction, multiplication and division (3-4)
  - d) Use strategies to estimate measurements (3-4)
- **Determine the reasonableness of results.**
  - a) Predict the outcome of an event such as tossing a coin (1)
  - b) Discuss the certainty or uncertainty of an event (1-2)
  - c) Use a reasonableness test to determine if a student could purchase popcorn and a soda after buying a movie ticket with his two-week allowance. (3)
  - d) Know if the following answer is reasonable: Sally purchased juice boxes in six-packs for her sister's birthday party. If she paid \$2.29 per six pack, did she need to spend \$50 for a party for six girls?
- **Predict experimental probabilities.**
  - a) Use spinners in games (K)
  - b) Predict probabilities for experiments with coins and dice. For example, know how to predict the number of times that the number 6 appears when a die is tossed 60 times. After the experiment, compare the result to the mathematical probability. (4)
- **Make predictions using unbiased random samples.**
  - a) Estimate the number of people attending a rally by using a photo and determining the number of attendees in a small random segment of the photo and then estimating the size of the entire crowd
- **Determine probabilities of simple events.**
  - a) Perform experiments with three or more likely outcomes, using language such as 'one chance in three' (1-2)
  - b) Know the mathematical probability of tossing an even number with a single die (3)
  - c) Know the mathematical probability of landing on a number less than four on a spinner with the numbers 1, 2, 3, and 4. (4)
  - d) Find the mathematical probability of getting two numbers that match when you toss two dice. (4)

- e) Find the probabilities of simple events (4)
  - f) Use tree diagrams to count the possible outcomes of an events (5)
  - g) Estimate the probability of an event based on sample data (5)
7. **Students use patterns and functions to develop mathematical power, appreciate the true beauty of mathematics, and construct generalizations that describe patterns simply and efficiently.**

**Students:**

- **Recognize, describe, extend, and create a wide variety of patterns.**
  - a) Recognize, describe, and extend a wide variety of patterns, including size, color, shape, and quantity, including increasing, decreasing and repeating patterns with concrete materials and pictures (K-1)
  - b) Make congruent shapes and designs (2)
  - c) Identify odd and even numbers (2)
  - d) Identify, create, and extend a wide variety of patterns using symbols and objects (2)
  - e) Identify multiples of a given number and common multiples of two given numbers (4)
  - f) Identify factors of a given number and common factors of two given numbers (4)
  - g) Recognize similar and congruent figures (4)
  - h) Extend a given pattern, using concrete materials and tables and solve problems involving pattern identification and completion of patterns (4)
  - i) Describe and extend numerical and geometric patterns, including triangular numbers, perfect squares, patterns formed by powers of 10, and arithmetic sequences (By end of Grade 5)
- **Represent and describe mathematical relationships.**
  - a) Understand the concept of a set, using synonyms such as group (K)
  - b) Count to 15; read and write number through 10 (K)
  - c) Use the symbols  $>$ ,  $<$  and  $=$  to order numbers (2)
  - d) Understand the relative magnitude of whole numbers, fractions, decimals and mixed numbers (4)

- e) Use a number line to order and compare numbers, including negative numbers (4)
- f) Identify the ordered pair for a point and locate the point for an ordered pair in the first quadrant of a coordinate plane
- **Explore and express relationships using variables and open sentences.**
  - a) Know the basic whole number relationships (e.g.,  $4 < 10$ ,  $30 = 3$  tens) (2)
  - b) Can solve simple addition and subtraction equations with a variable in any position (e.g.,  $4 + 5 = \underline{\quad}$ ;  $9 - \underline{\quad} = 5$ ;  $\underline{\quad} - 4 = 5$ ) (1)
  - c) Recognize and use the inverse relationship between addition and subtraction to solve problems such as  $4 + \underline{\quad} = 7$  and  $7 - \underline{\quad} = 4$  (2)
  - d) Solve problems with more than one operation such as  $(72 \div 9) \times (144 \div 12) = \underline{\quad}$  (4)
- **Solve for an unknown using manipulative materials.**
  - a) Use counters to solve open sentences (such as  $3 + \underline{\quad} = 10$ ) (1)
  - b) Use counters to demonstrate the commutative and associative properties of addition (1-2)
- **Use a variety of manipulative materials and technologies to explore patterns.**
  - a) Observe, create and describe patterns from pattern blocks, tiles, puzzles and other materials (K)
  - b) Sort concrete objects according to two attributes (such as color and shape) (1)
  - c) Recognize and describe patterns formed using concrete objects, tables, and pictures and extend and reproduce the pattern (3)
  - d) Solve problems involving pattern identification and completion of patterns (4)
  - e) Explain various patterns in drum rhythms (4)
- **Interpret graphs.**
  - a) Know how to access information from a table to make simple comparisons (3)
  - b) Determine if the temperature is with the normal range from the newspaper's bar graph of daily temperature ranges (4)
  - c) Hypothesize about the peaks and valleys in a line graph of daily spending on a family driving vacation to visit grandparents. (4)
- **Explore and develop relationships among two- and three-dimensional geometric shapes.**
  - a) Identify, describe and sort basic solid figures: sphere, cube, cone (1)

- b) Draw and describe triangles, squares, rectangles, and circles according to number of sides, corners, and square corners (1)
  - c) Identify and describe a cube, rectangular solid, sphere, cylinder, and cone, according to the number and shape of faces, edges, bases, and corners. (2)
  - d) Identify the shape of faces and edges in plane and solid geometric figures (square, rectangle, triangle, cube, rectangular solid, and cylinder) (3)
  - e) Identify and describe congruent and symmetrical two-dimensional figures (3)
  - f) Know how to find the area and perimeter of a rectangle and the volume of a cube (4)
- **Discover patterns in nature, art, music, and literature.**
    - a) Describe objects in the environment containing triangles, rectangles, squares, and circles (1)
    - b) Identify which objects in nature are symmetrical and point out the line of symmetry in each (3)
    - c) Determine if there are different polygon shapes used in tile designs in the school's bathroom or kitchen. Or at home. (4)
    - d) Understand the patterns used in the rhythms of a poem (5)

**English Language Arts Alignment to New York State Learning Standards****Elementary Level**

**Standard 1:** Students will read, write, listen, and speak for information and understanding. As listeners and readers, students will collect data, facts, and ideas; discover relationships, concepts, and generalizations; and use knowledge generated from oral, written, and electronically produced texts. As speakers and writers, they will use oral and written language to acquire, interpret, apply, and transmit information.

1. **Listening and reading to acquire information and understanding involves collecting data, facts, and ideas; discovering relationships, concepts, and generalizations; and using knowledge from oral, written, and electronic sources.**

**Students:**

- **gather and interpret information from children's reference books, magazines, textbooks, electronic bulletin boards, audio and media presentations, oral interviews, and from such forms as charts, graphs, maps, and diagrams**
  - a) Hold print materials in the correct position. (K)
  - b) Identify the front cover, back cover, and title page of a book. (K)
  - c) Follow words from left to right and top to bottom on a printed page. (K)
  - d) Match voice with print, associating oral phonemes, syllables, words, and phrases with their written forms. (K)
  - e) Retell familiar stories using beginning, middle, and end. (K)
  - f) Use story language in discussions and retellings. (K)
  - g) Explore the uses of available technology for reading and writing. (K)
  - h) Set a purpose for reading. (1-3)
  - i) Tell and retell stories and events in logical order. (1)
  - j) Read from left to right and top to bottom. (1)
  - k) Match spoken words with print. (1)
  - l) Retell stories and events, using beginning, middle, and end. (1)
  - m) Use a picture dictionary to find meanings of unfamiliar words. (1)
  - n) Paraphrase information found in nonfiction materials. (2)
  - o) Locate information to answer questions. (2)
  - p) Use a table of contents. (2)
  - q) Use dictionaries and indices. (2)
  - r) Use dictionaries, encyclopedias, and other reference books. (3)
  - s) Use videos, interviews, and cassette recordings. (3)
  - t) Use available technology to collect, process and present information. (3-4)

- u) Use word-reference materials including the glossary, dictionary, and thesaurus. (4-5)
  - v) Collect information, using a variety of print and electronic resources. (4)
  - w) Use dictionary, encyclopedia glossary, thesaurus, and other reference materials. (5)
  - x) Use available electronic databases to access information. (5)
  - y) Use keywords, indices, cross-references, and letters on volumes to find information for research topics.
- **select information appropriate to the purpose of their investigation and relate ideas from one text to another**
    - a) Generates questions about topics of personal interest (K)
    - b) Examine pictures and charts. (2)
    - c) Use information to learn about new topics. (3)
    - d) Develop a plan for writing. (3)
    - e) Use a variety of planning strategies. (3)
    - f) Construct questions about a topic. (4)
    - g) Evaluate and synthesize information for use in writing. (4)
    - h) Uses a variety of strategies to identify topics to investigate (e.g., brainstorm, lists questions, uses idea webs) (3-5)
  - **select and use strategies they have been taught for note-taking, organizing, and categorizing information**
    - a) Generate ideas before writing. (1-2)
    - b) Use available technology. (1-2)
    - c) Organize information according to the type of writing. (3)
    - d) Organize information for clarity. (4)
    - e) Use text organizers such as type, headings, and graphics to predict and categorize information. (4-5)
    - f) Prioritize information according to purpose of reading. (5)
    - g) Develop notes that include important concepts, paraphrases, summaries, and identification of information sources. (5)
    - h) Credit secondary reference sources. (5)
  - **ask specific questions to clarify and extend meaning**
    - a) Ask about words not understood. (K)
    - b) Begin to ask how and why questions. (K)
    - c) Begin to ask for clarification and explanation of words and ideas. (1)
    - d) Ask and answer questions about what is read. (1-3)
    - e) Formulate questions that might be answered in the selection. (4)
  - **make appropriate and effective use of strategies to construct meaning from print, such as prior knowledge about a subject, structural and context clues, and an understanding of letter-sound relationships to decode difficult words**
    - a) Use pictures to make predictions about story content. (K)

- b) Use beginning and ending consonants in decoding single-syllable words. (1)
  - c) Use vowel sounds in decoding single-syllable words. (1)
  - d) Blend beginning, middle, and ending sounds to recognize and read words. (1)
  - e) Use knowledge of the story and topic to read words. (1)
  - f) Reread and self-correct. (1-3)
  - g) Use knowledge of sentence structure to read words. (1)
  - h) Preview the selection. (1-2)
  - i) Read with accuracy and self-correct when necessary. (1-2)
  - j) Relate previous experiences to what is read. (1-3)
  - k) Make predictions about content. (1)
  - l) Use knowledge of consonants and consonant blends in words. (2)
  - m) Use knowledge of common vowel patterns. (2)
  - n) Use pictures and diagrams. (2)
  - o) Use information in the story to read words. (2)
  - p) Use titles and headings. (2)
  - q) Use knowledge of prefixes and suffixes. (2)
  - r) Use knowledge of contractions and singular possessives. (2)
  - s) Use knowledge of simple abbreviations. (2)
  - t) Use knowledge of sentence structure. (2)
  - u) Use knowledge of story structure and sequence. (2)
  - v) Use pictures, phonics, meaning clues, and language structure. (2)
  - w) Read to confirm predictions. (2)
  - x) Preview and use text formats. (3)
  - y) Apply meaning clues, language structure, and phonetic strategies. (3)
  - z) Make, confirm, or revise predictions. (3)
  - aa) Explain how knowledge of the lives and experiences of individuals in history can relate to individuals who have similar goals or face similar challenges. (4)
  - bb) Use knowledge of root words, prefixes, and suffixes. (5)
- **support inferences about information and ideas with reference to text features, such as vocabulary and organizational patterns**
    - a) Participate in discussions about learning. (K)
    - b) Use pictures to make predictions about story content. (K)
    - c) Retell familiar stories using beginning, middle and end. (K-1)
    - d) Talk about characters, setting and events. (K)
    - e) Use story language in retellings and discussion. (K)
    - f) Identify what an author does and what an illustrator does. (K)
    - g) Relate previous experiences to what is read. (1-2)
    - h) Make predictions about content. (1)
    - i) Ask and answer questions about what is read. (1-3)
    - j) Identify characters and setting. (1)
    - k) Identify the theme or main ideas. (1)
    - l) Read to confirm predictions. (2)

- m) Locate information to answer questions. (2)
- n) Paraphrase from non-fiction. (2)
- o) Describe characters and setting in fiction selections and poetry. (2)
- p) Explain the problem, solution or central idea. (2)
- q) Make connections between previous experiences and reading selections (3)
- r) Make, confirm or revise predictions. (3)
- s) Compare and contrast settings, characters and events. (3)
- t) Use text organizers such as type, headings, and graphics to predict and categorize information. (4)
- u) Formulate questions that might be answered in the selection. (4)
- v) Make inferences using information from texts. (4)
- w) Paraphrase content of selection, identifying important ideas and providing details for each important idea. (4)
- x) Describe relationship between content and previously learned concepts or skills. (4)
- y) Use text organizers such as type, headings, and graphics to predict and categorize information in information texts. (5)
- z) Locate information to support opinions, predictions and conclusions. (5)
- aa) Rank order information according to purpose of reading.

**2. Speaking and writing to acquire and transmit information requires asking probing and clarifying questions, interpreting information in one's own words, applying information from one context to another, and presenting the information and interpretation clearly, concisely, and comprehensibly.**

**Students:**

- **present information clearly in a variety of oral and written forms such as summaries, paraphrases, brief reports, stories, posters, and charts**
  - a) The student will write stories, poems, letters, picture books, and informational reports. (2)
  - b) Use appropriate volume and pitch. (3)
  - c) Speak at an understandable rate. (3)
  - d) Organize ideas sequentially or around major points of information. (3)
  - e) Use clear and specific vocabulary to communicate ideas. (3)
  - f) Group related ideas. (3)
  - g) Include descriptive details that elaborate the central idea. (3)
  - h) Organize information to present reports of group activities. (5)
  - i) Summarize information gathered within group activities. (5)
  - j) Organize and record information on charts, maps, and graphs. (5)
- **select a focus, organization, and point of view for oral and written presentations**
  - a) Focus on one topic. (1)
  - b) Focus on a central idea. (3)

- c) Use text organizers such as type, headings and graphics to predict and categorize information (4-5)
- d) Choose planning strategies for various writing purposes. (5)
- e) Organize information. (5)
- **use a few traditional structures for conveying information such as chronological order, cause and effect, and similarity and difference**
  - a) Use number words. (K)
  - b) Identifies the similarities and differences among persons, places, things and events using concrete criteria. (K)
  - c) Writes with a logical sequence. (1)
  - d) Describes and compares things in terms of number, shape, texture, size, weight, color, motion, sound and behavior. (1-2)
  - e) Identify and use synonyms and antonyms in oral communication. (2)
  - f) Organize writing to include a beginning, middle, and end. (2)
  - g) Compare and contrast settings, characters, and events. (3)
  - h) Organize information or events logically. (3)
  - i) Compare and contrast the characters described in two folk tales. (3)
  - j) Compare and contrast the lives of two persons as described in biographies and/or autobiographies. (3)
  - k) Identify cause-and-effect relationships. (5)
- **use details, examples, anecdotes, or personal experiences to explain or clarify information**
  - a) Use words to describe/name people, places, and things. (K)
  - b) Use words to describe location, size, color, and shape. (K)
  - c) Uses general, frequently used words to convey basic ideas. (K)
  - d) Use descriptive words when writing about people, places, things, and events to clarify and enhance ideas. (3-5)
- **include relevant information and exclude extraneous material**
  - a) Compiles information into written reports or summaries (3-5)
- **use the process of pre-writing, drafting, revising, and proofreading ( the "writing process") to produce well-constructed informational texts**
  - a) Pre-writing: Uses pre-writing strategies to plan written work (e.g., discusses ideas with peers, draws pictures to generate ideas, writes key thoughts and questions, rehearses ideas, records reactions and observations). (K-2)
  - b) Drafting and revising: Uses strategies to draft and revise written work (e.g., re-reads, rearranges words, sentences and paragraphs to improve or clarify meaning; varies sentence type; adds descriptive words and details; deletes extraneous information; incorporates suggestions from peers and teachers; sharpens the focus). (K-2)

- c) **Editing and publishing:** Uses strategies to edit and published written work (e.g., proofreads using a dictionary and other resources; edits for grammar, punctuation, capitalization and spelling at a developmentally appropriate level; incorporates illustrations or photos; shares finished product. (K-2)
- d) Evaluates own and others' writing (e.g., asks questions and makes comments about writing, helps classmates apply grammatical and mechanical conventions. (K-2)
- e) Dictates or writes with a logical sequence of events (e.g., includes a beginning, middle and ending). (K-2)
- f) Dictates or writes detailed descriptions of familiar persons, places, objects or experiences. (K-2)
- g) Writes in response to literature. (K-2)
- h) Writes in a variety of formats (e.g., picture books, letters, stories, poems, information pieces). (K-2)
- i) **Prewriting:** Uses prewriting strategies to plan written work (e.g., uses graphic organizers, story maps, and webs; groups related ideas; takes notes; brainstorms ideas). (3-5)
- j) **Drafting and revising:** Uses strategies to draft and revise written work (e.g., elaborates on a central idea; writes with attention to voice, audience, word choice, tone and imagery; uses paragraphs to develop separate ideas). (3-5)
- k) **Editing and Publishing:** Uses strategies to edit and publish written work (e.g., edits for grammar, punctuation, capitalization and spelling at a developmentally appropriate level; considers page format [paragraphs, margins, indentations, titles]; selects presentation format; incorporates photos, illustrations, charts and graphs). (3-5)
- l) Evaluates own and others' writing (e.g., identifies the best features of a piece of writing, determines how own writing achieves its purposes, asks for feedback, responds to classmates' writing). (3-5)
- m) Writes stories or essays that show awareness of intended audience. (3-5)
- n) Writes stories or essays that convey an intended purpose (e.g., to record ideas, to describe, to explain). (3-5)
- o) Writes expository compositions (e.g., identified and stays on the topic; develops the topic with simple facts, details, examples and explanations; excludes extraneous and inappropriate information). (3-5)
- p) Writes narrative accounts (e.g., engages the reader by establishing a context and otherwise developing reader interest; establishes a situation, plot, point of view, setting and conflict; creates an organizational structure that balances and unifies all narrative aspects of the story; uses sensory details and concrete language to develop plot and character; uses a range of strategies such as dialogue and tension or suspense). (3-5)

- q) Writes autobiographical compositions (e.g., expresses ideas, reflections and observations; uses an individual, authentic voice; uses narrative strategies, relevant details and ideas that enable the reader to imagine the world of the event or experience). (3-5)
  - r) Writes in response to literature (e.g., advances judgments; supports judgments with references to the text, other works, other authors, non-print media and personal knowledge. (3-5)
  - s) Writes personal letters (e.g., includes the date, address, greeting and closing; addresses envelopes. (3-5)
  - t) Uses available technology (1-3)
  - u) Writes with attention to voice, audience, word choice, tone, and imagery (4)
- **observe basic writing conventions, such as correct spelling, punctuation, and capitalization, as well as sentence and paragraph structures appropriate to written forms.**
    - a) Sort words orally according to shared beginning, ending, or medial sounds. (K)
    - b) Blend sounds orally to make words or syllables. (K)
    - c) Divide syllables orally into sounds (K)
    - d) Identify letters, words, and sentences. (1)
    - e) Blend sounds to make word parts and words with one to three syllables. (1)
    - f) Forms letters in print and spaces words and sentences. (K-2)
    - g) Uses declarative and interrogative sentences in written compositions (1-2)
    - h) Uses nouns, verbs, adjectives and adverbs in written compositions. (K-5)
    - i) Use complete sentences in final copies. (1)
    - j) Begin each sentence with a capital letter and use ending punctuation in final copies. (1)
    - k) Use conventions of spelling for frequently used words and phonetically regular words in final copies. (1-5)
    - l) Uses conventions of capitalization (1-5)
    - m) Uses conventions of punctuation (1-5)
    - n) Edit for grammar, punctuation, and spelling (1-4)
    - o) Form letters. (1)
    - p) Space words and sentences. (1)
    - q) The student will edit final copies for grammar, capitalization, punctuation, and spelling. (2-3)
    - r) Use knowledge of homophones. (3)
    - s) Uses paragraphs, indentations, margins, headings and titles. (4-5)
    - t) Uses exclamatory and imperative sentences in written compositions (3-5)
    - u) Uses pronouns in written composition. (3-5)
    - v) Uses coordinating conjunctions in written compositions.
    - w) Uses negatives in written composition.
    - x) Edit final copies for grammar, capitalization, spelling, and punctuation, especially the use of possessives and quotation marks. (5)

y) Uses paragraphs to distinguish ideas (5)

**Standard 2: Students will read, write, listen, and speak for literary response and expression. Students will read and listen to oral, written, and electronically produced texts and performances, relate texts and performances to their own lives, and develop an understanding of the diverse social, historical, and cultural dimensions the texts and performances represent. As speakers and writers, students will use oral and written language for self-expression and artistic creation.**

**1. Listening and reading for literary response involves comprehending, interpreting, and critiquing imaginative texts in every medium, drawing on personal experiences and knowledge to understand the text, and recognizing the social, historical and cultural features of the text.**

**Students:**

- **read a variety of literature of different genres: picture books; poems; articles and stories from children's magazines; fables, myths and legends; songs, plays and media productions; and works of fiction and nonfiction intended for young readers**
  - a) Listen to a variety of literary forms, including stories and poems. (K)
  - b) Participate in creative dramatics. (K)
  - c) Substitute words in a rhyming pattern. (K)
  - d) Selects interrelated characters, environments, and situations for simple dramatizations. (K-4)
  - e) Plans and records improvisations based on personal experience and heritage, imagination, literature and history. (K-4)
  - f) Compare the use of fact and fantasy in historical fiction with other forms of literature. (4)
- **recognize some features that distinguish the genres and use those features to aid comprehension**
  - a) Begin to discriminate between spoken words and sentences. (K)
  - b) Identify orally words that rhyme. (K)
  - c) Recognize rhyming words. (K)
  - d) Identify what an author does and what an illustrator does. (K)
  - e) Create rhyming words orally. (1)
  - f) Identify the characteristics of folk tales. (3)
  - g) Identify the characteristics of biographies and autobiographies. (3)
  - h) Describe the rhyme scheme (approximate, end, and internal). (4)
  - i) Describe character development in fiction and poetry selections. (5)
  - j) Describe the characteristics of free verse, rhymed, and patterned poetry. (5)

- **understand the literary elements of setting, character, plot, theme, and point of view and compare those features to other works and to their own lives**
    - a) Explain that printed materials provide information. (K)
    - b) Talk about characters, setting, and events. (K)
    - c) Identify characters and setting. (1)
    - d) Identify the theme or main ideas. (1)
    - e) Describe characters and setting in fiction selections and poetry. (2)
    - f) Explain the problem, solution, or central idea. (2)
    - g) Describe the development of plot, and explain how conflicts are resolved (5)
  - **use inference and deduction to understand the text**
    - a) Make inferences using information from texts. (4)
  - **read aloud accurately and fluently, using phonics and context cues to determine pronunciation and meaning**
    - a) Participate in choral speaking and recite short poems, rhymes, songs, and stories with repeated patterns. (K)
    - b) Use word patterns. (1)
    - c) The student will read familiar stories, poems, or passages with fluency and expression. (1)
    - d) Share stories or information orally with an audience. (2)
  - **evaluate literary merit**
    - a) Describe how author's choice of vocabulary and style contribute to the quality and enjoyment of selections. (5)
2. **Speaking and writing for literary response involves presenting interpretations, analyses, and reactions to the content and language of a text. Speaking and writing for literary expression involves producing imaginative texts that use language and text structures that are inventive and often multi-layered.**

**Students:**

- **present personal responses to literature that make reference to the plot, characters, ideas, vocabulary, and text structure**
  - a) Listen and respond to a variety of media, including books, audiotapes, videos, and other age-appropriate publications. (1)
  - b) Write about what is read. (1-5)
  - c) Use knowledge of less common vowel patterns. (3)
  - d) Describe how the choice of language, setting, and information contributes to the author's purpose. (4)

- e) Paraphrase content of selection, identifying important ideas and providing details for each important idea. (4)
- **explain the meaning of literary works with some attention to meanings beyond the literal level**
  - a) Explain the author's purpose. (4)
  - b) Identify the sensory words used and their effect on the reader. (4)
- **create their own stories, poems, and songs using the elements of the literature they have read and appropriate vocabulary**
  - a) Read and explain own writing and drawings. (K)
  - b) The student will draw pictures and/or use letters and phonetically spelled words to write about experiences, stories, people, objects, or events. (K)
  - c) Writes in a variety of formats (1)
  - d) Make a personal dictionary or word list to use in writing. (1)
  - e) Create oral stories to share with others. (2)
  - f) Create and participate in oral dramatic activities. (2)
  - g) Use declarative, interrogative, and exclamatory sentences. (2)
  - h) Write rhymed, unrhymed, and patterned poetry. (4)
- **observe the conventions of grammar and usage, spelling, and punctuation.**
  - a) Understand that letters represent sounds. (K)
  - b) Identify beginning consonants in single-syllable words. (K)
  - c) The student will identify both uppercase and lowercase letters of the alphabet. (K)
  - d) The student will print his/her name. (K)
  - e) Capitalize all proper nouns and words at the beginning of sentences. (2)
  - f) Use correct spelling for frequently used words. (2)
  - g) The student will write legibly in cursive. (3)
  - h) Use knowledge of word origins; synonyms, antonyms, and homonyms; and multiple meanings of words. (4)

**Standard 3: Students will read, write, listen, and speak for critical analysis and evaluation. As listeners and readers, students will analyze experiences, ideas, information, and issues presented by others using a variety of established criteria. As speakers and writers, they will present, in oral and written language and from a variety of perspectives, their opinions and judgments on experiences, ideas, information and issues.**

1. **Listening and reading to analyze and evaluate experiences, ideas, information, and issues requires using evaluative criteria from a variety of perspectives and recognizing the difference in evaluations based on different sets of criteria.**

**Students:**

- **read and form opinions about a variety of literary and informational texts and presentations, as well as persuasive texts such as advertisements, commercials, and letters to the editor**
  - a) Identify common signs and logos. (K)
  - b) Focus on one aspect of a topic. (4)
  - c) Develop a plan for writing. (4)
  - d) Organize writing to convey a central idea. (4)
  - e) Write several related paragraphs on the same topic. (4)
  - f) Utilize elements of style, including word choice, tone, voice, and sentence variation. (4)
  - g) Use available technology. (4)
  - h) Skim materials to develop a general overview of content or to locate specific information. (5)
  - i) Use a variety of literary genre such as fables, folk tales, historical fiction, modern fiction, science fiction, poetry, fantasy, adventure and mystery. (K-5)
  - j) Use elements of style unique to each genre as models for their own writing. (1-5)
- **make decisions about the quality and dependability of texts and experiences based on some criteria, such as the attractiveness of the illustrations and appeal of the characters in a picture book, or the logic and believability of the claims made in an advertisement**
  - a) Join in discussions about favorite authors, understanding that students use varying criteria in making these choices (1)
  - b) Evaluate newspaper articles and newspaper ads based on the sources used and/or claims made (4)

- **recognize that the criteria that one uses to analyze and evaluate anything depend on one's point of view and purpose for the analysis**
    - a) Understand that people are alike in many ways and different in others (K-2)
    - b) Know that two people can differ on how they view or assess a story or an idea because they have different perspectives or needs (3-5)
  - **evaluate their own strategies for reading and listening critically (such as recognizing bias or false claims, and understanding the difference between fact and opinion) and adjust those strategies to understand the experience more fully.**
    - a) Ask “how do you know” in appropriate situations and attempts to provide reasonable answers when others ask the same question. (K-2)
    - b) Provide coherent (though not necessarily valid or convincing) answers when asked why one believes something to be true or how one knows something. (K-2)
    - c) Attempt to verify work done by others. (3-5)
    - d) Distinguish between actual observations and ideas or conclusions about what was observed. (3-5)
3. **Speaking and writing for critical analysis and evaluation requires presenting opinions and judgments on experiences, ideas, information, and issues clearly, logically, and persuasively with reference to specific criteria on which the opinion or judgment is based.**

**Students:**

- **express opinions (in such forms as oral and written reviews, letters to the editor, essays, or persuasive speeches) about events, books, issues, and experiences, supporting their opinions with some evidence**
  - a. Understands that people are more likely to believe a person's ideas if that person can give good reasons for them. (K-2)
  - b. Keeps a notebook that describes observations made (3-5)
  - c. Uses facts from books, articles, and databases to support an argument
  - d. Begin to use evidence to support opinions. (4)
- **present arguments for certain views or actions with reference to specific criteria that support the argument (e. g., an argument to purchase a particular piece of playground equipment might be based on the criteria of safety, appeal to children, durability, and low cost.)**
  - a) Begin to use evidence to support opinions. (4)
  - b) Understands that changing one thing sometimes causes changes in something else and that changing the same thing in the same way usually has the same result. (K-2)

- c) Identifies basic informal fallacies, including appeals to authority, the use of statements such as “everybody knows,” and vague references such as “leading doctors say.” (3-5)
  - d) Understands that reasoning can be distorted by strong feelings. (3-5)
  - e) Analyzes arguments to determine if they are supported by facts from books, articles and databases. (3-5)
  - f) Raises questions about arguments that are based on the assertion that “everybody knows” or “I just know.” (3-5)
  - g) Seeks reasons for believing things other than the assertion that “everybody agrees.” (3-5)
  - h) Recognizes when a comparison is not fair because important characteristics are not the same. (3-5)
- **monitor and adjust their own oral and written presentations to meet criteria for competent performance (E. g., in writing, the criteria might include development of position, organization, appropriate vocabulary, mechanics, and neatness. In speaking, the criteria might include good content, effective delivery, diction, posture, poise, and eye contact.)**
    - a) Follow implicit rules for conversation (e.g., taking turns, staying on topic). (K-1)
    - b) Use voice level, phrasing, sentence structure, and intonation appropriate for language situation. (K-1)
    - c) Listen and speak in informal conversations with peers and adults. (K)
    - d) Initiate conversations. (K)
    - e) Participate in discussions about learning. (K)
    - f) Initiate conversations with peers and adults. (1)
    - g) Ask and respond to questions in small-group settings. (1)
    - h) Use oral language for different purposes: to inform, to persuade and to entertain. (2)
    - i) Share stories or information orally with an audience. (2)
    - j) Participate as a contributor and leader in a group. (2)
    - k) Paraphrase information shared orally by others. (2)
    - l) Listen attentively by making eye contact, facing the speaker, asking questions and paraphrasing what is said. (3)
    - m) Ask and respond to questions from teachers and other group members. (3)
    - n) Explain what has been learned. (3)
    - o) Present accurate directions to individuals and small groups. (4)
    - p) Contribute to group discussions. (4)
    - q) Seek the ideas and opinions of others. (4)
    - r) Begin to use evidence to support opinions. (4)
    - s) Maintain eye contact with listeners. (5)
    - t) Use gestures to support, accentuate, or dramatize verbal message. (5)
    - u) Use facial expressions to support or dramatize verbal message. (5)
    - v) Use posture appropriate for communication setting. (5)
    - w) Organize content sequentially or around major ideas. (5)

- x) Summarize main points before or after presentation. (5)
  - y) Incorporate visual aids to support the presentation. (5)
  - z) Use available technology to gather, process and present information. (5)
  - aa) Vary sentence structure. (5)
  - bb) Revise writing for clarity. (5)
- **use effective vocabulary and follow the rules of grammar, usage, spelling, and punctuation in persuasive writing.**
    - a) Edit for grammar, punctuation and spelling. (1-5)
    - b) Rearrange words or sentences. (1-5)
    - c) Write with a logical sequence. (1-5)
    - d) Form letters. (1)
    - e) Space words and sentences. (1)
    - f) Use declarative, interrogative and exclamatory sentences. (2)
    - g) Capitalize all proper nouns and words at the beginning of sentences. (2)
    - h) Use correct spelling for frequently used words. (2)
    - i) Revise writing for clarity. (3-5)
    - j) Use paragraphs, indentations, margins, headings and titles. (4)
    - k) Incorporate charts, illustrations, graphs or photos. (4)
    - l) Write with attention to voice, audience, word choice, tone and imagery. (4)
    - m) Organize information. (5)
    - n) Use vocabulary effectively. (5)
    - o) Vary sentence structure. (5)

**Standard 4: Students will read, write, listen, and speak for social interaction. Students will use oral and written language for effective social communication with a wide variety of people. As readers and listeners, they will use the social communications of others to enrich their understanding of people and their views.**

1. **Oral communication in formal and informal settings requires the ability to talk with people of different ages, genders, and cultures, to adapt presentations to different audiences, and to reflect on how talk varies in different situations.**

**Students:**

- **listen attentively and recognize when it is appropriate for them to speak**
  - a) Follow one and two-step directions. (K)
  - b) Give and follow simple two-step oral directions. (1)
  - c) Give and follow oral directions with three or four steps. (2)
  - d) Speak clearly. (3)
  - e) Contribute to group discussions. (4)
  - f) Listen to and record information. (4)

- **take turns speaking and respond to others' ideas in conversations on familiar topics**
  - a) Participate in a variety of oral language activities. (1)
  - b) Ask and respond to questions in small-group settings. (1)
  - c) Participate as a contributor and leader in a group. (2)
  - d) Paraphrase information shared orally by others. (2)
  - e) Listen attentively by making eye contact, facing the speaker, asking questions, and paraphrasing what is said. (3)
  - f) Ask and respond to questions from teachers and other group members. (3)
  - g) Explain what has been learned. (3)
  - h) Seek the ideas and opinions of others. (4)
  - i) Participate in and contribute to discussions across content areas. (5)
- **recognize the kind of interaction appropriate for different circumstances, such as story hour, group discussions, and one-on-one conversations.**
  - a) Follow implicit rules for conversation, (e.g., taking turns and staying on topic). (K)
  - b) Use voice level, phrasing, sentence structure, and intonation appropriate for language situation. (K)
  - c) Be able to express ideas orally in complete sentences. (1)
  - d) Follow rules for conversation. (1)
  - e) Use appropriate voice level in small-group settings. (1)
  - f) Use oral language for different purposes: to inform, to persuade, and to entertain. (2)

**2. Written communication for social interaction requires using written messages to establish, maintain, and enhance personal relationships with others.**

**Students:**

- **exchange friendly notes, cards, and letters with friends, relatives, and pen pals to keep in touch and to commemorate special occasions**
  - a) Communicate with a pen pal via the Internet (2)
  - b) Send invitations to parents, relatives and friends when performing in Paragon Night (K-5)
  - c) Send thank you notes to those who have helped the school (2-5)
  - d) Write the President, Senator or Congressman to express interest or concern about a topic (1-5)

- **adjust their vocabulary and style to take into account the nature of the relationship and the knowledge and interests of the person receiving the message**
  - a) Understands that people are alike in many ways and different in many ways. (K-2)
  - b) Knows that people can learn from each other in many ways (e.g., telling and listening, showing and watching, imitating) (K-2)
  - c) Understands that people can learn about others in many different ways (e.g., direct experience, mass communications, conversations with others about their work and lives.) (3-5)
  - d) Understands that the way a person views an incident reflects personal beliefs, experiences and attitudes. (3-5)
  - e) Understands that human beings can use the memory of their past experiences to make judgments about new situations. (3-5)
  - f) Understands that as roles vary depending on expectations and changing conditions (e.g., worker, parent, volunteer, student), behavior, attitudes, and goals change. (3-5)
  - g) Listen and speak in informal conversations with peers and adults. (K)
  - h) Initiate conversation with peers and adults. (1)
  - i) Use words that reflect a growing range of interests and knowledge. (2)
  - j) Use subject-related information and vocabulary. (4)
  - k) Determine appropriate content for audience. (5)
  - l) Writes with attention to voice, audience, word choice, tone, and imagery. (5)
  
- **read and discuss published letters, diaries, and journals to learn the conventions of social writing.**
  - a) Students write for a variety of purposes and projects. (K-5)
  - b) Daily assignments: journals (2-5)
  - c) Short-term assignments: letter writing, project proposals (few drafts) (3-5)
  - d) Long-term assignments (often 4 weeks): theme of World Culture in a historical context (narrative or expository) (3-5)

**Science and Technology Alignment to New York State Learning Standards****Elementary Level**

**Standard 6. Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions.**

**A. Scientific Inquiry**

- 1. The central purpose of scientific inquiry is to develop explanations of natural phenomena in a continuing, creative process.**

**Students:**

- **ask "why" questions in attempts to seek greater understanding concerning objects and events they have observed and heard about**
  - a) Know that scientific investigations involve asking and answering questions and comparing results. (K-5)
  - b) Know that scientists use different kinds of investigation depending on the questions they are trying to answer. (3-5)
  - c) Know how to formulate hypotheses in scientific exploration and discovery (3-5)
  - d) Plan, hypothesize, conduct investigations and restructure the experiment as new evidence is uncovered (4-5)
- **question the explanations they hear from others and read about, seeking clarification and comparing them with their own observations and understandings**
  - a) Know that scientific investigations generally work in the same way in different places and normally produce results that can be duplicated. (K-2)
  - b) Know that although the same scientific investigation may give slightly different results when it is carried out by different people, or at different times and places, the general information collected from the investigation should be replicable by others. (3-5)
- **develop relationships among observations to construct descriptions of objects and events and to form their own tentative explanations of what they have observed**
  - a) Review observations and measurements and discuss preliminary thoughts about the implications of these results (3-5)

2. **Beyond the use of reasoning and consensus, scientific inquiry involves the testing of proposed explanations involving the use of conventional techniques and procedures and usually requiring considerable ingenuity.**
  - **develop written plans for exploring phenomena or for evaluating explanations guided by questions or proposed explanations they have helped formulate**
    - a) With one or more partners, write the plan for conducting a scientific investigation including the process to be followed and the hypothesis that has been formulated. Record observations and preliminary conclusions on an ongoing basis. (3-5)
  - **share their research plans with others and revise them based on their suggestions**
    - a) Discuss the preliminary findings with team members and the implications for revising the hypothesis. Work to gain consensus. (3-5)
    - b) Prepare a formal report for the team to present to the class. Include initial nature of the investigation, discussion of methodology, initial hypothesis, summary of findings and final conclusion (3-5)
  - **carry out their plans for exploring phenomena through direct observation and through the use of simple instruments that permit measurements of quantities (e. g., length, mass, volume, temperature, and time)**
    - a) Know that learning can come from careful observations and simple experiments through actual experiences (e.g., watching the process through which a chrysalis transforms into a butterfly) (K-2)
    - b) Know that scientists plan and conduct investigations having been a “scientist in training” and by visiting scientists at museums (3-5)
3. **The observations made while testing proposed explanations, when analyzed using conventional and invented methods, provide new insights into phenomena**
  - **organize observations and measurements of objects and events through classification and the preparation of simple charts and tables**
    - a) During each scientific investigation, record observations in science journal including date and time observed. Note if observation varied from expectation (3-5)
  - **interpret organized observations and measurements, recognizing simple patterns, sequences, and relationships**
    - a) Understand through experience that scientific explanations are based upon evidence (4-5)

- b) Review observations and measurements and discuss preliminary thoughts about the implications of these results (3-5)
- **share their findings with others and actively seek their interpretations and ideas**
  - a) Know that it is helpful to work in a team and share findings with others (K-2)
  - b) Know that scientists often work in teams to accomplish tasks. (3-5)
  - c) Discuss different findings for the same investigation in small teams and with the entire class. Use this opportunity to have the team reach a consensus as to the implications of the findings and any potential changes to the methodology used in the investigation (3-5)
- **adjust their explanations and understandings of objects and events based on their findings and new ideas**
  - a) Know that scientific explanations are based upon evidence. (3)
  - b) Based on new understanding gained from patterns/relationships that developed from the observations, modify hypothesis if required. Also, reflect on new-found insights and ideas based on these conclusions (3-5)

## **B. Engineering Design**

1. **Engineering design is an iterative process involving modeling and optimization finding the best solution within given constraints which is used to develop technological solutions to problems within given constraints.**

**Students engage in the following steps in a design process:**

- **describe objects, imaginary or real, that might be modeled or made differently and suggest ways in which the objects can be changed, fixed, or improved.**
  - a) Know that objects occur in nature; but people can also design and make objects (e.g., to solve a problem, to improve the quality of life) (K-2)
  - b) Categorize items into groups of natural objects and designed objects (3-5)
- **investigate prior solutions and ideas from books, magazines, family, friends, neighbors, and community members.**
  - a) Develop hypotheses based on research (print and online) and based on a wide range of discussions (2-5)
  - b) When documenting potential hypotheses in science journal, note the sources for each insight used (3-5)
- **generate ideas for possible solutions, individually and through group activity; apply age-appropriate mathematics and science skills; evaluate**

**the ideas and determine the best solution; and explain reasons for the choices**

- a) Evaluate potential hypotheses. Consider the credibility of each source used (3-5)
- b) Decide on the final hypothesis that will be tested noting rationale in science journal (33-5)
- **plan and build, under supervision, a model of the solution using familiar materials, processes, and hand tools.**
- **discuss how best to test the solution; perform the test under teacher supervision; record and portray results through numerical and graphic means; discuss orally why things worked or didn't work; and summarize results in writing, suggesting ways to make the solution better.**
  - a) Design and model ideas for transporting all necessary schoolbooks and materials to and from home each day without undue strain for you or your family members (4-5)

**Standard 7. Students will access, generate, process, and transfer information using appropriate technologies.**

1. **Information technology is used to retrieve, process, and communicate information and as a tool to enhance learning.**

**Students:**

- **use a variety of equipment and software packages to enter, process, display, and communicate information in different forms using text, tables, pictures, and sound.**
  - a) Know the alphanumeric keys and special keys on a computer keyboard (e.g., function keys, escape key, space bar, delete/backspace, return/enter) (K-2)
  - b) Know how to start the computer and type logins and passwords as well as shut down (1-2)
  - c) Understand the proper usage policy for school technology (1-2)
  - d) Know proper finger placement on the home row keys (K-2)
  - e) Handle diskettes and other computer equipment with care (K-2)
  - f) Know the basic functions of hardware (e.g., keyboard and mouse provide input; printer and monitor provide output; hard and floppy disk provide storage; the CPU processes information) (3-5)

- g) Know the basic functions of hardware (e.g., keyboard and mouse provide input; printer and monitor provide output; hard and floppy disk provide storage; the CPU processes information) (3-5)
  - h) Types on a computer keyboard, using correct hand and body positions (K-2)
  - i) Knows basic distinctions among computer software programs, such as word processors, special purpose programs, and games (K-2)
  - j) Uses menu options and commands (K-2)
  - k) Uses database software to add, edit, and delete records, and to find information through simple sort or search techniques (3-5)
  - l) Knows how formats differ among software applications (e.g., word processing files, database files) and hardware platforms (e.g., Macintosh, Windows) (3-5)
  - m) Knows ways that technology is used at home and school (e.g., paging systems, telephones, VCRs) (3-5)
  - n) Uses database software to add, edit, and delete records, and to find information through simple sort or search techniques (3-5)
  - **telecommunicate a message to a distant location with teacher help.**
    - a) Send an e-mail message to a friend or family member, or to a pen pal in another country (1-5)
    - b) Send an intranet message to a student in another Mosaica-managed school comparing points of view on either a favorite sports team or the latest natural disaster (e.g., earthquake in Seattle) (3-5)
    - c) Send an e-mail message to a governmental official asking for support for a piece of legislation (5)
  - **access needed information from printed media, electronic databases, and community resources.**
    - a) Access a specific Internet address given the URL (2-4)
    - b) Uses the intranet and Internet to search for specific information for a research project (2-5)
    - c) Print pages of work onto the classroom printer (K-2)
    - d) Trouble-shoots simple problems in software (e.g., re-boots, uses help systems) (3-5)
2. **Knowledge of the impacts and limitations of information systems is essential to its effective and ethical use.**

**Students:**

- **describe the uses of information systems in homes, schools, and businesses.**
    - a) Knows ways that technology is used at home and school (e.g., paging systems, telephones, VCRs (K-5)
    - b) Knows the basic distinctions among computer software programs such as word processing, special-purpose programs and games
  - **understand that computers are used to store personal information**
    - a) Understands that when an individual creates something on a computer, the created work is that person's property, and only that person has the right to change it (K-2)
  - **demonstrate ability to evaluate information**
    - a) use word processing software and database software to analyze information, draw conclusions and write/edit reports (3-5)
- 3. Information technology can have positive and negative impacts on society, depending upon how it is used.**

**Students:**

- **describe the uses of information systems in homes and schools.**
  - a) Understands the concept of software piracy (i.e., illegally copying software), and that piracy is a violation of copyright laws (3-5)
  - b) knows that new tools and ways of doing things affect all aspects of life, and may have positive or negative effects on other people (K-2)
- **demonstrate ability to evaluate information critically.**
  - a) Use spreadsheet and database software to analyze information and present it graphically (5)
  - b) Research specific questions and subject matters using the internet and other electronic sources (3-5)

**Standard 8. Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.**

**A. Physical Setting**

- 1. The Earth and celestial phenomena can be described by principles of relative motion and perspective.**

**Students :**

- **describe patterns of daily, monthly, and seasonal changes in their environment.**
  - a) Know that short-term weather conditions (rain, snow, and temperature) can change daily and over seasons. (K)
  - b) Know that there is a pattern in the movement of the sun and moon. (1)
  - c) Know that the earth is one of several planets that orbit the sun, and moon orbits around the earth. (2-3)
  - d) Know that the patterns of stars in the sky stay the same. (4)
  - e) Know that planets look like stars but over time appear to move among the constellations. (4)

**2. Many of the phenomena that we observe on Earth involve interactions among components of air, water, and land.**

**Students :**

- **describe the relationships among air, water, and land on Earth.**
  - a) Know that there is a limited amount of air, water, and land. (K)
  - b) Know that air is a substance that surrounds us, takes up space, and moves around the earth as wind. (3)

**3. Matter is made up of particles whose properties determine the observable characteristics of matter and its reactivity.**

**Students:**

- **observe and describe properties of materials using appropriate tools.**
  - a) Know that materials consist of solid rocks, soils, liquid water, and the gases of the atmosphere (K-1)
  - b) Know that stars are innumerable, unevenly dispersed, and unequal in brightness. (1)
  - c) Know that rocks come in different shapes and sizes (sand, pebbles, boulders). (2)
  - d) Know that different objects are made of different types of materials and have observable properties. (2)
  - e) Know that an object's motion can be described by tracing and measuring its position over time. (3)
  - f) Know the major differences between fresh and ocean waters. (4)

- g) Know that rocks are composed of different combination of minerals. (4)
- h) Know the composition and properties of soil. (4)
- i) Understand the use of telescopes. (5)
- j) Know that astronomical objects are large in size and separated by vast distances (4)
- k) Know that properties can be measured using the appropriate tools. (5)
- **describe chemical and physical changes, including changes in states of matter.**
  - a) Know that water can be a liquid or a solid and can change from one to another. (K)
  - b) Know that rocks and fossils can give clues to the past. (2)
  - c) Know that things can be done to materials (heating, freezing, mixing, cutting, blending) to change the properties of the object. (2)
  - d) Know that not all materials respond to external actions in the same way. (2)
  - e) Know that water can change from one state to another through various processes (3)
  - f) Know that smaller rocks can come from the breakage and weathering of bedrock and larger rocks (4)
  - g) Know how the earth's surface is changed by both rapid and slow processes (4)
  - h) Know that light can be reflected, refracted or absorbed. (4)
  - i) Know that materials can have different states. (5)
  - j) Know that the mass of a material is constant whether it is together, in parts, or in different states. (5)

**4. Energy exists in many forms, and when these forms change energy is conserved.**

**Students:**

- **describe a variety of forms of energy (e. g., heat, chemical, light) and the changes that occur in objects when they interact with those forms of energy.**
  - a) Know that heat can be produced in many ways. (2)
  - b) Know the organization of a simple electrical circuit. (4)

- **observe the way one form of energy can be transformed into another form of energy present in common situations (e. g., mechanical to heat energy, mechanical to electrical energy, chemical to heat energy).**

- a) Demonstrate possible materials, that when mixed, result in chemical interactions (e.g., bake a cake with baking powder and make one without)

## 5. **Energy and matter interact through forces that result in changes in motion.**

### **Students:**

- **describe the effects of common forces (pushes and pulls) on objects, such as those caused by gravity, magnetism, and mechanical forces.**

- a) Know that magnets can be used to make some things move without being touched. (1)
  - b) Know that pushing and pulling can change the position and motion of an object. (1)
  - c) Know that things fall to the earth unless something holds them up (1)
  - d) Know that vibrating objects produce sound. (2)
  - e) Know that force applied to an object can change the speed and direction of the object. (3)
  - f) Know that there is a relationship between the force applied to an object and the effect on object. (3)
  - g) Know that electrically charged material pulls on all other materials and can attract or repel other charged materials. (4)
  - h) Know that the pitch of a sound depends on the vibration producing it. (4)
- **describe how forces can operate across distances.**
    - a) Know that light travels in a straight line until it strikes an object. (2)

## **B. The Living Environment**

### **1. Living things are both similar to and different from each other and nonliving things.**

#### **Students:**

- **describe the characteristics of and variations between living and non-living things.**

- a) Know that differences exist among individuals of the same kind of plant and or animal. (1)

- b) Observe the class guinea pig and help with its care. (K-2)
- c) Grow a plant from an avocado seed (3-4)
- **describe the life processes common to all living things.**
  - a) Know that the transfer of energy is essential to all living organisms. (4)
  - b) Know that cells convert energy obtained from food to carry on the functions needed to sustained life. (5)
  - c) Know that all organisms are composed of cells, which are the fundamental units of life. (5)

**2. Organisms inherit genetic information in a variety of ways that result in continuity of structure and function between parents and offspring.**

**Students:**

- **recognize that traits of living things are both inherited and acquired or learned.**
  - a) Know that many characteristics of an organism are a result of the interaction with their environment. (3)
  - b) Know that intrinsic failures or infections can cause diseases in organism by other organisms. (By End of Grade 5)
  - c) Know that animal behavior is influenced by internal and external cues. (3)
- **recognize that for humans and other living things there is genetic continuity between generations.**
  - a) Know that people resemble their parents by studying the common characteristics between students and their parents and grandparents. (2-4)
  - b) Know that many characteristics of an organism are inherited from the parents of the organism. (3)

**3. Individual organisms and species change over time.**

**Students:**

- **describe how the structures of plants and animals complement the environment of the plant or animal.**
  - a) Know that plants and animals have different features that allow them to live in different environments. (K-2)
  - b) Know that animals have different structures that perform different functions. (3)

- **observe that differences within a species may give individuals an advantage in surviving and reproducing.**

a) Know that changes in environments can have different effects on different organisms. (5)

**4. The continuity of life is sustained through reproduction and development.**

**Students:**

- **describe the major stages in the life cycles of selected plants and animals.**
- **describe evidence of growth, repair, and maintenance, such as nails, hair, and bone, and the healing of cuts and bruises.**

a) Know that animals go through life cycles after observing a chrysalis transform into a butterfly. (1)

b) Know that life cycles are different between animals. (3)

c) Know that plants progress through life cycles after each student observes his/her seed develop into a plant. (3-4)

d) Know that the human body heals itself based on observations of a student with a broken bone or bruise or lost tooth. (K-3)

**5. Organisms maintain a dynamic equilibrium that sustains life.**

**Students:**

- **describe basic life functions of common living specimens (guppy, mealworm, gerbil)**
- **describe some survival behaviors of common living specimens**
- **describe the factors that help promote good health and growth in humans**

a) Understand the habits and processes of the class guinea pig from daily observations. (1-2)

b) Knows how the physical environment can impact personal health (e.g., the effects of exposure to pollutants) (3-5)

**6. Plants and animals depend on each other and their physical environment.**

**Students:**

- **describe how plants and animals, including humans, depend upon each other and the non-living environment.**

a) Know that plants and animals need certain resources (food, water, and light) to live (K)

b) Know that living things are found almost everywhere in the world. (1)

- c) Know that animals require air, water, food, and shelter from observing a class pet. (1-2)
- d) Know that plants require air, water, food and light. (1-2)
- e) Know that some plant and animal life that once live on the earth have completely disappeared. (2)
- f) Know the role of plants within ecosystems (4)
- g) Know that organisms can produce beneficial or detrimental changes to the environment. (4-5)
- **describe the relationship of the sun as an energy source for living and nonliving cycles.**
  - a) Know that the sun supplies warmth to the earth. (K)
  - b) Know how plants use photosynthesis to grow. (4)
  - c) Know that the sun provides the light and heat necessary to maintain the temperature of the earth. (4- 5)

**7. Human decisions and activities have had a profound impact on the physical and living environment.**

**Students:**

- **identify ways in which humans have changed their environment and the effects of those changes.**
  - a) Know how personal health can be influenced by society (e.g., culture) and science (e.g., technology) (3-5)

**Standard 9. Students will apply technological knowledge and skills to design, construct, use, and evaluate products and systems to satisfy human and environmental needs.**

- 1. Technological tools, materials, and other resources should be selected on the basis of safety, cost, availability, appropriateness, and environmental impact; technological processes change energy, information, and material resources into more useful forms.**

**Students:**

- **explore, use, and process a variety of materials and energy sources to design and construct things.**
- **understand the importance of safety, cost, ease of use, and availability in selecting tools and resources for a specific purpose.**

- **develop basic skill in the use of hand tools.**
- **use simple manufacturing processes (e. g., assembly, multiple stages of production, quality control) to produce a product.**
- **use appropriate graphic and electronic tools and techniques to process information.**
  - a) Use hammers, screwdrivers, clamps, rulers, scissors when constructing the Italian village square for the Renaissance unit within Paragon.
  - b) Make back-up copies of stored data, such as text, programs, and databases (3-5)
  - c) Use the school's digital camera and scanner in the development of presentations (4-5)

**2. Computers, as tools for design, modeling, information processing, communication, and system control, have greatly increased human productivity and knowledge.**

**Students:**

- **identify and describe the function of the major components of a computer system.**
  - a) Identifies basic computer hardware (e.g., keyboard and mouse, printer, monitor, output, hard and floppy disk, case for the CPU [central processing unit]) (K-2)
  - b) Powers-up computer, monitor, and starts a computer program (e.g., checks that printer is switched on and on-line; reboots the computer when necessary) (K-2)
  - c) Knows the basic functions of hardware (e.g., keyboard and mouse provide input; printer and monitor provide output; hard and floppy disk provide storage; the CPU processes information) (3-5)
  - d) Uses a word processor to edit, copy, move, save, and print text with some formatting (e.g., centering lines, using tabs, forming paragraphs) (K-2)
- **use the computer as a tool for generating and drawing ideas.**
  - a) Use spreadsheets and databases to analyze data and draw conclusions (4-5)
  - b) Research specific questions or subject matters using the internet or other electronic sources (3-5)
- **control computerized devices and systems through programming.**
- **model and simulate the design of a complex environment by giving direct commands.**

- a) Knows the common features and uses of data bases (e.g., data bases contain records of similar data, which is sorted or organized for ease of use; data bases are used in both print form, such as telephone books, and electronic form, such as computerized card catalogs) (3-5)
- b) Use software to model patterns from data that is analyzed (5)
- c) Use presentation software (e.g., KidPix and HyperStudio) for class projects (2-5)
- d) Use Front Page and Publisher to create web pages (5)

**3. Technological systems are designed to achieve specific results and produce outputs, such as products, structures, services, energy, or other systems.**

**Students:**

- **identify familiar examples of technological systems that are used to satisfy human needs and wants, and select them on the basis of safety, cost, and function.**
- **assemble and operate simple technological systems, including those with interconnecting mechanisms to achieve different kinds of movement.**
- **understand that larger systems are made up of smaller component subsystems.**
  - a) Knows basic facts about networked computers (e.g., computers can connect to each other via modem and telephone line, or through local network systems, or internet and intranet) (3-5)
  - b) Model the agricultural system of Mesopotamia and understand the importance of irrigation (2)

**4. Technology has been the driving force in the evolution of society from an agricultural to an industrial to an information base.**

**Students:**

- **identify technological developments that have significantly accelerated human progress.**
  - a) Knows areas in which technology has improved human lives (e.g., transportation, irrigation, communication, nutrition, sanitation, health care, entertainment) (3-5)
  - b) Knows that new inventions often lead to other new inventions and ways of doing things (3-5)
  - c) Knows that people are always inventing new ways to solve problems and get work done (e.g., computer is a machine that helps people work and play) (K-2)

- d) Knows that people have invented and used tools throughout history to solve problems and improve ways of doing things (3-5)

**5. Technology can have positive and negative impacts on individuals, society, and the environment and humans have the capability and responsibility to constrain or promote technological development.**

**Students:**

- **describe how technology can have positive and negative effects on the environment and on the way people live and work.**

- a) Knows that technologies often have costs as well as benefits and can have an enormous effect on people and other living things (3-5)
- b) Identifies a simple problem that can be solved using technology (e.g., sharing information among family members across continents in a cost-effective way) (3-5)

**6. Project management is essential to ensuring that technological endeavors are profitable and that products and systems are of high quality and built safely, on schedule, and within budget.**

**Students:**

- **participate in small group projects and in structured group tasks requiring planning, financing, production, quality control, and follow-up.**
- **speculate on and model possible technological solutions that can improve the safety and quality of the school or community environment.**

- a) work in small groups conducting scientific investigations (2-5)
- b) discuss how the class can work with the school and neighborhood to improve the lives of people (4-5)

**Standard 6. Students will understand the relationships and common themes that connect mathematics, science, and technology and apply the themes to these and other areas of learning.**

**1. Through systems thinking, people can recognize the commonalities that exist among all systems and how parts of a system interrelate and combine to perform specific functions.**

**Students:**

- **observe and describe interactions among components of simple systems.**
- **identify common things that can be considered to be systems (e. g., a plant population, a subway system, human beings).**

- a) Compare and contrast the human body (as a system) to the subway system. Understand the ways in which they are similar and ways that they are different. (4-5)

**2. Models are simplified representations of objects, structures, or systems used in analysis, explanation, interpretation, or design.**

**Students:**

- analyze, construct, and operate models in order to discover attributes of the real thing.
- discover that a model of something is different from the real thing but can be used to study the real thing.
- use different types of models, such as graphs, sketches, diagrams, and maps, to represent various aspects of the real world.

- a) Create a model Viking ship by studying designs from textbooks and on the Internet.

**3. The grouping of magnitudes of size, time, frequency, and pressures or other units of measurement into a series of relative order provides a useful way to deal with the immense range and the changes in scale that affect the behavior and design of systems.**

**Students:**

- provide examples of natural and manufactured things that belong to the same category yet have very different sizes, weights, ages, speeds, and other measurements.
- identify the biggest and the smallest values as well as the average value of a system when given information about its characteristics and behavior.

- a) Compare the life span of a butterfly to that of a human (K-2)

- b) Compare the body temperatures of different animals and understand what accounts for the wide range. (2-4)

**4. Equilibrium is a state of stability due either to a lack of changes (static equilibrium) or a balance between opposing forces (dynamic equilibrium).**

**Students:**

- cite examples of systems in which some features stay the same while other features change.
- distinguish between reasons for stability from lack of changes to changes that counterbalance one another to changes within cycles.

- a) Identify the change in how family members communicate today as compared to ten years ago (2-4)

- b) Identify the factors that led to the shift toward a dynamic telecommunications industry (4-5)

**5. Identifying patterns of change is necessary for making predictions about future behavior and conditions.**

**Students:**

- use simple instruments to measure such quantities as distance, size, and weight and look for patterns in the data.
- analyze data by making tables and graphs and looking for patterns of change.
  - a) Use rulers, meter sticks, feet and hands to measure the classroom and its fixtures. (2-4)
  - b) Weigh the classroom guinea pig on a weekly basis and graph the results. (3)

**6. In order to arrive at the best solution that meets criteria within constraints, it is often necessary to make trade-offs.**

**Students:**

- determine the criteria and constraints of a simple decision making problem.
- use simple quantitative methods, such as ratios, to compare costs to benefits of a decision problem.
  - a) Determine the best store to rent a video having researched alternatives weighing cost per rental, number of days rented, range of selections, quality of tapes, convenience of location, frequent rental plans, availability of new releases (and other criteria based on student brainstorming) (4-5)

**Standard 7. Students will apply the knowledge and thinking skills of mathematics, science, and technology to address real-life problems and make informed decisions.**

- 1. The knowledge and skills of mathematics, science, and technology are used together to make informed decisions and solve problems, especially those relating to issues of science/ technology/ society, consumer decision-making, design, and inquiry into phenomena.**

**Students:**

- analyze science/ technology/ society problems and issues that affect their home, school, or community, and carry out a remedial course of action.**
  - make informed consumer decisions by applying knowledge about the attributes of particular products and making cost/ benefit tradeoffs to arrive at an optimal choice.**
  - design solutions to problems involving a familiar and real context, investigate related science concepts to inform the solution, and use mathematics to model, quantify, measure, and compute.**
  - observe phenomena and evaluate them scientifically and mathematically by conducting a fair test of the effect of variables and using mathematical knowledge and technological tools to collect, analyze, and present data and conclusions.**
- a) Evaluates a product or design (e.g., considers how well the product or design met the challenge to solve a problem; considers the ability of the product or design to meet constraints), and makes modifications based on results. Each team chooses its own product to evaluate (3-5)**
  - b) Knows constraints that must be considered when designing a solution to a problem (e.g., cost, materials, time, space, safety, scientific laws, engineering principles, construction techniques, appearance, environmental impact, what will happen if the solution fails) (3-5)**

2. **Solving interdisciplinary problems involves a variety of skills and strategies, including effective work habits; gathering and processing information; generating and analyzing ideas; realizing ideas; making connections among the common themes of mathematics, science, and technology; and presenting results. Students participate in an extended, culminating mathematics, science, and technology project.**

**Students:**

- **work effectively**
- **gather and process information**
- **generate and analyze ideas**
- **observe common themes**
- **realize ideas**
- **present results**

OWN Charter School's curriculum has a strong bent toward interdisciplinary focus. In particular, in Science and Humanities, students spend a great amount of time on project teams, learning to work cooperatively gathering information, understanding and evaluating it, coming to conclusions and sharing these findings with classmates and the larger school community. The Paragon Nights are venues through which students and teams of students can share their work with friends, family and the entire community.

**Social Studies Alignment to New York Learning Standards****Elementary**

**Standard 1. History of the United States and New York - students will use a variety of intellectual skills to demonstrate their understanding of major ideas, eras, themes, developments, and turning points in the history of the United States and New York.**

- 1. The study of New York State and United States history requires an analysis of the development of American culture, its diversity and multicultural context, and the ways people are unified by many values, practices, and traditions.**

**Students:**

- **know the roots of American culture, its development from many different traditions, and the ways many people from a variety of groups and backgrounds played a role in creating it**
  - a) Understand that people often choose to do the same kinds of things that their friends do (e.g., dress, talk, act), but that people also often choose to do certain things their own ways (K-2)
  - b) Understand the different lives, plans, and dreams of the various racial and ethnic groups who lived in the state 100-200 years ago (K-2)
  - c) Know the English colonists who became revolutionary leaders and fought for independence from England (e.g., George Washington, Thomas Jefferson, Benjamin Franklin) (K-2)
  - d) Understands how individuals have worked to achieve the liberties and equality promised in the principles of American democracy and to improve the lives of people from many groups (e.g., Rosa Parks, Martin Luther King, Jr.; Sojourner Truth; Cesar Chavez) (K-2)
  - e) Understand what life was like for children and families “on the trail” when they moved from one part of the U.S. to another (K-2)
  - f) Know the various movements (westward, northward, and eastward) of large groups of people in the history of the U.S. (3-4)
  - g) Know about the forced relocation of Native Americans and how their lives, rights, and territories were affected by European colonization and expansion of the U.S. (e.g., Spanish colonization of the Southwest, Tecumseh’s resistance to Indian removal, the Cherokee Trail of Tears, Black Hawk’s War, the movement of the Nez Perce) (3-4)

- h) Understand the experience of immigrants groups (e.g., where they came from, why they left, travel experiences, ports of entry and immigration screening, the opportunities and obstacles they encountered when they arrived; changes that occurred when they moved to the United States) (3-4)
- i) Know the reasons why various groups (e.g., freed African Americans, Mexican and Puerto Rican migrant workers, Dust Bowl farm families) migrated to different parts of the U.S. (3-4)
- j) Understand the experiences of those who moved from farm to city during the periods when cities grew (3-4)
- k) Understand that people often like or dislike other people because of membership in or exclusion from a particular social group (3-5)
- l) Understand the interactions that occurred between the Native Americans or Hawaiians and the first European, African, and Asian-Pacific explorers and settlers in the state or region (3-4)
- m) Know about the first inhabitants who lived in the state or region, each successive group of arrivals and their countries (or origin), and significant changes that developed as a result of each group's arrival (3-4)
- n) Understand daily life of a farm family from long ago (e.g., work, clothing, tools, food and food production in the early 1800s) (3-4)
- o) Know of problems in the community's past, the different perspectives of those involved, the choices people had, and the solutions they chose (3-4)
- p) Understand the historical development and daily life of a colonial community (e.g., Plymouth, Williamsburg, St. Augustine, San Antonio, Post Vincennes) (3-4)
- q) Understand the challenges and difficulties encountered by people in pioneer farming communities (e.g., the Old Northwest, the prairies, the Southwest, eastern Canada, the Far West) (3-4)
- r) Understand daily life in ethnically diverse urban communities long ago (e.g., a free African American community in Philadelphia, an Italian community in New York, a Chinese community in San Francisco) (3-4)
- s) Understand how people over the last 200 years have continued to struggle to bring to all groups in American society the liberties and equality promised in the basic principles of American democracy (e.g., Sojourner Truth; Harriet Tubman; Frederick Douglass; W.E.B. DuBois; Booker T. Washington; Susan B. Anthony; Martin Luther King, Jr.; Rosa Parks; Cesar Chavez) (3-4)
- t) Understand the migration and settlement patterns of peoples in the Americas (e.g., the archaeological and geological evidence that explains the movement of people from Asia to Americas, the spread of human societies and the rise of diverse

- cultures from hunter-gatherers to urban dwellers, use of the Bering land bridge)  
(By End of Grade 5)
- u) Understand the influence of Enlightenment ideas on American society (e.g., Benjamin Franklin’s experiments with electricity) (By End of Grade 5)
  - v) Understand Puritanism in colonial America (e.g., how Puritanism shaped New England communities, the changes in Puritanism during the 17th century, opposition to King James I, why Puritans came to America, the Puritan family structure) (By End of Grade 5)
  - w) Understand how and why family and community life differed in various regions of colonial North America (e.g., Williamsburg, Philadelphia, Boston, New York, French Quebec, Santa Fe) (By End of Grade 5)
  - x) Understand the events that contributed to the outbreak of the American Revolution and the earliest armed conflict of the Revolutionary War (e.g., opponents and defenders of England’s new imperial policy, the idea of “taxation without representation,” the battle at Lexington and Concord) (By End of Grade 5)
  - y) Understand the major developments and chronology of the Revolutionary War and the roles of its political, military, and diplomatic leaders (e.g., George Washington, Benjamin Franklin, Thomas Jefferson, John Adams, Samuel Adams, John Hancock, Richard Henry Lee) (By End of Grade 5)
  - z) Understand how slavery shaped social and economic life in the South after 1800 (e.g., how the cotton gin and the opening of new lands in the South and West led to increased demands for slaves; differences in the lives of plantation owners, poor free black and white families, and slaves; methods of passive and active resistance to slavery; escaped slaves and the Underground Railroad) (By End of Grade 5)
  - aa) Understand the economic and social importance of slavery and other forms of coerced labor in various societies (By End of Grade 5)
  - bb) Understand slavery prior to the Civil War (e.g., the importance of slavery as a principle cause of the Civil War, the growing influence of abolitionists, children’s’ roles and family life under slavery) (By End of Grade 5)
  - cc) Understand perspectives of and the roles played in the American Revolution by various groups of people (e.g., men, women, white settlers, free and enslaved African-Americans, and Native Americans) (By End of Grade 5)
  - dd) Understand the United States relationships with European countries and the contributions of each European power to the outcome of the Revolution (e.g., relations with France, Holland and Spain; consequences of the Treaty of Paris; Ben Franklin’s negotiations with the French) (By End of Grade 5)

- ee) Understand the major political issues in the thirteen colonies after their independence from England (e.g., arguments over the Articles of Confederation, arguments over how to govern themselves)(By End of Grade 5)
- ff) Understand the differences in leaders (e.g., Alexander Hamilton and Thomas Jefferson) and the social and economic composition of each political party in the 1790s (By End of Grade 5)
- gg) Understand the factors that led to U.S. territorial expansion in the Western Hemisphere (e.g., Napoleon's reasons for selling the Louisiana Territory, expeditions of American explorers and mountain men) (By End of Grade 5)
- hh) Know the foreign territorial claims in the Western Hemisphere in 1800 and the impact on American foreign policy (e.g., the origins and provisions of the Monroe Doctrine; the claims of Spain, France, Britain, and Russia; nations that declared their independence in 1823; how President Monroe dealt with European attempts to reestablish control) (By End of Grade 5)
- ii) Understand the impact of territorial expansion on Native American tribes (e.g., the Cherokee, Chickasaw, Choctaw, Creek and Seminole removals, the significance of the Trail of Tears, the original lands held by various tribes of the Southeast and those held in the Old Northwest territory) (By End of Grade 5)
- jj) Understand elements of early western migration (e.g., the lure of the West and the reality of life on the frontier; motivations of various settlers; Mormon contributions to the settlement of the West; differences in the settlement of California and Oregon in the late 1840s and 1850s; routes taken by settlers of the Western U.S.; interactions between settlers and Native Americans and Mexicans in the western territories) (By End of Grade 5)
- kk) Understand the origins of Manifest Destiny and its influence on the westward expansion of the United States (e.g., its role in the resolution of the Oregon dispute with Great Britain, how it led to the Mexican-American war) (By End of Grade 5)
- ll) Understand social and economic elements of urban and rural life in the early and mid-19th centuries (e.g., the impact of the factory system on gender roles and the daily life of men, women, and children; factors that caused rapid urbanization; city life in the 1840s; differences in urban and rural children's' lives, life in New England mill towns in the early 1800s, the impact of the canal and railroad on the locations and size of cities after 1820) (By End of Grade 5)
- mm) Understand social and economic elements of urban and rural life in the early and mid-19th centuries (e.g., the impact of the factory system on gender roles and the daily life of men, women, and children; factors that caused rapid urbanization; city life in the 1840s; differences in urban and rural children's' lives, life in New

England mill towns in the early 1800s, the impact of the canal and railroad on the locations and size of cities after 1820) (By End of Grade 5)

- nn) Understand the impact of the Civil War on social and gender issues (e.g., the roles of women on the home front and on the battlefield; the human and material costs of the war; the degree to which the war united the nation; how it changed the lives of women, men, and children) (By End of Grade 5)
- oo) Understand military, political, and social factors affecting the post Civil War period (e.g., the basic provisions of the 13th, 14th, and 15th amendments, and the political and social forces that opposed and supported them, how the lives of African Americans were changed by these amendments; demobilization of the Union and Confederate armies; how the leadership of Presidents Lincoln and Johnson affected reconstruction) (By End of Grade 5)
- pp) Understand changes in social relations in the South during Reconstruction (e.g., the role of the Freedmen's Bureau, the impact of emancipation in the South, how former slaves improved their position in society, how people from the North traveled to aid in Reconstruction) (By End of Grade 5)
- qq) Understand the lives of African Americans during the Reconstruction era (e.g., the progress of "Black Reconstruction" and the impact of legislative reform programs, contributions of individual African Americans who served as teachers and political leaders, why some abolition leaders voiced opposition to the 15<sup>th</sup> amendment) (By End of Grade 5)
- rr) Understand the impact of the Reconstruction period on politics in the South (e.g., the increase in corruption in the post-Civil War period, the importance of political cartoonists in drawing attention to corruption) (By End of Grade 5)
- **understand the basic ideals of American democracy as explained in the Declaration of Independence and the Constitution and other important documents**
  - a) Understand that the "rules" for group behaviors and expectations sometimes are written down and strictly enforced or are just understood from example (3-5)
  - b) Understand that although rules at home, school, church, and in the community usually remain the same, sometimes they change for various reasons (e.g., some rules do not work, new people are involved, outside circumstances change) (3-5)
  - c) Understand that rules at home, at school, and in the community let individuals know what to expect and so can reduce the number of disputes (K-2)
  - d) Know the history of events and the historic figures responsible for such historical documents as the Mayflower Compact, the Declaration of Independence, the U.S. Constitution, the Bill of Rights, and the Emancipation Proclamation) (3-4)

- e) Understand the major ideas in the Declaration of Independence, their sources, and how they became unifying ideas of American democracy (e.g., major terms, why the document was written, what the signers risked) (By End of Grade 5)
  - f) Understand the provisions and significance of the Emancipation Proclamation (e.g., reasons Abraham Lincoln issued it, public reactions to it in the North and the South) (By End of Grade 5)
  - **explain those values, practices, and traditions that unite all Americans.**
    - a) Understand that the groups to which a person belongs (e.g., family, friends, team, community) influence in varying degrees how she or he thinks and acts (K-2)
    - b) Understands that people sometimes imitate people or characters they see presented in the media (3-5)
    - c) Understand why Americans and those who lead them (e.g., George Washington, Benjamin Franklin, and Thomas Jefferson) went to war to win independence from England. Understand how ordinary people have worked to contribute money and ideas to create or enhance our national symbols (e.g., French school children who raised money for the Statue of Liberty, Lee Iaccoca's work to restore Ellis Island) (3-4)
2. **Important ideas, social and cultural values, beliefs, and traditions from New York State and United States history illustrate the connections and interactions of people and events across time and from a variety of perspectives.**

**Students:**

- **gather and organize information about the traditions transmitted by various groups living in their neighborhood and community**
  - a) Know a family history through two generations (e.g., various family members and their connections) (K-2)
  - b) Understand various meanings of social group, general implications of group membership, and different ways that groups function (K-2)
  - c) Know the cultural similarities and differences in clothes, homes, food, communication, technology, and cultural traditions between families now and in the past (K-2)
  - d) Know the history of the local community since its founding, the people who came, the changes they brought, and significant events over time (3-4)
  - e) Know regional folk heroes, stories, or songs that have contributed to the development of the cultural history of the U.S. (e.g., Pecos Bill, Brer Rabbit, Paul Bunyan, Davey Crockett, John Henry, Joe Magarac) (3-4)
  - f) Understand how regional folk heroes and other popular figures have contributed to the cultural history of the U.S. (e.g., frontiersmen such as Daniel Boone,

cowboys, mountain men such as Jedediah Smith, American Indian Chiefs including Geronimo, and outlaws such as Billy the Kid) (3-4)

- **recognize how traditions and practices were passed from one generation to the next**
  - a) Know that people belong to some groups because they are born into them and to some groups because they join them (K-2)
  - b) Understands personal family or cultural heritage through stories, songs, and celebrations (K-2)
  - c) Know ways in which people share family beliefs and values (e.g., oral traditions, literature, songs, art, religion, community celebrations, mementos, food, language) (K-2)
  - d) Know the differences between toys and games children played long ago and the toys and games of today (3-4)
  - e) Understand influences on African American culture during the 1920s (e.g., the Harlem Renaissance) (By End of Grade 5)
- **distinguish between near and distant past and interpret simple timelines.**
  - a) Distinguishes among broad categories of historical time (e.g., long, long ago; long ago; yesterday; today; tomorrow) (K-2)
  - b) Knows how to identify the beginning, middle, and end of historical stories, myths, and narratives (K-2)
  - c) Knows how to develop picture time lines of their own lives or their family's history (K-2)
  - d) Distinguishes among broad categories of historical time (e.g., long, long ago; long ago; yesterday; today; tomorrow) (K-2)
  - e) Understands calendar time in days, weeks, and months (K-2)
  - f) Knows how to identify change and continuity in his or her own life (K-2)
  - g) Understands calendar time in years, decades, and centuries (K-2)
  - h) Knows how to construct time lines in significant historical developments that mark at evenly spaced intervals the years, decades, and centuries (3-5)
  - i) Knows how to interpret data presented in time lines (e.g., identify the time at which events occurred; the sequence in which events developed; what else was occurring at the time) (3-5)
  - j) Knows how to identify patterns of change and continuity in the history of the community, state, and nation, and in the lives of people of various cultures from times long ago until today (3-5)

- k) Distinguishes between past, present, and future time (3-5)
  - l) Understands the broadly defined eras of state and local historical events (3-5)
3. **Study about the major social, political, economic, cultural, and religious developments in New York State and United States history involves learning about the important roles and contributions of individuals and groups.**

**Students:**

- **gather and organize information about the important accomplishments of individuals and groups, including Native American Indians, living in their neighborhoods and communities**
  - a) Understand the daily life and values of early Hawaiians or Native American cultures (K-2)
  - b) Understand through legends, myths, and archaeological evidence the origins and culture of early Native Americans or Hawaiians who lived in the state or region (K-2)
  - c) Understands the contributions and significance of historical figures of the community (K-2)
  - d) Understand how the ideas of significant people affected the history of the state (3-4)
  - e) Predict how events might have turned out differently in one's local community if specific individuals or groups had chosen different courses of action (5-6)
  - f) Understand significant events for Native American tribes in the late 19th century and how they responded (e.g., survival strategies of Native American societies during the "second great removal," movement to reservations in western states, the effect of government policies on Native American nations and Native American land holdings between 1870 and 1900) (By End of Grade 5)
- **classify information by type of activity: social, political, economic, technological, scientific, cultural, or religious**
  - a) Knows various forms that institutions take (e.g., religious, social, political) (3-5)
  - b) Understand the social, political, and economic effects of the American revolutionary victory on different groups (e.g., rural farmers, wealthy merchants, enslaved and free African Americans, abolitionists, women who contributed to the war effort) (By End of Grade 5)
- **identify individuals who have helped to strengthen democracy in the United States and throughout the world.**
  - a) Understand how important figures reacted to their times and why they were significant to the history of our democracy (e.g., George Washington; Thomas

Jefferson; Abraham Lincoln; Sojourner Truth; Susan B. Anthony; Mary McLeod Bethune; Eleanor Roosevelt; Martin Luther King, Jr.) (K-2)

- b) Understands the ways in which people in a variety of fields have advanced the cause of human rights, equality, and the common good (e.g., Frederick Douglass, Clara Barton, Elizabeth Blackwell, Jackie Robinson, Rosa Parks, Jonas Salk, Cesar Chavez) (K-2)
  - c) Understands the specific individuals had a great impact on history (4-5)
  - d) Understand the accomplishments of ordinary people in historical situations and how each struggled for individual rights or for the common good (e.g., James Armistead, Sybil Ludington, Nathan Beman, Lydia Darragh, Betty Zane) (3-4)
  - e) Understand historical figures who believed in the fundamental democratic values (e.g., justice, truth, equality, the rights of the individual, responsibility for the common good, voting rights) and the significance of these people both in their historical context and today (3-4)
  - f) Understand how historical figures in the U.S. and in other parts of the world have advanced the rights of individuals and promoted the common good, and the character traits that made them successful (e.g., persistence, problem solving, moral responsibility, respect for others) (3-4)
  - g) Understand the effects of women's suffrage on politics (e.g., the major events of women's suffrage movement from the Seneca Falls Convention of 1848 to the ratification of the 19th amendment; how the 19th Amendment changed political life in America) (By End of Grade 5)
4. **The skills of historical analysis include the ability to: explain the significance of historical evidence; weigh the importance, reliability, and validity of evidence; understand the concept of multiple causation; understand the importance of changing and competing interpretations of different historical developments.**

**Students:**

- **consider different interpretations of key events and/ or issues in history and understand the differences in these accounts**
  - a) Understand that the way a person views an incident reflects personal beliefs, experiences, and attitudes (3-5)
  - b) Understand that people are more likely to believe a person's ideas if that person can give good reasons for them (K-2)
  - c) Provide coherent (though not necessarily valid or convincing) answers when asked why one believes something to be true or how one knows something (K-2)
  - d) Ask "how do you know" in appropriate situations (K-2)
  - e) Use facts from books, articles, and databases to support an argument (3-5)

## Appendix D

- f) Identify basic informal fallacies, including appeals to authority, the use of statements such as “everybody knows,” and vague references such as “leading doctors say” (3-5)
- g) Understand that reasoning can be distorted by strong feelings (3-5)
- h) Analyze arguments to determine if they are supported by facts from books, articles, and databases (3-5)
- i) Raise questions about arguments that are based on the assertion that “everybody knows” or “I just know” (3-5)
- j) Seek reasons for believing things other than the assertion that “everybody agrees” (3-5)
- k) Recognize when a comparison is not fair because important characteristics are not the same (3-5)
- l) Know the chronological order of major historical events that are part of the states’ history, their significance and the impact on people then and now, and their relationship to the history of the nation (3-4)
- m) Understand major historical events and developments in the state or region that involved interaction among various groups (3-4)
- n) Knows how to view the past in terms of the norms and values of the time (4-5)
- o) Understands that specific ideas had an impact on history (4-5)
- p) Understands that “chance events” had an impact on history (4-5)
- q) Understands that specific decisions and events had an impact on history (4-5)
- r) Evaluates historical fiction according to the accuracy of its content and the author’s interpretation (4-5)
- s) Understand the significance of beliefs held by both Native Americans and Europeans (e.g., Native American beliefs about their origins in America, ideas of land use held by Native Americans and Europeans) (By End of Grade 5)
- t) Understand peaceful and conflict-ridden interaction between English settlers and Native Americans in the New England, Mid-Atlantic, Chesapeake, and lower South colonies (e.g., how Native American and European societies influenced one another, differing European and Native American views of the land and its use) (By End of Grade 5)
- u) Understand elements of suffrage in the antebellum years (e.g., contradictions between the movement for universal white male suffrage and disenfranchisement of free African Americans and women, the influence of the West and western politicians in supporting equality in the political process) (By End of Grade 5)

## Appendix D

- v) Understand divisive issues prior to the Civil War (e.g., the Missouri Compromise and its role in determining slave and non-slave land areas, the issues that divided the North and the South) (By End of Grade 5)
- w) Understand the major characteristics of the abolition movement in the antebellum period (e.g., different viewpoints within the abolitionist movement, arguments of those opposed to and those who supported slavery, the Underground Railroad) (By End of Grade 5)
- x) Understand the experiences of diverse groups and minorities in different regions of the country (e.g., the experiences of African Americans, Asian Americans, and Hispanic Americans; the anti-Chinese movement in the West; the rise of lynching in the South; the impact of Jim Crow laws on African Americans) (By End of Grade 5)
- **explore different experiences, beliefs, motives, and traditions of people living in their neighborhoods, communities, and State**
  - a) Knows the cultural similarities and differences in clothes, homes, food, communication, technology, and cultural traditions between families now and in the past (K-2)
  - b) Understands family life in a community of the past and life in a community of the present (e.g., roles, jobs, communication, technology, style of homes, transportation, schools, religious observances, cultural traditions) (K-2)
  - c) Understands personal family or cultural heritage through stories, songs, and celebrations (K-2)
  - d) Understand that various factors (e.g., interests, capabilities, values) contribute to the shaping of a person's identity (3-5)
  - e) Know unique features of different groups to which she or he belongs (e.g., family, team, class), and also features of these groups that overlap with other groups (K-2)
  - f) Understand that individuals tend to support members of their own groups and may think of them as being like themselves (3-5)
  - g) Understand that different groups have different expectations for how their members should act (3-5)
  - h) Understand how women's lives changed after World War I (e.g., their contributions in schools, hospitals, settlement houses, and social agencies; how the spread of electrification and household appliances improved the life of homemakers) (By End of Grade 5)
- **view historic events through the eyes of those who were there, as shown in their art, writings, music, and artifacts.**

- a) Understand the main ideas found in folktales, stories of great heroism, fables, legends, and myths from around the world that reflect the beliefs and ways of living of various cultures in times past (K-2)
- b) Know regional folk heroes, stories, or songs that have contributed to the development of the cultural history of the U.S. (e.g., Pecos Bill, Brer Rabbit, Paul Bunyan, Davey Crockett, John Henry, Joe Magarac) (K-2)
- c) Understands the daily life, history, and beliefs of a country as reflected in dance, music, or the other art forms (such as paintings, sculptures, and masks) (K-2)
- d) Knows ways in which people share family beliefs and values (e.g., oral traditions, literature, songs, art, religion, community celebrations, mementos, food, language) (K-2)
- e) Know that language, stories, folktales, music, and artistic creations are expressions of culture (3-5)
- f) Know the ways that families long ago expressed and transmitted their beliefs and values through oral tradition, literature, songs, art, religion, community celebrations, mementos, food, and language (e.g., celebration of national holidays, religious observances, and ethnic and national traditions; visual arts and crafts; hymns, proverbs, and songs) (3-4)
- g) Understand how stories, legends, songs, ballads, games, and tall tales describe the environment, lifestyles, beliefs, and struggles of people in various regions of the country (3-4)
- h) Understand how arts, crafts, music, and language of people from a variety of regions long ago influenced the nation (3-4)
- i) Know how to view the past in terms of the norms and values of the time (By End of Grade 5)
- j) Understand popular and high culture in growing urban areas during the 19th century (e.g., novels, theater, minstrel shows, P.T. Barnum's "American Museum") (By End of Grade 5)
- k) Understand how literary and artistic movements fostered a distinct American identity among different groups and in different regions (By End of Grade 5)
- l) Understand the technological, social, and strategic aspects of the Civil War (e.g., the impact of innovations in military technology; turning points of the war; leaders of the Confederacy and Union; conditions, characteristics, and armies of the Confederacy and Union; major areas of Civil War combat) (By End of Grade 5)
- m) Understand social activities in the late 19th century (e.g., new forms of popular culture and leisure activities at different levels of American society, entertainment for children) (By End of Grade 5)

- n) Understand how migrants from rural areas and immigrants from other lands experienced life in growing urban centers and how they coped (e.g., schools, settlement houses, religious groups, philanthropists) (By End of Grade 5)

**Standard 2. World History - students will use a variety of intellectual skills to demonstrate their understanding of major ideas, eras, themes, developments, and turning points in world history and examine the broad sweep of history from a variety of perspectives.**

- 1. The study of world history requires an understanding of world cultures and civilizations, including an analysis of important ideas, social and cultural values, beliefs, and traditions. This study also examines the human condition and the connections and interactions of people across time and space and the ways different people view the same event or issue from a variety of perspectives.**

**Students:**

- **read historical narratives, myths, legends, biographies, and autobiographies to learn about how historical figures lived, their motivations, hopes, fears, strengths, and weaknesses**
  - a) **Understand personal family or cultural heritage through stories, songs, and celebrations (K-2)**
  - b) **Know the journeys of Marco Polo and Christopher Columbus, the routes they took, and what happened as a result of their travels (K-2)**
  - c) **Understand the main ideas found in folktales, stories of great heroism, fables, legends, and myths from around the world that reflect the beliefs and ways of living of various cultures in times past (K-2)**
  - d) **Understand that members of a group and even people in a crowd sometimes do and say things, good or bad, that they would not do or say on their own (3-5)**
  - e) **Understand the dreams and ideals that people from various groups have sought, some of the problems they encountered in realizing their dreams, and the sources of their strength and determination that families drew upon and shared (e.g., families arriving together in America and living together in rural or urban settings, traditions brought from their cultural past) (3-4)**
  - f) **Know about European explorers of the 15th and 16th centuries, their reasons for exploring, the information gained from their journeys, and what happened as a result of their travels (e.g., Christopher Columbus, Marco Polo, Eric the Red, Zheng He Ferdinand Magellan, Vasco de Gama, Jacques Cartier) (3-4)**
  - g) **Know the features of the major European explorations that took place between the 15th and 17th centuries (e.g., the routes and motives of Spanish, French, Dutch, and English explorers; the goals and achievements of major expeditions; problems encountered on the high seas; fears and superstitions of the times; what sailors expected to find when they reached their destinations) (By End of Grade 5)**

## Appendix D

- h) Understand aspects of the Spanish exploration, conquest, and immigration to the Americas in the centuries following Columbus (e.g., Spanish interactions with the Aztec, Inca, and Pueblo; the expeditions of Cabeza de Vaca and Francisco Vasquez de Coronado in the American Southwest; the conquest of Spanish America) (By End of Grade 5)
- i) Understand the background and leadership styles of depression-era presidents (e.g., Herbert Hoover, Franklin D. Roosevelt) (By End of Grade 5)
- j) Understand Alexander's achievements as a military and political leader (e.g., reasons for the disintegration of the empire into smaller areas after his rule; the campaigns, battles, and cities founded in Alexander's imperial conquests) (By End of Grade 5)
- k) Understand the significance of William the Conqueror in English society (e.g., why William invaded England; how he won control of England after the Battle of Hastings; what changes he made in governing England) (By End of Grade 5)
- l) Know the major accomplishments of Columbus (e.g., his voyages off the coast of Africa and to North America) (By End of Grade 5)
- **explore narrative accounts of important events from world history to learn about different accounts of the past to begin to understand how interpretations and perspectives develop**
  - a) Know how to identify the beginning, middle, and end of historical stories, myths, and narratives (K-2)
  - b) Understand the origins and changes in methods of writing over time and how the changes made communications between people more effective (e.g., pictographs, cuneiform, hieroglyphics, alphabets) (3-4)
  - c) Understand the significance of the printing press, the computer, and electronic developments in communication and their impact on the spread of ideas (3-4)
  - d) Understand how new religious or ethical systems contributed to cultural integration of large regions of Afro-Eurasia (By End of Grade 5)
  - e) Understand features of Spanish exploration and conquest (e.g., why the Spanish wanted to invade the Incan and Aztec Empires, and why these empires collapsed after the conflict with the Spanish; interaction between the Spanish and indigenous populations such as the Inca and the Aztec; different perspectives on Cortes' journey into Mexico) (By End of Grade 5)
  - f) Understand elements of the slave trade in Africa (e.g., how the Atlantic slave trade affected population, economic systems, family life, polygamous marriage, and the use of male and female slave labor in West and Central Africa; what narratives reveal about the experiences of Africans sold into slavery) (By End of Grade 5)

- g) Understand the ideas and events that shaped the Revolution in France (e.g., the causes, character, and consequences of the American and French revolutions; the meaning of the revolutionary slogan in France, “Liberty, Equality, Fraternity,” and the social ideals it embodied; the legacy of leading ideas of the revolution; how the wars of the revolutionary and Napoleonic periods changed Europe and Napoleon’s effects on the aims and outcomes of the revolution; connections between political events in the Americas and France between 1770 and 1815) (By End of Grade 5)
- h) Understand aspects of the abolition movement in the 18th and 19th centuries (e.g., the organization and arguments of movements in Europe and the Americas that sought to end slavery, and how the trans-Atlantic slave trade was suppressed; why and how the slave trade continued after it had been outlawed; major accomplishments of the American abolitionist Frederick Douglass) (By End of Grade 5)
- **study about different world cultures and civilizations focusing on their accomplishments, contributions, values, beliefs, and traditions**
  - a) Know a family history through two generations (e.g., various family members and their connections) (K-2)
  - b) Understand family life today and how it compares with family life in the recent past and family life long ago (e.g., roles, jobs, schooling experiences) (K-2)
  - c) Know the cultural similarities and differences in clothes, homes, food, communication, technology, and cultural traditions between families now and in the past (K-2)
  - d) Know the holidays and ceremonies of different societies (e.g., Christmas celebrations in Scandinavia, Germany, or England; Cinco de Mayo; the Chinese New Year; the Japanese tea ceremony; harvest and spring festivals) (K-2)
  - e) Understand the daily life, history, and beliefs of a country as reflected in dance, music, or the other art forms (such as paintings, sculptures, and masks) (K-2)
  - f) Understands family life in a community of the past and life in a community of the present (e.g., roles, jobs, communication, technology, style of homes, transportation, schools, religious observances, cultural traditions) (K-2)
  - g) Understand the contributions and significance of historical figures of the community (K-2)
  - h) Understand the daily life and values of early Hawaiian or Native American cultures (K-2)
  - i) Understand the daily life of a colonial community (e.g., Plymouth, Williamsburg, St. Augustine, San Antonio, Post Vincennes)

- j) Understand life in a pioneer farming community (e.g., the Old Northwest, the prairies, the Southwest, eastern Canada, the Far West) (K-2)
- k) Understand that beliefs and customs held by certain groups can help or hinder people as they strive to use their talents and that sometimes individuals can change those beliefs and customs in ways that will help people to succeed more easily in the future (3-5)
- l) Understands social, economic, and cultural characteristics of European society (e.g., the customary European family organization, gender roles, property holding, education and literacy, linguistic diversity, religion) (By End of Grade 5)
- m) Know legends of pre-Columbus explorations and the technological, scientific, and geographic factors that led to the age of exploration in the Americas (By End of Grade 5)
- n) Understand influences on religion in contemporary society (e.g., how changing immigration patterns affected religious diversity, issues related to religious belief) (By End of Grade 5)
- o) Understand the social and cultural characteristics of hunter-gatherer communities in various continental regions (e.g., similarities and differences between hunter-gatherer communities in Africa, Eurasia, and the Americas and their responses to local environments; characteristics of Cro-Magnon communities of western Eurasia; location and composition of archaeological discoveries and what understanding these bring to Neanderthal culture and community life) (By End of Grade 5)
- p) Understand how new ideas, products, techniques, and institutions spread from one region to another and the conditions under which people assimilated or rejected new ideas or adapted them to cultural traditions (By End of Grade 5)
- q) Understand elements of Judaism and how it compares to other religions (e.g., the differences between Jewish monotheism and the polytheism of Southwest Asia, the ethical teachings of Judaism illustrated in stories from the Hebrew Scriptures, the major events in the early history of Judaism through the Babylonian Captivity) (By End of Grade 5)
- r) Understand the social and political characteristics of Greek city-states (e.g., significant similarities and differences between Athenian democracy and Spartan military aristocracy; hierarchical relationships in Greek societies and the civic, economic, and social tasks performed by men and women of different classes; the location and political structure of the major Greek city-states) (By End of Grade 5)
- s) Understand the influence of the monastery in European development (e.g., the importance of monasteries, convents, and missionaries from Britain and Ireland in

the Christianizing of Western and Central Europe; the individual duties of monks and nuns) (By End of Grade 5)

- t) Understand the significant features of Mayan civilization (e.g., locations of Mayan city-states, road systems, and sea routes in Mesoamerica and the influence of the environment on these developments; the role and status of elite women and men in Mayan society as indicated by their portrayal in Mayan monumental architecture; the importance of religion in Mayan society; the structure and purpose of Mayan pyramids; ceremonial games among the Mayans) (By End of Grade 5)
  - u) Understand the influence of Christianity in Medieval Europe (e.g., how successful the Christian states were in overthrowing Muslim powers in Central and Southern Iberia, the reasons for and consequences of the European Crusades against Syria and Palestine) (By End of Grade 5)
  - v) Understand the lives of different groups of people in Medieval Europe (e.g., life in Jewish communities and what Jews added to the cultural and economic development of Europe; the influence of ideals of chivalry and courtly love on feudal society; how the status of women changed in medieval European life) (By End of Grade 5)
  - w) Understand political characteristics of Egypt (e.g., the impact of the French invasion of Egypt in 1798, the reign and major accomplishments of Muhammad Ali of Egypt, why he was known as the “father of modern Egypt”) (By End of Grade 5)
  - x) Understand cultural trends of the second half of the 20th century (e.g., the influence of television, the Internet, and other forms of electronic communication on the creation and diffusion of cultural and political information worldwide; how the world’s religions have responded to challenges and uncertainties in society and the world) (By End of Grade 5)
2. **Establishing timeframes, exploring different periodizations, examining themes across time and within cultures, and focusing on important turning points in world history help organize the study of world cultures and civilizations.**

**Students:**

- **distinguish between past, present, and future time periods**
  - a) Understands the relationship between themes studied in cultures long ago and in more recent history. K-5 Program is organized around 8 eras in world history, with students organizing time lines and making regular connections across cultures and time periods (K-5)
- **develop timelines that display important events and eras from world history**

- a) Know how to develop picture time lines of their own lives or their family's history (K-2)
  - b) Know how to identify change and continuity in his or her own life (3-5)
  - c) Know how to construct time lines in significant historical developments that mark at evenly spaced intervals the years, decades, and centuries (3-5)
  - d) Know how to identify patterns of change and continuity in the history of the community, state, and nation, and in the lives of people of various cultures from times long ago until today (3-5)
  - e) Understand the broadly defined eras of state and local historical events (3-5)
  - f) Understand major changes in the political geography of Africa between 1880 and 1914 (By End of Grade 5)
- **measure and understand the meaning of calendar time in terms of years, decades, centuries, and millennia, using BC and AD as reference points**
    - a) Understand calendar time in days, weeks, and months (K-2)
    - b) Understand calendar time in years, decades, and centuries (3-5)
- **compare important events and accomplishments from different time periods in world history**
    - a) Know various systems of long-distance communication and their effects (e.g., runners, the "talking drums" of Africa, smoke signals of Native Americans, the pony express, the telegraph, telephones, satellite systems) (K-2)
    - b) Know how to interpret data presented in time lines (e.g., identify the time at which events occurred; the sequence in which events developed; what else was occurring at the time) (3-5)
    - c) Understand the English civil war and the Revolution of 1688 (e.g., how these events affected government, religion, economy, and society in England; how the English Revolution influenced political institutions and attitudes in the English colonies and the outbreak of the American Revolution; new freedoms granted to the English people after 1688) (By End of Grade 5)
    - d) Understands the significance of the Scientific Revolution and the Age of Enlightenment (e.g., the impact of astronomical discoveries from Copernicus to Newton; principal ideas of the Enlightenment, from rationalism to theories of education; the word "revolution" and what is meant by the term "Scientific Revolution"; the lives and achievements of significant figures of the Scientific Revolution; how Diderot's encyclopedia contributed to the Age of Enlightenment) (By End of Grade 5)

**3. Study of the major social, political, cultural, and religious developments in world history involves learning about the important roles and contributions of individuals and groups.**

**Students:**

- **understand the roles and contributions of individuals and groups to social, political, economic, cultural, scientific, technological, and religious practices and activities**
  - a) Understand that specific individuals had a great impact on history (By End of Grade 5)
  - b) Understand that specific ideas had an impact on history (By End of Grade 5)
  - c) Understand that “chance events” had an impact on history (By End of Grade 5)
  - d) Understand that specific decisions and events had an impact on history (By End of Grade 5)
  - e) Know that people tend to live in families and communities in which individuals have different roles (K-2)
  - f) Understand the contributions and significance of historical figures of the community (K-2)
  - g) Know the accomplishments of major scientists and inventors (e.g., George Washington Carver, Galileo, Marie Curie, Louis Pasteur, Alexander Graham Bell) (K-2)
  - h) Know significant historical achievements of various cultures of the world (e.g., the Hanging Gardens of Babylon, the Taj Mahal in India, pyramids in Egypt, temples in ancient Greece, bridges and aqueducts in ancient Rome) (3-4)
  - i) Know about people who have made significant contributions in the field of communications (e.g., the inventors of the telegraph, telephone, the Braille alphabet, radio, television, the computer, satellite communication) (3-4)
  - j) Understand the design and development of aircraft and rocketry, and the people involved (3-4)
  - k) Know the significant scientific and technological achievements of various historical societies (e.g., the invention of paper in China, Mayan calendars, mummification in Egypt, astronomical discoveries in the Moslem world, the invention of the steam engine in England) (3-4)
  - l) Know about people who have made significant contributions in the field of transportation (e.g., Henry Ford, Amelia Earhart, John Glenn, Sally Ride) (3-4)
  - m) Understand the major technological developments that influenced land and water transportation, the economy, international markets, and the environment between

- 1801 and 1860 (e.g., the importance of the spinning jenny, steam locomotive, and telegraph; the development of the canal system after 1825 and railroad system after 1860) (By End of Grade 5)
- n) Understand the impact of significant achievements and individuals of the late 19<sup>th</sup> century (e.g., the effects of major technological, transportation, and communication changes that occurred after 1870; careers of industrial and financial leaders of the late 19th century) (By End of Grade 5)
  - o) Understand the rise of a mass culture in the 1920s (e.g., the media and recreation available in the 1920s; how increased leisure time promoted the growth of professional sports, amusement parks, and national parks; the impact of recreational areas on the local environment) (By End of Grade 5)
  - p) Understand the involvement of diverse groups in the civil rights movement (e.g., the agendas, strategies, and effectiveness of African, Asian, Latino, and Native Americans, as well as the disabled, in advancing the movement for civil and equal rights; regional issues important to diverse groups and their efforts to attain equality and civil rights after World War II) (By End of Grade 5)
  - q) Understand elements of the trans-Atlantic African slave trade (e.g., how slaves were transported to the Americas via the “middle passage”; how European firms and governments organized and financed the slave trade; conditions of slave life on plantations in the Caribbean, Brazil, and British North America; how slaves resisted servitude and preserved their African heritage) (By End of Grade 5)
  - r) Understand the character and impact of Portuguese maritime expansion to Africa, India, and Southeast Asia upon local populations (e.g., relations between King Affonso II of the Kongo and Portuguese, why Bartholomew de las Casas was considered the “defender of the Indians”) (By End of Grade 5)
  - s) Understand how the acceleration of scientific and technological innovations in this era affected social, economic, and cultural life in various parts of the world (e.g., the broad effects of navigational and ship-building innovations such as astrolabe and lateen sails) (By End of Grade 5)
  - t) Understand the impact of new inventions and technological developments in various regions of the world (e.g., how new inventions transformed patterns of global communication, trade, and state power; how new machines, fertilizers, transport systems, and commercialization affected agricultural production; significant inventions and inventors in 19th-century Europe and America) (By End of Grade 5)
  - u) Understand how new technologies and scientific breakthroughs both benefited and imperiled humankind (By End of Grade 5)

## Appendix D

- v) Understand the position of women in developing countries (e.g., as compared to their position in industrialized countries, how change has occurred in different societies) (By End of Grade 5)
- w) Understand how feminist movements and social conditions have affected the lives of women around the world, and the extent of women's progress toward social equality, economic opportunity, and political rights in various countries (By End of Grade 5)
- x) Understand scientific and technological trends of the second half of the 20th century (e.g., worldwide implications of the revolution in nuclear, electronic, and computer technology; the social and cultural implications of medical successes such as the development of antibiotics and vaccines and the conquest of smallpox; the "consumer societies" of industrialized nations compared with those in predominantly agrarian nations) (By End of Grade 5)
- **gather and present information about important developments from world history**
  - a) Understand changes in community life over time (e.g., changes in goods and services; changes in architecture and landscape; change in jobs, schooling, transportation, communication, religion, recreation) (K-2)
  - b) Know the different forms of transportation and their developments over time (3-4)
  - c) Know the ways people communicate with each other now and long ago, and the technological developments that facilitated communication (e.g., speaking by gestures, transmitting stories orally, pictographs, hieroglyphics, different alphabets, writing by hand, printing techniques, the invention of the telegraph and telephone, satellite transmission of messages) (K-2)
  - d) Know about the development of the wheel and its early uses in ancient societies (3-4)
  - e) Understand the development and the influence of basic tools on work and behavior (3-4)
  - f) Understand growth and change in the European colonies during the two centuries following their founding (e.g., the arrival of Africans in the European colonies in the 17<sup>th</sup> century, the rapid increase of slave importation in the 18th century) (By End of Grade 5)
  - g) Understand the influences on and impact of the New Deal (e.g., how legislation and policies affected American workers and the labor movement, the condition of working men and women in the United States in the 1930s, how the New Deal affected the lives of local families, how women contributed to New Deal programs) (By End of Grade 5)

## Appendix D

- h) Understand the significance and legacy of the New Deal (e.g., major New Deal programs still in effect today, support for and opposition to Roosevelt's "court packing" proposal and why he abandoned this proposal) (By End of Grade 5)
- i) Understand the role of technology in early agrarian societies (e.g., how the advent of the plow influenced new agrarian societies in Southwest Asia, the Mediterranean basin, and temperate Europe; how megalithic stone buildings, such as Stonehenge, indicate the emergence of complex agrarian societies in Europe; changes for humankind and civilization brought on by the bow and arrow and by pottery; what physical evidence indicated about the characteristics of the agrarian society of ancient Egypt and the life of the Pharaoh) (By End of Grade 5)
- j) Understand how the invention of the chariot affected Southwest Asian societies (e.g., how the chariot changed transportation, the development of chariot warfare, how the chariot contributed to the spread of new ideas and technology) (By End of Grade 5)
- k) Understand possible causes of the decline and collapse of Indus Valley civilization (e.g., possible causes for the disappearance of cities such as Mohenjo-Daro, the role changes played in the fall of Indus cities) (By End of Grade 5)
- l) Know the different forms of slavery or coerced labor in various empires (e.g., the Han empire, the Maurya empire, the Greek city-states, the Roman empire) (By End of Grade 5)
- m) Understand possible reasons for the decline of the Roman and Han Empires (e.g., possible factors that motivated nomadic peoples to move into the Roman Empire and China, common patterns of decline and fall in the Roman and Han Empires, the chronological order of significant historical events for Rome from the late Empire through the reign of Justinian, how differences in architecture can illustrate unity and alienation between the Eastern and Western halves of the Roman Empire) (By End of Grade 5)
- n) Understand the origins and impact of the plague (e.g., how the plague started and spread across Eurasia and North Africa; the impact of the plague on daily life in urban Southwest Asia and Europe; how Christian and Muslim communities responded to the plague, and how the plague changed the lives of survivors) (By End of Grade 5)
- o) Understand trends in the population of Europe for the last three and a half centuries, and at what time Europe had the greatest number of inhabitants (By End of Grade 5)
- p) Understand the consequences of the significant revolutions of the early 20th century (e.g., the prominent figures in the Mexican Revolution and its significance as the first 20<sup>th</sup> century movement in which peasants played a prominent role) (By End of Grade 5)

- **understand how the terms *social, political, economic, and cultural* can be used to describe human activities or practices**
  - a) Understand that “social group” has many meanings (e.g., any set of people who regularly spend time together for any reason; groups classified according to region or occupation such as Southerners or blue-collar workers; groups that people formally and deliberately join or are assigned to such as sororities, military units, scouts, street gangs, or the Shriners) (3-5)
  - b) Understand the lives of free and indentured immigrants who came to North America and the Caribbean from Europe (e.g., religious, political, and economic motives of free immigrants from different parts of Europe; why indentured servants risked the hardships of bound labor overseas; opportunities and challenges encountered by European immigrants) (By End of Grade 5)
  - c) Understand patterns of immigrant life after 1870 (e.g., where people came from and where they settled; how immigrants formed a new American culture; the challenges, opportunities, and contributions of different immigrant groups; ways in which immigrants learned to live and work in a new country) (By End of Grade 5)
  - d) Understand the systems of feudalism and manorialism (e.g., the principles of feudalism, manorialism, and serfdom, and their widespread use in parts of Europe in the 11th century; how population growth and agricultural expansion affected the legal, economic, and social position of peasant men and women; how the lives of peasants and serfs differed; how their lives were affected by the manors and castles) (By End of Grade 5)
  - e) Understand how the Aztec Empire arose in the 14th century (e.g., major aspects of Aztec government, society, religion and culture; the construction of Tenochtitlan, the “Foundation of Heaven”) (By End of Grade 5)
- 4. **The skills of historical analysis include the ability to investigate differing and competing interpretations of the theories of history, hypothesize about why interpretations change over time, explain the importance of historical evidence, and understand the concepts of change and continuity over time.**

**Students:**

- **consider different interpretations of key events and developments in world history and understand the differences in these accounts**
  - a) Understand the development of the civil rights movement (e.g., the Supreme Court case *Brown v. Board of Education* and its significance in advancing civil rights; the resistance to civil rights in the South between 1954 and 1965; how the “freedom ride,” “civil disobedience,” and “non-violent resistance” were important to the civil rights movement; Martin Luther King Jr.’s “I Have a Dream” speech in the context of major events) (By End of Grade 5)

## Appendix D

- b) Explore the lifestyles, beliefs, traditions, rules and laws, and social/ cultural needs and wants of people during different periods in history and in different parts of the world
- c) Understand that people can learn about others in many different ways (e.g., direct experience, mass communications media, conversations with others about their work and lives) (3-5)
- d) Understand various aspects of family life, structures, and roles in different cultures and in many eras (e.g., medieval families, matrilineal families in Africa, extended families in China) (3-4)
- e) Know about life in urban areas and communities of various cultures of the world at various times in their history (e.g., Rome, Tenochtitl, Timbuktu, a medieval European city) (3-4)
- f) Know about the migrations of large groups in the past and recently (e.g., Native American ancestors across the Bering land bridge; the Bantu migrations in Africa; the movement of Europeans and Africans to the Western Hemisphere; the exodus of Vietnamese boat people, Haitians, and Cubans) (3-4)
- g) Understand social, economic, and cultural characteristics of European society (e.g., the customary European family organization, gender roles, property holding, education and literacy, linguistic diversity, religion) (By End of Grade 5)
- h) Understand how economic, political, and environmental factors influenced the civilizations of Mesopotamia, Egypt, and the Indus Valley (e.g., the impact of trade networks connecting various regions of Southwest Asia on Mesopotamian civilization; the importance of commercial, cultural, and political connections between Egypt and peoples of Nubia along the upper Nile; how geography and climate affected trade in the Nile Valley) (By End of Grade 5)
- i) Understand the origins and social framework of Roman society (e.g., the geographic location of different ethnic groups on the Italian peninsula in the late 6th century BCE and their influences on early Roman society and culture, how legends of the founding of Rome describe ancient Rome and reflect the beliefs and values of its citizens, what life was like for the common people living in Rome and Pompeii) (By End of Grade 5)
- j) Understand shifts in the political and social framework of Roman society (e.g., political and social institutions of the Roman Republic and reasons for its transformation from Republic to Empire; how values changed from the early Republic to the last years of the Empire as reflected through the lives of such Romans as Cincinnatus, Scipio Africanus, Tiberius Gracchus, Cicero, Julius Caesar, Augustus, Nero, Marcus Aurelius, and Constantine) (By End of Grade 5)
- k) Understands the significance of Jesus of Nazareth (e.g., the story of the life of Jesus, the messages of Jesus' prominent parables) (By End of Grade 5)

## Appendix D

- l) Understand the fundamental elements of Chinese society under the early imperial dynasties (e.g., policies and achievements of the Qin emperor Shi Huangdi, the life of Confucius and the fundamentals of Confucianism and Daoism, what life was like for ordinary people in ancient China as illustrated in Chinese folktales) (By End of Grade 5)
- m) Understand the commercial and cultural significance of the trans-Eurasian “silk roads” to the Roman and Chinese Empires and the peoples of Central Asia (By End of Grade 5)
- n) Understands the origins of Buddhism and fundamental Buddhist beliefs (e.g., the life story of Buddha and his essential teachings; how the Buddhist teachings were a response to the Brahmanic system; the contributions of the emperor Ashoka to the expansion of Buddhism in India; how Indian epic stories reflect social values, and how the Jataka tales reveal Buddhist teachings) (By End of Grade 5)
- o) Understand various characteristics of Christianity and Buddhism (e.g., methods used to spread the two religions to new areas and people; possible aspects of Christianity and Buddhism that appealed to people living between the 3rd and 5th centuries CE; the approximate geographical realms of Buddhism, Christianity, Hinduism, and Confucianism until the 5th century CE) (By End of Grade 5)
- p) Understand fundamental Hindu beliefs (e.g., how the concept of dharma reflects a social value for the ideal king, husband and wife, brother and friend; the concepts of Brahma, dharma, and karma, the caste system, ritual sacrifice, and reincarnation) (By End of Grade 5)
- q) Understand the significance of Norse migrations and invasions (e.g., how Norse explorations stimulated the emergence of independent lords and the knightly class; locations of Norse settlements, including routes to North America, Russia, Western Europe, and the Black Sea) (By End of Grade 5)
- r) Understand social and political elements of Incan society (e.g., Incan methods for expansion and unification of their empire, daily life for different people in Incan society, the food plants that formed the basis of Incan as compared with Aztec agriculture) (By End of Grade 5)
- s) Understand the social characteristics of European society from 1450 to 1750 (e.g., how lifestyles were different among varied social classes in early modern Europe, changes in institutions of serfdom, changes in the social status of women) (By End of Grade 5)
- t) Understand the impact of the industrial revolution in Europe and the Atlantic Basin (e.g., connections between population growth, industrialization, and urbanization; the quality of life in early 19-century cities; the effects of urbanization on the development of class distinctions, family life, and the daily working lives of men, women, and children; advances made in communication

## Appendix D

and transportation; effects upon the political and economic status of women) (By End of Grade 5)

- u) Understand the advance of British power in India up to 1850, its social and economic impact, and the efforts of Indians to resist European conquest and achieve cultural renewal (By End of Grade 5)
- v) Understand aspects of education in 19th-century Europe (e.g., aspects of the basic school day for male and female students in the 19th century; how significantly education, or lack thereof, affected the lives and prospects of 19th century Europeans; differences in the daily lives of children from working, middle class, and upper class families) (By End of Grade 5)
- w) Understand how ideals and institutions of freedom, equality, justice, and citizenship have changed over time and from one society to another (By End of Grade 5)
- **view historic events through the eyes of those who were there, as shown in their art, writings, music, and artifacts**
  - a) Understand the daily life, history, and beliefs of a country as reflected in dance, music, or the other art forms (such as paintings, sculptures, and masks) (K-2)
  - b) Understand how historians learn about the past if there are no written records (3-4)
  - c) Understand the characteristics of writing forms in Mesopotamia, Egypt, and the Indus Valley and how written records shaped political, legal, religious, and cultural life (By End of Grade 5)
  - d) Understand characteristics of Mycenaean Greek society and culture (e.g., the political and social organization of the Mycenaean Greeks as revealed in archaeological and written records, how geography influenced the development of Mycenaean society, the significance of the story of the siege of Troy) (By End of Grade 5)
  - e) Understand the major cultural elements of Greek society (e.g., the major characteristics of Hellenic sculpture, architecture, and pottery and how they reflected or influenced social values and culture; characteristics of Classical Greek art and architecture and how they are reflected in modern art and architecture; Socrates' values and ideas as reflected in his trial; how Greek gods and goddesses represent non-human entities, and how gods, goddesses, and humans interact in Greek myths) (By End of Grade 5)
  - f) Understand methods used to study Zapotec, Teotihuacan, and Moche civilizations (e.g., locations of these communities and their major archaeological remains, what archaeological evidence such as clay pottery and figures reveal about Moche civilization, what remains of planned cities reveal about the structure of Zapotec and Teotihuacan civilization) (By End of Grade 5)

## Appendix D

- g) Understand aspects of the architecture of Medieval Europe (e.g., different architectural styles from this period; how some elements may still be seen in local, modern architecture) (By End of Grade 5)
- h) Understand social and religious features of West Africa (e.g., what art reveals about the societies and rulers of Benin and Ile-Ife, the story of Solomon and Sheba and the role of Sheba in African history) (By End of Grade 5)
- i) Understand major changes in the social, political, and cultural characteristics of European society after the 14th century (e.g., the effect of population decline on European agrarian and commercial economies; causes of and major figures in the Hundred Years War; the causes of peasant rebellions in Europe between 1300 and 1500; how the techniques of painting, sculpting, and architecture changed in this period) (By End of Grade 5)
- j) Understand what archaeological, artistic, and written sources can illustrate about pre-European life in the Americas (By End of Grade 5)
- k) Understand significant contributions of the Renaissance and Reformation to European society (e.g., major achievements in literature, music, painting, sculpture, and architecture in 16th-century Europe; the life and accomplishments of select figures from the Renaissance to the Reformation) (By End of Grade 5)
- l) Understand the impact of cultural achievements on 19th-century Europe and America (e.g., movements in literature, music, and the visual arts, and ways in which they shaped or reflected social and cultural values) (By End of Grade 5)
- m) Understand the emergence of a new mass and popular culture between 1900 and 1940 (e.g., how new modes of transportation affected world commerce, international migration, and work and leisure habits; how the new media - newspapers, magazines, commercial advertising, film, and radio - contributed to the rise of mass culture around the world; the new approaches to visual art represented by the works of Pablo Picasso and Henri Matisse; the types of leisure activity and sports people enjoyed; changes in clothing fashions for men and women, and how they reflected changes in social attitudes and values) (By End of Grade 5)

**Standard 3. Geography - students will use a variety of intellectual skills to demonstrate their understanding of the geography of the interdependent world in which we live; local, national, and global, including the distribution of people, places, and environments over the Earth's surface.**

- 1. Geography can be divided into six essential elements that can be used to analyze important historic, geographic, economic, and environmental questions and issues. These six elements include: the world in spatial terms, places and regions, physical settings (including natural resources), human systems, environment and society, and the use of geography.**

**Students:**

- **study about how people live, work, and utilize natural resources**
  - a) Knows geographical settings, economic activities, food, clothing, homes, crafts, and rituals of Native American societies long ago (e.g., Iroquois, Sioux, Hopi, Nez Perce, Inuit, Cherokee) (3-4)
  - b) Know basic information about marine transportation (e.g., the technology and activities of people along the Erie Canal) (K-2)
  - c) Understand the development in marine vessels constructed by people from ancient times until today (e.g., early dugout Phoenician ships, Native American canoes, the Portuguese caravel, the Chinese vessels used by Zheng He, the Arab dhow, the Norse long ships, currachs used in the British Isles, square riggers, aircraft carriers, submarines, bathyscaphs) (3-4)
  - d) Understand differences in the methods of travel from various times in human history and the advantages and disadvantages of each (e.g., the use of animals such as horses and camels; nonmotorized vehicles such as chariots and hot air balloons; motorized vehicles such as railroads, automobiles, and airplanes; modern space advancements) (K-2)
  - e) Understand the economic and social changes that occurred in late 19th century American cities (e.g., where industries and transportation expanded; geographic reasons for building factories, commercial centers, and transportation hubs; why different groups moved from the farms to the big cities and how they adjusted; living conditions in the growing cities) (By End of Grade 5)
  - f) Understand social development and labor patterns in the late 19th century West (e.g., major technological and geographic influences that affected farming, mining, and ranching; conflicts among farmers, ranchers, and miners during settlement; life on the Great Plains and the idea of “frontier”) (By End of Grade 5)
  - g) Understand the role of agriculture in early settled communities (e.g., how archaeological evidence explains the technology, social organization, and cultural

life of settled farming communities in Southwest Asia; differences between wild and domestic plants and animals; how patterns of settlement were influenced by agricultural practices) (By End of Grade 5)

- **draw maps and diagrams that serve as representations of places, physical features, and objects**
  - a) Know the locations of the southern and northern states and their economic resources (e.g., the industries and small family farms of the industrial North, the agricultural economy and slavery of the South) (By End of Grade 5)
  - b) Understand the expansion of U.S. territories in the post-Civil War era (e.g., areas the U.S. annexed, primary interests in these areas) (By End of Grade 5)
  - c) Understand the development of early agricultural communities in different regions of the world (e.g., differences between hunter-gatherer, fishing, and agrarian communities; social, cultural, and economic characteristics of large agricultural settlements and their unique problems; the development of tropical agriculture in Southeast Asia) (By End of Grade 5)
  - d) Know the maritime and overland trade routes linking regions of Afro-Eurasia and understands the importance of international trade for African and Eurasian societies (By End of Grade 5)
  - e) Understand features of trade routes in Asia, Europe, and Africa (e.g., how goods traveled from East Asia to Europe and the importance of the Indian Ocean to the societies of Asia, East Africa, and Europe; the usefulness of the camel in desert transportation and trade) (By End of Grade 5)
  - f) Understand the causes, consequences, and major patterns of international migration in the late 20th century compared to world population movements of the 19th century and the first half of the 20<sup>th</sup> (By End of Grade 5)
- **locate places within the local community, State, and nation; locate the Earth's continents in relation to each other and to principal parallels and meridians.**
  - a) Knows the basic elements of maps and globes (e.g., title, legend, cardinal and intermediate directions, scale, grid, principle parallels, projection) (3-5)
  - b) Uses map grids (e.g., latitude and longitude or alphanumeric system) to plot absolute location (3-5)
  - c) Know important buildings, statues, and monuments in the state's history (K-2)
- **identify and compare the physical, human, and cultural characteristics of different regions and people**
  - a) Understand differences between hunters and gatherers and people who cultivated plants and raised domesticated animals for food (e.g., in family life, the amounts

## Appendix D

- of land necessary for support, ability to acquire surplus food for storage and trading) (K-2)
- b) Understand that one way to make sense of something is to think how it is like something more familiar (3-5)
  - c) Recognize when comparisons might not be fair because some characteristics are not the same (3-5)
  - d) Compare people in terms of important ethnic, religious, and cultural characteristics (3-5)
  - e) Make comparisons between countries in terms of relatively concrete characteristics (e.g., size, population, products,) and abstract characteristics (e.g. the arts) (3-5)
  - f) Understand the economic, social, and cultural influence of location and physical geography on different Native American societies (e.g., Iroquois and Pueblo, Northwest and Southeast societies) (By End of Grade 5)
  - g) Understand characteristics of pastoral nomadic societies (e.g., the importance of the horse to the development of pastoral nomadism and cavalry warfare; reasons for conflict economic interdependence between pastoral nomadic peoples of Central Asia and major agrarian states of Eurasia, the location and range of nomadic peoples in the 1<sup>st</sup> millennium BCE and how they moved their herds and belongings) (By End of Grade 5)
- **investigate how people depend on and modify the physical environment**
    - a) Know ways in which early explorers and settlers adapted to, used, and changed the environment of the state or region (K-2)
    - b) Understand changes in land use and economic activities in the local community since its founding (e.g., changes in technology, the work people did, transportation, local resources) (3-4)
    - c) Understand geographic, economic, and religious reasons that brought the first explorers and settlers to the state or region, who they were, and where they settled (3-4)
    - d) Know the effects geography has had on the different aspects of societies (e.g., the development of urban centers, food, clothing, industry, agriculture, shelter, trade) (3-4)
    - e) Understand environmental issues of the late 19th century (e.g., environmental costs of pollution and depletion of natural resources; efforts of reformers to control pollution and promote concern for the natural environment) (By End of Grade 5)

## Appendix D

- f) Understand how the rise of pastoral societies was linked to the climate and geography of the Central Asian steppes, and how kinship-based pastoral society differed from the social organization of agrarian states (By End of Grade 5)
  - g) Understand the effect of geography on different groups and their trade practices (e.g., nomads, town-dwellers, trade practices on the Arabian peninsula; the goods traded and the origins of these goods) (By End of Grade 5)
  - h) Understand what contributed to increasing oceanic travel in the 15th and 16th centuries (e.g., major Spanish and Portuguese technological innovations in shipbuilding, navigation, and naval warfare; navigational inventions such as the compass, astrolabe, and quadrant; trade routes of prominent Asian and European explorers and how prevailing wind currents influenced these routes; the features of Chinese and Arab sailing vessels that made long-distance travel easier) (By End of Grade 5)
  - i) Understand major shifts in world population and urbanization in this era and how factors such as industrialization, migration, changing diets, and scientific and medical advances affected worldwide demographic trends (e.g., the changes large cities around the world went through during this period, such as Guangzhou [Canton], Cairo, Tokyo, Buenos Aires, Bombay, San Francisco, and London) Understands the experiences of immigrants to North and South America in the 19<sup>th</sup> century (By End of Grade 5)
  - j) Understand global influences on the environment (e.g., how population growth, urbanization, industrialization, warfare, and the global market economy have contributed to environmental alterations; how effective governments and citizens' groups have been at protecting the global natural environment) (By End of Grade 5)
  - k) Understand ways in which human action has contributed to long-term changes in the natural environment in particular regions or worldwide (By End of Grade 5)
2. **Geography requires the development and application of the skills of asking and answering geographic questions; analyzing theories of geography; and acquiring, organizing, and analyzing geographic information.**

**Students:**

- **ask geographic questions about where places are located; why they are located where they are; what is important about their locations; and how their locations are related to the location of other people and places**
  - a) Understand the reasons different groups came to the state or region (K-2)
  - b) Understand how urban life changed in the 1920s (e.g., how scientific management and technological innovations, including assembly lines, rapid transit, household appliances, and radio, transformed production, work and daily life; how improvements in steel construction and elevators contributed to the changes; why

## Appendix D

- people prized home ownership; why people left the cities for the suburbs) (By End of Grade 5)
- c) Understand influences on the development of various civilizations in the 4th and 3<sup>rd</sup> millennia BCE (e.g., how the natural environment of the Tigris-Euphrates, Nile, and Indus Valleys shaped the early development of civilization; different characteristics of urban development in Mesopotamia, Egypt, and the Indus Valley) (By End of Grade 5)
  - d) Understand major shifts in world demography and urbanization between 1450 and 1770 and reasons for these changes (By End of Grade 5)
  - e) Understand causes of large-scale population movements from rural areas to cities in continental Europe and how these movements affected the domestic and working lives of men and women (By End of Grade 5)
  - f) Understand why humans have built cities and how the character, function, and number of cities have changed over time (By End of Grade 5)
- **gather and organize geographic information from a variety of sources and display in a number of ways**
    - a) Understands how to make use of the multimedia resources (i.e. web searches, periodicals such as Cobblestones, census reports, Nystrom atlases and correlating classroom pull-down maps and globes, maps from various sources, standard reference works, interviews, surveys, Black Line Masters) to locate and gather geographical information about issues and problems. (K-5)
    - b) Understands and creates various types of maps in classroom and individual “hands-on” map-making activities (e.g. elevated maps, territorial maps, trade and industry maps, historical maps, etc. made with paints, butcher paper, rice, beans, cotton, computer-generated icons, etc.) (K-5)
  - **analyze geographic information by making relationships, interpreting trends and relationships, and analyzing geographic data.**
    - a) Understand how geographical features contributed to the establishment and growth of communities such as mining towns (e.g., Sacramento) and trading settlements (e.g., New Orleans, Vincennes, Astoria) (3-4)
    - b) Understand patterns and changes in population over a period of time in a city or town in the state or region (3-4)
    - c) Understand the influence of geography on the history of the state or region, and issues and approaches to problems (e.g., land use, environmental problems) (3-4)
    - d) Know areas of Eurasia and Africa where cities and dense farming populations appeared between 4000 and 1000 BCE, and understands the connection between the spread of agriculture and the acceleration of world population growth (By End of Grade 5)

## Appendix D

- e) Understand the development of Greek city-states (e.g., common features of Greek city-states in the Aegean region; the political, social, and legal character of the polis; how geography influenced the location and development of Greek city-states) (By End of Grade 5)
- f) Understand geographical and architectural features of Egypt and Kush (e.g., the locations of Egypt and Kush on the African continent and the geographic features that either assisted or hampered communication between these two kingdoms, what architectural evidence suggests about the relationship between Egypt and Kush) (By End of Grade 5)

**Standard 4. Economics - students will use a variety of intellectual skills to demonstrate their understanding of how the United States and other societies develop economic systems and associated institutions to allocate scarce resources, how major decision-making units function in the United States and other national economies, and how an economy solves the scarcity problem through market and non-market mechanisms.**

1. **The study of economics requires an understanding of major economic concepts and systems, the principles of economic decision-making, and the interdependence of economies and economic systems throughout the world.**

**Students:**

- **know some ways individuals and groups attempt to satisfy their basic needs and wants by utilizing scarce resources**
  - a) Understand that different groups, societies, and cultures have some similar wants and needs (K-2)
  - b) Know that goods are objects that can satisfy people's wants, and services are activities that can satisfy people's wants (K-2)
  - c) Know various technological developments to control fire, water, wind, and soil, and to utilize natural resources (e.g., trees, coal, oil, gas) in order to satisfy basic human needs for food, water, clothing, and shelter (3-4)
  - d) Know that natural resources are "gifts of nature" because they are present without human intervention (K-2)
  - e) Know that capital resources are things made by people that are used to make other goods or to provide services (K-2)
  - f) Know that human resources (i.e., labor or human capital) are the efforts of people who work to produce goods and to provide services (K-2)
  - g) Know that a price is the amount of money that people pay when they buy a good or service (K-2)
  - h) Know that people who use goods and services are called consumers, and people who make goods or provide services are called producers, and that most people both produce and consume (K-2)
  - i) Know that a market exists whenever buyers and sellers exchange goods and services (K-2)
  - j) Understand that in an exchange people trade goods and services for other goods and services or for money (K-2)
  - k) Know that money is a good that can be used to buy all other goods and services (K-2)

## Appendix D

- l) Understand that when two people trade because they want to, they expect to be better off after the exchange (K-2)
- m) Know that barter is trading goods and services for other goods and services without using money (K-2)
- n) Know that productive resources are all natural resources, human resources, and capital resources used to produce goods and to provide services (3-5)
- o) Know that households (i.e., individuals or family units), as consumers, buy goods and services from business firms (3-5)
- p) Knows that households, as resource owners, sell productive resources (e.g., labor, natural resources, capital resources, entrepreneurial resources) to firms in order to earn income (3-5)
- q) Understand that when consumers make purchases, goods and services are transferred from businesses to households in exchange for money payments, which are used in turn by businesses to pay for productive resources and to pay taxes (3-5)
- r) Understand the factors that shaped the economic system in the colonies and the Americas (e.g., labor systems, natural resources, relations with other countries and the home country) (By End of Grade 5)
- s) Understand the environmental and social impact of the Great Depression (e.g., the effects of the Great Depression and Dust Bowl on American farm owners, tenants, and sharecroppers; the effects of the depression on diverse groups and on local communities) (By End of Grade 5)
- **explain how people's wants exceed their limited resources and that this condition defines scarcity**
  - a) Understand that since people cannot have everything they want, they must make choices about using goods and services to satisfy wants (K-2)
  - b) Understand that goods and services are scarce because there are not enough productive resources to satisfy all of the wants of individuals, governments, and societies (3-5)
- **know that scarcity requires individuals to make choices and that these choices involve costs**
  - a) Know that a cost is what you give up when you decide to do something, and a benefit is something that satisfies your wants (K-2)
  - b) Know that choices about what goods and services to buy and consume determine how resources will be used (K-2)
  - c) Understand that when productive resources are used to produce one good or service, the opportunity cost (i.e., what is given up) is other goods and services

## Appendix D

that would have been made with the same resources if the chosen good or service had not been made (3-5)

- d) Understand that choices usually involve trade-offs; people can give up buying or doing a little of one thing in order to buy or do a little of something else (3-5)
- e) Understand the economic and social impact of the Great Depression (e.g., how the Great Depression affected industrialized economies and societies around the world; the human cost of the depression; how governments, businesses, social groups, families and individuals coped with hardships of world depression) (By End of Grade 5)
- **study about how the availability and distribution of resources is important to a nation's economic growth**
  - a) Know that economic specialization occurs when people produce a narrower range of goods and services than they consume (3-5)
  - b) Understand how labor productivity can be increased as a result of specialization, division of labor, and more capital goods such as tools and machines (3-5)
  - c) Understand that the quality of labor resources (i.e., human capital) can be improved through investments in education, training, and health care (3-5)
  - d) Know that innovation is the introduction of an invention into a use that has economic value (3-5)
  - e) Understand the development of extensive road systems (e.g., the Roman system of roads; the trade routes by camel caravan linking East Asia, Southwest Asia, and Africa during the ancient and early Middle Ages; the network of roads and highways of the Inca in Peru; the interstate highway system), the travel and communication difficulties encountered by people over vast expanses of territory, and the social and economic effects of these developments (3-4)
  - f) Know the developments in rail transportation beginning in the 19th century and the effects of national systems of railroad transport on the lives of people (3-4)
  - g) Know about technological inventions and developments that evolved during the 19<sup>th</sup> century and the influence of these changes on the lives of workers (3-4)
  - h) Know that entrepreneurs are people who use resources to produce innovative goods and services they hope people will buy (3-5)
  - i) Understand that entrepreneurs take the risk that people won't buy their products or won't pay enough for them to cover the entrepreneurs' costs (3-5)
  - j) Know that people's choices and behavior are influenced by positive incentives (i.e., rewards that make people better off) and negative incentives (i.e., penalties that make people worse off) (3-5)

## Appendix D

- k) Know that because people's views of rewards and penalties are different, the influence of an incentive can vary with the individual (3-5)
- l) Know that in any market there is one price (i.e., the equilibrium or market clearing price) that makes the amount buyers want to buy equal to the amount sellers want to sell (3-5)
- m) Understand that people buy less of a product when its price goes up and more when its price goes down (3-5)
- n) Understand that businesses are willing and able to sell more of a product when its price goes up and less when its price goes down (3-5)
- o) Know that competitive markets are those with many buyers and sellers, where no one person or firm controls prices or the number of products for sale (3-5)
- p) Understand that money reduces the problems barter faces because money is easy to divide and store (3-5)
- q) Know that banks play a key role in providing currency and other forms of money to consumers, and that banks serve as intermediaries between savers and borrowers (3-5)
- r) Understand that money makes it easier to compare the value of different kinds of goods and services and allows people to save purchasing power for a later time because it can easily be traded for goods and services at any time (3-5)
- s) Understand how active competition among sellers results in lower prices and costs, higher product quality, and better customer service (3-5)
- t) Understand how economic conditions and family life in the North and South changed over the war years (By End of Grade 5)
- u) Understand features of the labor system and economy in the Americas (e.g., why sugar, tobacco, coffee, tea, and other crops grown in the colonies became so important in the world economy; different jobs performed by indigenous peoples in the Americas) (By End of Grade 5)
- v) Understand factors that transformed American and European society in the early 20<sup>th</sup> century (e.g., how industrial development affected the culture and working lives of middle and working class people in the United States, Japan, and Europe; major scientific, medical, and technological advances in Europe and the United States at the turn of the century; popular attitudes regarding material progress and the West's global leadership) (By End of Grade 5)
- **understand how societies organize their economies to answer three fundamental economic questions: What goods and services shall be produced and in what quantities ? How shall goods and services be produced? For whom shall goods and services be produced?**

## Appendix D

- a) Understand that different groups, societies, and cultures may have different ways of meeting similar wants and needs (3-5)
  - b) Understands that federal, state, and local governments have problems of scarcity also; because they have limited budgets, they must compare their revenues to the costs of public projects their citizens want (3-5)
  - c) Understand economic life in the New England, Chesapeake, and southern colonies (e.g., environmental and human factors; the work people did; the crops that plantation, yeoman, and family farmers grew; the New England merchant's trading triangle) (By End of Grade 5)
  - d) Understand elements of African slavery during the colonial period in North America (e.g., relocation of enslaved Africans to the Caribbean and North America, the slave trade and "the middle passage") (By End of Grade 5)
  - e) Understand changes in business and labor practices during the late 19th century (e.g., reasons for child labor and its consequences, changes in business operation, how workers' lives were affected after the Civil War) (By End of Grade 5)
  - f) Understand European influence in the Americas between the 16th and 18th centuries (e.g., European activity and control in the Americas in the form of territorial empires, trading-post empires, plantation colonies, and settler colonies; how the Netherlands, England, and France became naval, commercial, and political powers in the Atlantic basin; the locations of the British and French in the Americas, and their interest in trade there; the concept of mercantilism and its advantages and disadvantages for the colonies and the mother country) (By End of Grade 5)
  - g) Understand the emergence and impact of industrialism in 18th-century England (e.g., the effects of the agricultural revolution on population growth, industrialization, and patterns of land-holding; major characteristics of industrialization; how the industrial revolution affected population shifts; how the industrial revolution in the textile industry changed the way people worked; how figures such as John Kay, James Hargreaves, James Watt, Edmund Cartwright, and Richard Arkwright contributed to industrialization in England) (By End of Grade 5)
- **investigate how production, distribution, exchange, and consumption of goods and services are economic decisions with which all societies and nations must deal**
    - a) Understand that all societies have developed various economic systems in order to allocate their resources to produce and distribute goods and services and there are advantages and disadvantages to each type of system (3-5)
    - b) Understands that when people and nations specialize, they become more interdependent (i.e., less self-sufficient and more dependent on exchange)

## Appendix D

- c) Know about the various crops, foods, and animals that were transported from the Western Hemisphere and from the Eastern Hemisphere as a result of the “Columbian Exchange” (e.g., tomato, corn, cassava, potato; horse, cattle, sugar cane) (3-4)
  - d) Understand influences on the growth of long-distance exchanges between different regions (e.g., the continuing spread of Islam, and the importance of Muslim civilization in mediating long-distance commercial, cultural, and intellectual exchanges; why new ports, manufacturing centers, merchant communities, and long-distance trade routes emerged in the region of the “Southern Seas,” from the Arabian Sea to the coasts of China) (By End of Grade 5)
  - e) Understand the interregional trading system that linked peoples of Africa, Asia, and Europe on the eve of the European overseas voyages (By End of Grade 5)
  - f) Understand major patterns of long-distance trade from ancient times to the present and how trade has contributed to economic and cultural change in particular societies or civilizations (By End of Grade 5)
2. **Economics requires the development and application of the skills needed to make informed and well-reasoned economic decisions in daily and national life.**

**Students:**

- **locate economic information, using card catalogues, computer databases, indices, and library guides**
  - a) Understands how to conduct research (i.e. web searches, library card catalog and database searches, identification of relevant periodicals) to locate and gather information about economic issues and problems. (3-5)
- **collect economic information from textbooks, standard references, newspapers, periodicals, and other primary and secondary sources**
  - a) Knows that people's choices and behavior are influenced by positive incentives (i.e., rewards that make people better off) and negative incentives (i.e., penalties that make people worse off) (3-5)
  - b) Knows that because people's views of rewards and penalties are different, the influence of an incentive can vary with the individual (3-5)
  - c) Understands that all societies have developed various economic systems in order to allocate their resources to produce and distribute goods and services and there are advantages and disadvantages to each type of system (3-5)
- **make hypotheses about economic issues and problems, testing, refining, and eliminating hypotheses and developing new ones when necessary**

## Appendix D

- a) Understands that the hope of earning profit (i.e., the difference between revenues and the costs of producing or selling a good or service) is the incentive that persuades entrepreneurs and business firms to take the risks of producing goods and services to sell (3-5)
  - b) Knows that households (i.e., individuals or family units), as consumers, buy goods and services from business firms (3-5)
  - c) Knows that households, as resource owners, sell productive resources (e.g., labor, natural resources, capital resources, entrepreneurial resources) to firms in order to earn income (3-5)
- **present economic information by developing charts, tables, diagrams, and simple graphs.**
    - a) Understands the information conveyed by and can discern the best graphic organizer tool for presenting economic information (e.g. charts, tables, graphs, etc.) (By end of Grade 5)

**Standard 5. Civics, Citizenship, and Government - students will use a variety of intellectual skills to demonstrate their understanding of the necessity for establishing governments; the governmental system of the United States and other nations; the United States Constitution; the basic civic values of American constitutional democracy; and the roles, rights, and responsibilities of citizenship, including avenues of participation.**

1. **The study of civics, citizenship, and government involves learning about political systems; the purposes of government and civic life; and the differing assumptions held by people across time and place regarding power, authority, governance, and law.**

**Students:**

- **know the meaning of key terms and concepts related to government, including *democracy, power, citizenship, nation-state, and justice***
  - a) Understand the basic principles of American democracy; right to life, liberty, and the pursuit of happiness; responsibility for the common good; equality of opportunity and equal of the law; freedom of speech and religion; majority rule with protection for rights; and limitations on government, with power held by the people and delegated by them to those officials whom they elected to office (3-4)
- **explain the probable consequences of the absence of government and rules**
  - a) Understand the basic principles of American democracy; right to life, liberty, and the pursuit of happiness; responsibility for the common good; equality of opportunity and equal of the law; freedom of speech and religion; majority rule with protection for rights; and limitations on government, with power held by the people and delegated by them to those officials whom they elected to office (3-4)
- **describe the basic purposes of government and the importance of civic life**
  - a) Understand the basic principles of American democracy; right to life, liberty, and the pursuit of happiness; responsibility for the common good; equality of opportunity and equal of the law; freedom of speech and religion; majority rule with protection for rights; and limitations on government, with power held by the people and delegated by them to those officials whom they elected to office (3-4)
- **understand that social and political systems are based upon people's beliefs**
  - a) Understand that group and cultural influences contribute to human development, identity, and behavior
  - b) Understand the development of colonial governments (e.g., how early colonies differed in the way they were established and governed, how characteristics of colonial self-government such as the right to vote and hold office were reflected in the Mayflower Compact) (By End of Grade 5)

- c) Understand the advancement of human rights and democratic ideals and practices in the world during the 20th century (By End of Grade 5)
  - **discuss how and why the world is divided into nations and what kinds of governments other nations have**
    - a) Compare political, social, economic, and religious systems of Africans, Europeans, and Native Americans who converged in the Western Hemisphere after 1492 (e.g., concepts of political authority, civic values, and the organization and practice of government; population levels, urbanization, family structure, and modes of communication; systems of labor, trade, concepts of property, and exploitation of natural resources; dominant ideas and values including religious beliefs and practices, gender roles, and attitudes toward nature) (By End of Grade 5)
2. **The state and federal governments established by the Constitutions of the United States and the State of New York embody basic civic values (such as justice, honesty, self-discipline, due process, equality, majority rule with respect for minority rights, and respect for self, others, and property), principles, and practices and establish a system of shared and limited government**

Students:

- **explain how the Constitutions of New York State and the United States and the Bill of Rights are the basis for democratic values in the United States**
  - a) Understand the unique historical conditions that influenced the formation of the state and how statehood was granted (3-4)
- **understand the basic civil values that are the foundation of American constitutional democracy**
  - a) Understand the issues and ideas supported and opposed by delegates at the Constitutional Convention (e.g., enduring features of the Constitution, such as the separation powers, and checks and balances; the Virginia Plan; the New Jersey Plan; the Compromise; abolition) (By End of Grade 5)
  - b) Understand the significance of the Bill of Rights and its specific guarantees (e.g., the relevance of the Bill of Rights in today's society) (By End of Grade 5)
- **know what the United States Constitution is and why it is important.**
  - a) Understand the issues and ideas supported and opposed by delegates at the Constitutional Convention (e.g., enduring features of the Constitution, such as the separation powers, and checks and balances; the Virginia Plan; the New Jersey Plan; the Compromise; abolition) (By End of Grade 5)
  - b) Understand the significance of the Bill of Rights and its specific guarantees (e.g., the relevance of the Bill of Rights in today's society) (By End of Grade 5)

- **understand that the United States Constitution and the Constitution of the State of New York are written plans for organizing the functions of government**
    - a) Understand the issues and ideas supported and opposed by delegates at the Constitutional Convention (e.g., enduring features of the Constitution, such as the separation powers, and checks and balances; the Virginia Plan; the New Jersey Plan; the Compromise; abolition) (By End of Grade 5)
    - b) Understand the significance of the Bill of Rights and its specific guarantees (e.g., the relevance of the Bill of Rights in today's society) (By End of Grade 5)
  - **understand the structure of New York State and local governments, including executive, legislative, and judicial branches**
    - a) Understands the basic ideas set forth in the Declaration of Independence and the New York and U.S. Constitutions, and the figures responsible for these documents (3-4)
  - **identify their legislative and executive representatives at the local, state, and national governments**
    - a) Understands the basic ideas set forth in the Declaration of Independence and the New York and U.S. Constitutions, and the figures responsible for these documents (3-4)
3. **Central to civics and citizenship is an understanding of the roles of the citizen within American constitutional democracy and the scope of a citizen's rights and responsibilities.**

**Students:**

- **understand that citizenship includes an awareness of the holidays, celebrations, and symbols of our nation**
  - a) Understand how symbols, slogans, and mottoes represent the state (K-2)
  - b) Understand the reasons that Americans celebrate certain national holidays (e.g., Martin Luther King, Jr. Day; the Fourth of July; Memorial Day) (K-2)
  - c) Know the history of American symbols (e.g., the eagle, the Liberty Bell, George Washington as the "father of our country," the national flag) (K-2)
  - d) Know why important buildings, statues, and monuments (e.g., the White House, Lincoln Memorial, Statue of Liberty, Ellis Island, Angel Island, Mt. Rushmore, veterans' memorials) are associated with state and national history (K-2)
  - e) Understand the historical events and democratic values commemorated by major national holidays (e.g., Martin Luther King, Jr. Day; President's Day; Memorial Day; the Fourth of July; Labor Day; Veteran's Day; Thanksgiving) (3-4)

## Appendix D

- f) Know the Pledge of Allegiance and patriotic songs, poems, and sayings that were written long ago, and understands their significance (3-4)
- g) Understand how songs, symbols, and slogans demonstrate freedom of expression and the role of protest in a democracy (e.g., the Boston Tea Party, the abolition of slavery, women's suffrage, labor movements, the civil rights movement) (3-4)
- **examine what it means to be a good citizen in the classroom, school, home, and community**
  - a) Understand that "acceptable" human behavior varies from culture to culture and from one time period to another, but there are some behaviors that are "unacceptable" in almost all cultures, past and present (K-2)
  - b) Understand ways in which such fundamental values as fairness, protection of individual rights, and responsibility for the common good have been applied by different groups of people (e.g., students and personnel in the local school) (K-2)
- **identify and describe the rules and responsibilities students have at home, in the classroom, and at school**
  - a) Understands that different families and classrooms have different rules and patterns of behavior, but there are some behaviors that are not accepted in most families or schools (K-2)
- **examine the basic principles of the Declaration of Independence and the Constitutions of the United States and New York State**
  - a) Understands the basic ideas set forth in the Declaration of Independence and the New York and U.S. Constitutions, and the figures responsible for these documents (3-4)
- **understand that effective, informed citizenship is a duty of each citizen, demonstrated by jury service, voting, and community service**
  - a) Know how different groups of people in the community have taken responsibility for the common good (e.g., the police department, the fire department, senior citizen home, soup kitchen) (K-2)
  - b) Understand how people have helped newcomers get settled and learn the ways of the new country (e.g., family members, fraternal organizations, houses of worship) (K-2)
  - c) Understand how people in the local community have displayed courage in helping the common good (e.g., volunteering in unique situations including earthquakes, floods, and fires) (3-4)
  - d) Understand how people have helped make the community a better place to live (e.g., working to preserve the environment, helping the homeless, restoring houses in low-income areas) (3-4)

- **identify basic rights that students have and those that they will acquire as they age**
  - a) Understand the significance of the Bill of Rights and its specific guarantees (e.g., the relevance of the Bill of Rights in today's society) (By End of Grade 5)
- 4. **The study of civics and citizenship requires the ability to probe ideas and assumptions, ask and answer analytical questions, take a skeptical attitude toward questionable arguments, evaluate evidence, formulate rational conclusions, and develop and refine participatory skills.**

**Students:**

- **show a willingness to consider other points of view before drawing conclusions or making judgments**
  - a) Understands that people are alike in many ways and different in many ways (K-2)
- **participate in activities that focus on a classroom, school, or community issue or problem**
  - a) Know that disagreements are common, even between family members or friends (K-2)
- **suggest alternative solutions or courses of action to hypothetical or historic problems**
  - a) Understand that some ways of dealing with disagreements work better than others, and that people who are not involved in an argument may be helpful in solving it (K-2)
  - b) Know that communicating different points of view in a dispute can often help people to find a satisfactory compromise (3-5)
- **evaluate the consequences for each alternative solution or course of action**
  - a) Understand that resolving a conflict by force rather than compromise can lead to more problems (3-5)
  - b) Understand that one person's exercise of freedom may conflict with the freedom of others and that rules can help to resolve conflicting freedoms (3-5)
- **prioritize the solutions based on established criteria**
  - a) Understand how to weigh the relative pros and cons of various solutions, using establish criteria to gauge their probable efficacy.
  - b) Understand through discussion, debate and/or journal writing how to prioritize proposed solutions based on the relative merits weighed against the relative shortcomings of said proposed solutions. (3-5)
- **propose an action plan to address the issue of how to solve the problem.**

## Appendix D

- a) Understand that if a conflict cannot be settled by compromise, it may be decided by a vote if everyone agrees to accept the results

**Mathematics Alignment to New York State Learning Standards****Intermediate Level**

**Standard #1** Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions.

**A. Mathematical Analysis**

**1. Abstraction and symbolic representation are used to communicate mathematically.**

**Students:**

- **Extend mathematical notation and symbolism to include variables and algebraic expressions in order to describe and compare quantities and express mathematical relationships**
  - a) Explain and show solution processes in a variety of ways (e.g., words, numbers, symbols, pictures, charts, graphs, tables, diagrams and models) (7-8)
  - b) Use mathematics notation, terms and language to express solutions (7-8)
  - c) Support solutions with algebraic evidence (8)

**2. Deductive and inductive reasoning are used to reach mathematical conclusions.**

**Students:**

- **Use inductive reasoning to construct, evaluate, and validate conjectures and arguments, recognizing that patterns and relationships can assist in explaining and extending mathematical phenomena**
  - a) Devise formulas (e.g., surface area and volume) (7-8)
  - b) Identify patterns in number sequences (including sequences with integral terms) (7-8)
  - c) Apply strategies and results from similar problems to more complex problems (7-8)

### 3. Critical thinking skills are used in the solution of mathematical problems.

#### Students:

- **Apply mathematical knowledge to solve real-world problems and problems that arise from the investigation of mathematical ideas, using representations such as pictures, charts and tables**
  - a) Solve a wide variety of problems involving data sets, rate, ratio, proportion, experiments and geometry using models and representations (6-8)

**Standard #3 Students will understand mathematics and become mathematically confident by communicating and reasoning mathematically, by applying mathematics in real-world settings, and by solving problems through the integrated study of number systems, geometry, algebra, data analysis, probability, and trigonometry.**

#### 1. Students use mathematical reasoning to analyze mathematical situations, make conjectures, gather evidence, and construct an argument.

##### Students:

- **Apply a variety of reasoning strategies**
  - a) Use pictures, diagrams and patterns to solve problems (6-8)
  - b) Use 'guess and check' (6-8)
  - c) Use a simpler but related problem (6-8)
  - d) Use proportional reasoning, ratios and rates to solve problems (7-8)
- **Make and evaluate conjectures and arguments using appropriate language.**
  - a) Discriminate relevant from irrelevant information (6-8)
  - b) Explore the effects of changing parameters of a problem statement (7-8)
  - c) Seek a general solution and determine cases in which a general solution does not apply (7-8)
  - d) Explain solution processes in a variety of ways (verbal and written explanation, charts and graphs, diagrams) (7-8)
  - e) Use mathematical language and notation to express a solution (7-8)
- **Make conclusions based on inductive reasoning**
  - a) Devise formulas (such as surface area and volume) (7-8)
  - b) Identify patterns in number sequences (including sequences with integral terms) (7-8)

- c) Apply strategies and results from similar problems to more complex problems (7-8)
- **Justify conclusions involving simple and compound (i.e., and/or) statements**
  - a) Solve logic problems (6-8)
  - b) Find numbers that satisfy one or more conditions (7-8)
- 2. **Students use number sense and numeration to develop an understanding of the multiple uses of numbers in the real world, the use of numbers to communicate mathematically, and the use of numbers in the development of mathematical ideas.**

**Students:**

- **Understand, represent, and use numbers in a variety of equivalent forms (integer, fraction, decimal, percent, exponential, expanded and scientific notation).**
  - a) Read and write numbers to one billion (6)
  - b) Express numbers using powers of 10 from  $10^0$  to  $10^6$  (6-8)
  - c) Read and evaluate numerical expressions with positive and zero exponents (7-8)
  - d) Write decimals in expanded form and write numbers in expanded form with scientific notation (7-8)
  - e) Calculate equivalencies among percent, fractions and decimals, including repeat decimals (6-8)
  - f) Read, write and order integers, rational and irrational numbers (7-8)
  - g) Describe the relationship between subsets of the real number system (7-8)
  - h) Approximate integers and rational numbers using scientific notation (7-8)
  - i) Understand the meaning of the absolute value symbol (7-8)
- **Understand and apply ratios, proportions, and percents through a wide variety of hands-on explorations.**
  - a) Use circle graphs to explore the concept of percent (6)
  - b) Relate fractional notation to ratio and probability (6-7)

- c) Use ratios and proportions to interpret map scales and scale drawings (6)
  - d) Solve problems involving percent increase or decrease, including percents greater than 100%. For example, if the bicycle you want to buy is on sale for 30% off its regular price of \$165.00, what is the sale price? (7)
  - e) Solve word problems involving percent including sales tax, commission, taxes and simple interest (7)
  - f) Compare two values or variables as ratios using appropriate notations such as  $a/b$ ,  $a$  to  $b$ , and  $a:b$  (6)
  - g) Solve word problems involving proportions with one unknown variable (7-8)
  - **Develop an understanding of number theory (primes, factors and multiples)**
    - a) Factor numbers using the rules for divisibility (6)
    - b) Use factoring techniques to find common denominators (6)
    - c) Determine whether a number is a prime number or a composite number, and explain the concepts of prime and composite numbers (6)
  - **Recognize order relations for decimals, integers, and rational numbers**
    - a) Compare and order positive and negative decimals, mixed numbers, whole numbers and fractions with like and unlike denominators (including percent and scientific notation), using the signs  $<$ ,  $>$ , and  $=$  (6-7)
3. **Students use mathematical operations and relationships among them to understand mathematics.**

**Students:**

- **Add, subtract, multiply, and divide fractions, decimals and integers**
  - a) Solve division problems with remainders by rounding a decimal quotient (6)
  - b) Multiply mixed numbers and fractions (6)
  - c) Add and subtract positive and negative decimals, mixed numbers, whole numbers and fractions with like and unlike denominators (6-7)
  - d) Multiple and divide positive and negative decimals, mixed numbers, whole numbers and fractions, including dividing by a fraction (6)

- e) Solve problems that involve addition, subtraction, and/or multiplication with fractions and mixed numbers, with and without regrouping. These problems include like and unlike denominators. Express answers in simplest form (6)
- f) Solve multi-step consumer application problems involving fractions and decimals (6)
- g) Determine the absolute value of a number and numerical expression (7-8)
- h) Raise rational numbers to whole number powers (7-8)
- **Explore and use the operations dealing with roots and powers**
  - a) Identify perfect squares (and square roots) to 144 (7-8)
  - b) Know that the square of any number is positive (7-8)
  - c) Understand that any number has two square roots (7-8)
  - d) Use powers with 0 and positive exponents (7-8)
- **Use grouping symbols (parentheses) to clarify the intended order of operations**
  - a) Use the order of operations in a multi-step calculation (6)
  - b) Extend the use of order of operations to include parentheses and roots (7-8)
- **Apply the associative, commutative, distributive, inverse and identity properties**
  - a) Illustrate an understanding of the commutative property by usage and identifying examples and counter examples. For example,  $12 \times 8$  is the same as  $8 \times 12$  (6)
  - b) Identify the reciprocal of a given fraction and know that the product of a given number and its reciprocal = 1 (6)
  - c) Understand the role of the additive inverse in the set of integers (6)
  - d) Understand that integers include natural numbers, their additive inverses and zero (7)
  - e) Use properties of numbers to simplify expressions, do mental arithmetic and solve equations (6-8)
  - f) Understand the inverse relationships of exponentiation and root extraction (7-8)

- **Demonstrate and understanding of operational algorithms (e.g., procedures for adding, subtracting)**
  - a) Explain the reason for each step in a basic calculation (6-7)
  - b) Use a variety of procedures to divide fractions and explain why they work (6-7)
  - c) Explain the solution to a multi-step calculation involving basic operations and absolute value (7-8)
  - d) Explain why the steps in solving a simple equation are valid (7-8)
- **Develop appropriate proficiency with facts and algorithms**
  - a) Use mental math strategies (6-8)
  - b) Know basic facts (addition, subtraction, multiplication and division) with proficiency (6)
- **Apply concepts of ratio and proportion to solve problems**
  - a) Use ratio and proportion concepts to solve simple word problems (6)
  - b) Solve problems that involve rate, similar polygons, recipes and scale drawings (7-8)
- 4. **Students use mathematical modeling/multiple representation to provide a means of presenting, interpreting, communicating, and connecting mathematical information and relationships.**

**Students:**

- **Visualize, represent and transform two- and three-dimensional shapes**
  - a) Understand the effects of changing basic shapes (e.g. rectangle into parallelogram) (6)
  - b) Recognize rotations, reflections and translations of shapes (6)
  - c) Sketch, construct models and identify basic 3-dimensional shapes (i.e. cone, cylinder, pyramid, prism) (6)
  - d) Construct a two-dimensional pattern for a three-dimensional figure (7-8)
  - e) Identify the elements of three-dimensional figures (7-8)
- **Use maps and scale drawings to represent real objects or places**
  - a) Make and interpret scale drawings using inch or centimeter grids (6)
  - b) Select and use an appropriate scale for a map/drawing (7)

- c) Construct scale drawings with reasonable accuracy (7)
- **Use the coordinate plane to explore geometric ideas**
  - a) Use geoboards and graph paper to explore polygons and their properties (6)
  - b) Use geoboards and graph paper to develop measurement formulas and other geometric ideas (7)
- **Represent numerical relationships in one- and two-dimensional graphs**
  - a) Create data summaries by using the appropriate graphic representation (i.e., line, bar or circle) (6)
  - b) Solve problems requiring interpretation and application of graphically displayed data (6)
  - c) Plot points of a coordinate plane, using ordered pairs of positive and negative whole numbers (6)
  - d) Use the terms origin, x-axis and y-axis working with the coordinate plane (6-7)
  - e) Graph simple functions and solve problems involving use of a coordinate plane (6-7)
- **Use variables to represent relationships**
  - a) Understand the meaning of a variable (6)
  - b) Write and solve simple one-step equations (6)
  - c) Use variables and appropriate operations to write an expression, equation, inequality, or system of equations or inequalities that represent a verbal description (e.g. the square of an expression) (6-8)
- **Use concrete materials and diagrams to describe the operation of real world processes and systems**
  - a) Use tree diagrams and lists of possible events to solve basic combinatoric problems (6)
  - b) Model situations geometrically to interpret, formulate and solve problems
- **Develop and explore models that do and do not rely on chance**
  - a) Represent and count the elements in a sample space (6)
  - b) Identify events with a probability equal to zero, events that are certain and events that happen sometimes (6)

- **Investigate both two- and three-dimensional transformations**
    - a) Identify lines of symmetry (6)
    - b) Use coordinate grids to plot simple figures (6)
    - c) Identify similar and congruent shapes and determine their image under simple transformations in the coordinate plane (6-7)
  - **Use appropriate tools to construct and verify geometric relationships**
    - a) Draw and measure congruent and similar figures using rulers, compasses and protractors (6)
    - b) Use compasses, rulers and protractors to identify and construct basic elements of geometric figures including radii, diameters and chords of circles; altitudes, midpoints, diagonals, angle bisectors and perpendicular bisectors of triangles
  - **Develop procedures for basic geometric constructions**
    - a) Construct an angle with a given measure (6)
    - b) Bisect an angle, using compass and straight edge (6-7)
    - c) Draw the perpendicular bisector of a line using a protractor and ruler (6-7)
5. **Students use measurement in both metric and English measure to provide a major link between the abstractions of mathematics and the real world in order to describe and compare objects and data.**

**Students:**

- **Estimate, make and use measurements in real-world situations**
  - a) Measure temperatures of familiar substances (6)
  - b) Relate volume to capacity in metric and English systems (6)
  - c) Determine the reasonableness of measurements (6)
  - d) Estimate measures (6-8)
- **Select appropriate standard and nonstandard measurement units and tools to measure a desired degree of accuracy**
  - a) Associate the prefixes used in the metric system with quantities: kilo, hecto, deka, deci, centi, milli
  - b) Compare and convert units of measure of length, weight/mass, capacity and volume within the U.S. Customary system and within the metric system. Estimate the conversions between units in each system (6-8)
  - c) Measure the number of degrees in an angle (6)

- d) Determine the degree of accuracy needed in a measurement situation (8)
- e) Determine significant digits in a measurement (8)
- **Develop measurement skills and informally derive and apply formulas in direct measurement activities**
  - a) Measure area, perimeter, circumference and volume using manipulative materials (6)
  - b) Find the area and perimeter of a rectangle, square, triangle (6)
  - c) Find the area of a circle (6)
  - d) Find the circumference of a circle (6)
  - e) Find the volume of rectangular solids and find a missing dimension given the volume (6-7)
  - f) Derive and use formulas for surface area of a solid, volume of right circular cylinders, spheres, cones and pyramids (8)
  - g) Understand the relationship between length, area and volume (7-8)
  - h) Find the measure of the sides and angles of a right triangle, using the Pythagorean theorem and trigonometric ratios (7-8)
- **Use statistical methods and measures of central tendencies to display, describe, and compare data**
  - a) Find the mean, median and mode of a data set (6)
  - b) Compare the meaning of each measure of central tendency (6)
  - c) Find the range of a data set (6)
  - d) Determine which measure of central tendency is best for a given situation (7)
  - e) Organize and display collected data in charts, tables, broken line graphs, circle graphs, stem and leaf plots and box and whisker plots (7-8)
- **Explore and produce graphic representations of data using calculators/computers**
  - a) Compare graphs displayed on a computer screen or graphing calculator (6)
  - b) Use graphing calculators and computer spreadsheets to organize and analyze data (7-8)

- **Develop critical judgment for the reasonableness of measurement**
  - a) Judge whether a pair of metric and English measures are approximately equal (6-7)
  - b) Determine a method for comparing measures in given problem situation, such as the number of feet per second or miles per hour (7-8)
- 6. **Students use ideas of uncertainty to illustrate that mathematics involves more than exactness when dealing with everyday situations.**

**Students:**

- **Use estimation to check the reasonableness of results obtained by computation, algorithms, or the use of technology**
  - a) Round numbers to the nearest hundredth and up to 10,000 (6)
  - b) Relate rounding skills to estimation (6)
  - c) Round fractions and decimal numbers for estimates in computation (6)
  - d) Determine the effects of addition, subtraction, multiplication and division on size and order of numbers (6)
  - e) Estimate the solutions/outcomes of problems/experiments and compare the results with the prediction (6-7)
- **Use estimation to solve problems for which exact answers are inappropriate**
  - a) Judge when an estimate is more appropriate than an exact answer (6)
- **Estimate the probability of events**
  - a) Know that probability is a measure of the likelihood that an event will happen and express probability of a given event as a fraction and as a ratio (6)
  - b) Make predictions based on sample data (6)
  - c) Know that the larger the sample the closer the experimental and theoretical probabilities of an event
  - d) Make lists of permutations and combinations (7)
  - e) Using simple events, compute relative frequency, cumulative frequency and cumulative relative frequency (8)
- **Use simulation techniques to estimate probabilities**
  - a) Conduct simulations for experiments that are too difficult to determine experimentally, such as a computer simulation to estimate the value of pi (6-8)

- **Determine the probabilities of independent and mutually exclusive events**
  - a) Conduct experiments of independent and mutually exclusive events (6)
  - b) Understand the difference between experimental and theoretical probability, and express examples of each as fractions, decimals or percents (6)
  - c) Use the formula for computing probability  $P(e) = f/n$  (7-8)
  - d) Determine combinations and permutations (7-8)
- 7. **Students use patterns and functions to develop mathematical power, appreciate the true beauty of mathematics, and construct generalizations that describe patterns simply and efficiently.**

**Students:**

- **Recognize, describe, and generalize a wide variety of patterns and functions**
  - a) Interpolate or extrapolate simple patterns of numbers (6)
  - b) Recognize and describe simple functions in terms of rules (6)
  - c) Describe functions in algebraic terms (6-8)
  - d) Describe and extend numerical and geometric patterns, including triangular numbers, perfect squares, patterns formed by powers of 10, and arithmetic sequences (6-8)
- **Describe and represent patterns and functional relationships using tables, charts and graphs, algebraic expressions, rules, and verbal descriptions**
  - a) Use tables and graphs to help identify patterns (6)
  - b) Use a variety of representations for the same functional relationship (6)
  - c) Organize and analyze data using a variety of methods including table of values, algebraic expressions, formulas, graphs and informal interpolation/extrapolation (7-8)
- **Develop methods to solve basic linear and quadratic equations**
  - a) Recognize variables and solve one-step linear equations (6)
  - b) Solve a simple proportional equation (6)
  - c) Solve two-step equations with one variable (7-8)
  - d) Use the addition, subtraction, multiplication and division properties of inequalities to solve problems (8)
  - e) Model and solve word problems that involve direct variation including rate, average speed, distance (7-8)

- f) Use algebraic expressions, equations and inequalities to model linear and non-linear situations including direct and inverse variation, exponential growth and quadratic behavior (8)
- g) Understand the basic properties of linear graphs that depict additive and multiplicative functions (8)
- **Develop an understanding of functions and functional relationships: that a change in one quantity (variable) results in change in another**
  - a) Understand that the purpose of tables and graphs is to show the relationship between values of two quantities (6)
  - b) Use proportional relationships in a variety of problem situations (6)
  - c) Determine if quantities vary directly or indirectly and graph the data
  - d) Determine if a relationship is a function (8)
- **Verify the results of substituting variables**
  - a) Check an equation (7)
- **Apply the concept of similarity in relevant situations.**
  - a) Explore the concept of similarity in art and nature (6)
  - b) Determine if geometric figures (quadrilaterals and triangles) are similar or congruent and write proportions to express the relationships between corresponding parts (6-7)
- **Use properties of polygons to classify them**
  - a) Identify and use the signs that mean is congruent to, is similar to, is parallel to, and is perpendicular to with respect to the properties of quadrilaterals (6)
  - b) Understand the basic properties of a parallelogram, rectangle, square, trapezoid and rhombus and make comparisons between the figures (6)
- **Explore relationships involving points, lines, angles, and planes**
  - a) Estimate angles to 30 degrees and use the appropriate tools to measure the given angles
  - b) Name, classify and measure angles and apply the relationship between angle pairs such as complementary, supplementary, alternate interior and exterior and vertical angles (9)
  - c) Know and apply the relationship between the interior and exterior angles of a polygon (8)
  - d) Know how to determine the sum of the degrees of the interior angles of a polygon and use the information to solve problems (8)

- e) Classify triangles (8)
- **Develop and apply the Pythagorean principle in the solution of problems.**
  - a) Develop the Pythagorean theorem (6)
  - b) Apply the Pythagorean theorem to solve problems (6-8)
- **Explore and develop basic concepts of right triangle geometry**
  - a) Understand the relationships between the sides of a right triangle (8)
  - b) Develop and use the formulas for sine, cosine and tangent (8)
  - c) Explore and apply the relationship between corresponding angles of similar polygons (6-7)
- **Use patterns and functions to represent and solve problems**
  - a) Use patterns and functions to solve word problems (7-8)

## English Language Arts Alignment to New York State Learning Standards

### Intermediate Level

**Standard 1** Students will read, write, listen, and speak for information and understanding. As listeners and readers, students will collect data, facts, and ideas; discover relationships, concepts, and generalizations; and use knowledge generated from oral, written, and electronically produced texts. As speakers and writers, they will use oral and written language to acquire, interpret, apply, and transmit information.

**1.** Listening and reading to acquire information and understanding involves collecting data, facts, and ideas; discovering relationships, concepts, and generalizations; and using knowledge from oral, written, and electronic sources.

**Students:**

- **interpret and analyze information from textbooks and nonfiction books for young adults, as well as reference materials, audio and media presentations, oral interviews, graphs, charts, diagrams, and electronic databases intended for a general audience**

- a) Distinguish between facts and opinions
- b) Paraphrase what is heard or read
- c) Summarize what is heard or read
- d) Gather information from interviews
- e) Access and use information from print and electronic resources (using keywords, indices, cross-references)

- **compare and synthesize information from different sources**

- a) Make lists having accessed information from print and electronic sources
- b) Distinguish between facts and opinions
- c) Synthesize information to construct new concepts
- d) Connect knowledge within and across disciplines

- **use a wide variety of strategies for selecting, organizing, and categorizing information**

- a) Use a variety of planning strategies to generate and organize ideas
- b) Identify questions to be answered
- c) Organize information for use in written and oral presentations
- d) Establish central idea, organization, elaboration, and unity

- e) Connect knowledge within and across disciplines
  - f) Draw conclusions and make inferences based on explicit and implied information
- **distinguish between relevant and irrelevant information and between fact and opinion**
    - a) Identify questions to be answered.
    - b) Distinguish between facts and opinions
    - c) Use a variety of planning strategies to generate and organize ideas
    - d) Organize information from multiple sources in different ways
    - e) Draw conclusions and make inferences based on explicit and implied information
  - **relate new information to prior knowledge and experience**
    - a) Use knowledge of word origins and derivations
    - b) Use context clues to read unfamiliar words
    - c) Hypothesize
    - d) Make, confirm, or revise predictions as needed
    - e) Use knowledge of literary forms to aid comprehension and predict outcomes
    - f) Connect knowledge within and across disciplines
  - **understand and use the text features that make information accessible and usable, such as format, sequence, level of diction, and relevance of details**
    - a) Communicate orally as leader and contributor
    - b) Organize information for use in written and oral presentations
    - c) Select vocabulary and information to enhance the central idea, tone, and voice.
- 2. Speaking and writing to acquire and transmit information requires asking probing and clarifying questions, interpreting information in one's own words, applying information from one context to another, and presenting the information and interpretation clearly, concisely, and comprehensibly.**

**Students:**

- **produce oral and written reports on topics related to all school subjects**
  - a) Organize information for use in written and oral presentations
  - b) Use technology to draft, edit and finalize a written report
- **establish an authoritative stance on the subject and provide references to establish the validity and verifiability of the information presented**
  - a) Use information from print and electronic resources.

- b) Organize information from multiple sources in different ways
- c) Gather information from interviews.
- d) Distinguish between facts and opinions
- **organize information according to an identifiable structure, such as compare/contrast or general to specific**
  - a) Distinguish between facts and opinions
  - b) Compare and contrast points of view
  - c) Present a convincing argument
  - d) Compare and contrast information about one topic contained in different selections
  - e) Organize information from multiple sources in a different ways
- **develop information with appropriate supporting material, such as facts, details, illustrative examples or anecdotes, and exclude extraneous material**
  - a) Use information from print and electronic resources.
  - b) Organize information from multiple sources in different ways
  - c) Gather information from interviews.
  - d) Use a variety of planning strategies to generate and organize ideas.
  - d) Establish central idea, organization, elaboration and unity
  - e) Revise writing for clarity
  - f) Present a convincing argument
- **use the process of pre-writing, drafting, revising, and proofreading ( the "writing process") to produce well-constructed informational texts**
  - a) Use a variety of planning strategies to generate and organize ideas.
  - b) Establish central idea, organization, elaboration and unity
  - c) Expand and embed ideas by using modifiers, standard coordination, and subordination in complete sentences
  - d) Revise writing for clarity
- **use standard English for formal presentation of information, selecting appropriate grammatical constructions and vocabulary, using a variety of sentence structures, and observing the rules of punctuation, capitalization, and spelling**
  - a) Select vocabulary and information to enhance the central idea, tone, and voice
  - b) Edit final copies for correct use of language: subject-verb and pronoun-antecedent agreement, consistent tense inflections, and adverb and adjective usage
  - c) Edit final copies for writing mechanics: format, capitalization, punctuation, and spelling

**Standard 2. Students will read, write, listen, and speak for literary response and expression. Students will read and listen to oral, written, and electronically produced texts and performances, relate texts and performances to their own lives, and develop an understanding of the diverse social, historical, and cultural dimensions the texts and performances represent. As speakers and writers, students will use oral and written language for self-expression and artistic creation.**

**1. Listening and reading for literary response involves comprehending, interpreting, and critiquing imaginative texts in every medium, drawing on personal experiences and knowledge to understand the text, and recognizing the social, historical and cultural features of the text.**

**Students:**

- **read and view texts and performances from a wide range of authors, subjects, and genres**
  - a) Read a variety of fiction (realistic, fantasy, historical, and biographical) and nonfiction.
  - c) Read and write a variety of poetry
  - d) Read a Shakespearean play
- **understand and identify the distinguishing features of the major genres and use them to aid their interpretation and discussion of literature**
  - a) Use knowledge of literary forms to aid comprehension and predict outcomes
  - b) Compare and contrast authors' styles
  - c) Compare and contrast plot and character development in narrative poems, short stories, and longer fiction selections.
- **identify significant literary elements (including metaphor, symbolism, foreshadowing, dialect, rhyme, meter, irony, climax) and use those elements to interpret the work**
  - a) Distinguish between first- and third-person point of view
  - b) Explain how character and plot development are used in a selection to support a central conflict or story line
  - c) Describe the visual images created by language
  - d) Describe how word choice, speaker, and imagery elicit a response from the reader
  - e) Compare and contrast plot and character development in narrative poems, short stories, and longer fiction selections
- **recognize different levels of meaning**

a) Describe how word choice, speaker, and imagery elicit a response from the reader.

- **read aloud with expression, conveying the meaning and mood of a work**

a) Present a report to the class.

b) Present at a Paragon night

- **evaluate literary merit based on an understanding of the genre and the literary elements**

a) Read a variety of fiction (realistic, fantasy, historical, and biographical) and nonfiction.

b) Read and write a variety of poetry

c) Compare and contrast authors' styles.

**2. Speaking and writing for literary response involves presenting interpretations, analyses, and reactions to the content and language of a text. Speaking and writing for literary expression involves producing imaginative texts that use language and text structures that are inventive and often multilayered.**

**Students:**

- **present responses to and interpretations of literature, making reference to the literary elements found in the text and connections with their personal knowledge and experience**

a) Describe how the author's style elicits emotional response from the reader

b) Distinguish between first- and third-person point of view

c) Explain how character and plot development are used in a selection to support a central conflict or story line

d) Describe the visual images created by language

e) Describe how word choice, speaker, and imagery elicit a response from the reader

- **produce interpretations of literary works that identify different levels of meaning and comment on their significance and effect**

a) Describe how the author's style elicits emotional response from the reader

b) Describe the visual images created by language

c) Describe how word choice, speaker, and imagery elicit a response from the reader

- **write stories, poems, literary essays, and plays that observe the conventions of the genre and contain interesting and effective language and voice**

a) Read and write a variety of poetry

b) Write narratives, descriptions, and explanations

- **use standard English effectively**
  - a) Select vocabulary and information to enhance the central idea, tone, and voice
  - b) Edit final copies for correct use of language: subject-verb and pronoun-antecedent agreement, consistent tense inflections, and adverb and adjective usage
  - c) Edit final copies for writing mechanics: format, capitalization, punctuation, and spelling

**Standard 3. Students will read, write, listen, and speak for critical analysis and evaluation. As listeners and readers, students will analyze experiences; ideas, information, and issues presented by others using a variety of established criteria. As speakers and writers, they will present, in oral and written language and from a variety of perspectives, their opinions and judgments on experiences, ideas, information and issues.**

**1. Listening and reading to analyze and evaluate experiences, ideas, information, and issues requires using evaluative criteria from a variety of perspectives and recognizing the difference in evaluations based on different sets of criteria.**

**Students:**

- **analyze, interpret, and evaluate information, ideas, organization, and language from academic and nonacademic texts, such as textbooks, public documents, book and movie reviews, and editorials**
  - a) Draw conclusions and make inferences based on explicit and implied information.
  - b) Paraphrase what is heard or read.
  - c) Summarize what is heard or read
  - d) Use information from print and electronic resources
- **assess the quality of texts and presentations, using criteria related to the genre, the subject area, and purpose (e. g., using the criteria of accuracy, objectivity, comprehensiveness, and understanding of the genre to evaluate a sports editorial)**
  - a) Select interrelated characters, environments, and situations for simple dramatizations.
  - b) Plans and records improvisations based on personal experience and heritage, imagination, literature and history.
  - c) Compare the use of fact and fantasy in historical fiction with other forms of literature.

- **understand that within any group there are many different points of view depending on the particular interests and values of the individual, and recognize those differences in perspective in texts and presentations (E. g., in considering whether to let a new industry come into a community, some community members might be enthusiastic about the additional jobs that will be created while others are concerned about the air and noise pollution that could result.)**

- a) Distinguish between facts and opinions
- b) Compare and contrast points of view

- **evaluate their own and others' work based on a variety of criteria (e. g., logic, clarity, comprehensiveness, conciseness, originality, conventionality) and recognize the varying effectiveness of different approaches**

- a) Evaluate own contributions to discussions
- b) Summarize and evaluate group activities
- c) Analyze the effectiveness of participant interactions
- d) Revise writing for clarity.
- e) Compare and contrast authors' style

**2. Speaking and writing for critical analysis and evaluation requires presenting opinions and judgments on experiences, ideas, information, and issues clearly, logically, and persuasively with reference to specific criteria on which the opinion or judgment is based.**

**Students:**

- **present (in essays, position papers, speeches, and debates) clear analyses of issues, ideas, texts, and experiences, supporting their positions with well-developed arguments**

- a) Present a convincing argument
- b) Distinguish between facts and opinions
- c) Compare and contrast points of view

- **develop arguments with effective use of details and evidence that reflect a coherent set of criteria (e. g., reporting results of lab experiments to support a hypothesis)**

- a) Organizes information from multiple sources in different ways
- b) Hypothesize.
- c) Present a convincing argument

- **monitor and adjust their own oral and written presentations according to the standards for a particular genre (e. g., defining key terms used in a formal debate)**

- a) Write narratives, descriptions, and explanations
- b) Revise writing for clarity

- c) Select vocabulary and information to enhance the central idea, tone, and voice
- **use standard English, precise vocabulary, and presentational strategies effectively to influence an audience**
- a) Select vocabulary and information to enhance the central idea, tone, and voice.
- b) Establish central idea, organization, elaboration, and unity
- c) Expand and embed ideas by using modifiers, standard coordination, and subordination in complete sentences.
- d) Revise writing for clarity
- e) Edit final copies for correct use of language; subject-verb and pronoun-antecedent agreement, consistent tense inflections and adverb and adjective usage.
- f) Edit final copies for writing mechanics: format, capitalization, punctuation, and spelling

**Standard 4. Students will read, write, listen, and speak for social interaction. Students will use oral and written language for effective social communication with a wide variety of people. As readers and listeners, they will use the social communications of others to enrich their understanding of people and their views.**

**1. Oral communication in formal and informal settings requires the ability to talk with people of different ages, genders, and cultures, to adapt presentations to different audiences, and to reflect on how talk varies in different situations.**

**Students:**

- **listen attentively to others and build on others' ideas in conversations with peers and adults**
- a) Communicate as leader and contributor
- **express ideas and concerns clearly and respectfully in conversations and group discussions**
- a) Analyze the effectiveness of participant interactions.
- b) Summarize and evaluate group activities.
- **learn some words and expressions in another language to communicate with a peer or adult who speaks that language**
- a) Have each student communicate to classmates an expression in another language using a parent, grandparent or neighbor as a source (Given the

ethnic diversity of Queens, it may be possible to have a dozen different languages in this exercise)

- **use verbal and nonverbal skills to improve communication with others**
  - a) Evaluate own contributions to discussions
  - b) Summarize and evaluate group activities
  - c) Analyze the effectiveness of participant interactions

**2. Written communication for social interaction requires using written messages to establish, maintain, and enhance personal relationships with others.**

**Students:**

- **write social letters, cards, and electronic messages to friends, relatives, community acquaintances, and other electronic network users**
- **use appropriate language and style for the situation and the audience and take into account the ideas and interests expressed by the person receiving the message**
- **read and discuss social communications and electronic communications of other writers and use some of the techniques of those writers in their own writing**
  - a) Send e-mail messages to friends and pen pals
  - b) Send letters to government officials asking of support for a piece of legislation or action on an issue
  - c) Write two different letters on the same topic with the same facts but through difference in tone and language communicate a different message
  - d) Read author's correspondence to family and friends and discuss the techniques used

**Science Alignment to New York State Learning Standards**

**Intermediate**

**Standard #1** Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions.

**A. Scientific Inquiry**

**1. The central purpose of scientific inquiry is to develop explanations of natural phenomena in a continuing, creative process.**

**Students:**

- **formulate questions independently with the aid of references appropriate for guiding the search for explanations of everyday observations**
- **construct explanations independently for natural phenomena, especially by proposing preliminary visual models of phenomena**
- **represent, present, and defend their proposed explanations of everyday observations so that they can be understood and assessed by others**
- **seek to clarify, to assess critically, and to reconcile with their own thinking the ideas presented by others, including peers, teachers, authors and scientists.**

➤ Investigate solutions to a local problem. For example, the flight delays at LaGuardia airport, a not-to-distant neighbor of OWN Charter School. Working in teams of five, evaluate the problem accessing data (e.g., number of delayed/cancelled flights at LaGuardia vs. JFK vs. Newark airport). Brainstorm potential solutions and explore the most plausible after a review and discussion on each. Present the team's recommended solution to a panel of judges that will select the winning recommendation.

**2. Beyond the use of reasoning and consensus, scientific inquiry involves the testing of proposed explanations involving the use of conventional techniques and procedures and usually requiring considerable ingenuity.**

**Students:**

- **use conventional techniques and those of their own design to make further observations and refine their explanations guided by a need for more information**

- **develop, present and defend formal research proposals for testing their own explanations of common phenomena, including ways of obtaining needed observations and ways of conducting simple controlled experiments**
- **carry out their research proposals, recording observations and measurements (e.g., lab notes audio tape, computer disk, video tape) to help assess the explanation**
  - **Develop a plan to research a problem (e.g., the “LaGuardia problem” or the “parking lot that is also know as the Long Island Expressway”). Include in the plan the detailed information that would be needed to make the right decision and how this information could be obtained (e.g., a field trip to LaGuardia airport for data-gathering) and the methodology that would be needed to accurately obtain a fair sample of data. Each team will present its research plan.**

#### **A. Engineering Design**

1. **Engineering design is an iterative process involving modeling and optimization finding the best solution within given constraints which is used to develop technological solutions to problems within given constraints.**

**Students engage in the following steps in the design process:**

- **Identify needs and opportunities for technical solutions from an investigation of situations of general or social interest**
- **Locate and utilize a range of printed, electronic and human information resources to obtain ideas**
- **Consider constraints and generate several ideas for alternative solutions, using group and individual ideation techniques (group discussion, brainstorming, forced connections, role play); defer judgment until a number of ideas have been generated; evaluate (critique) ideas; and explain why the chosen solution is optimal**
- **Develop plans, including drawings with measurements and details of construction, and construct a model of the solution, exhibiting a degree of craftsmanship**
- **In a group setting, test their solution against design specifications, present and evaluate results, describe how the solution might have been modified for different or better results, and discuss tradeoffs that might have to be made.**
  - **Using teams of five students, brainstorm on a general problem facing members of the team, or society overall, that the team would like to focus on (e.g., a solution to the “too heavy backpack” faced by many students in fifth to eighth graders).**

Define the issues that result from this problem conducting research as appropriate. Brainstorm a list of possible solutions (for that day letting any answer be considered a good answer.) Next, select criteria that the team will use to rank order (roughly) these solutions and put the possible solutions through this filter. Finally, “build” your solution and compare its results to the goal. Each team is to present its final design as well as its performance results.

**Standard #2 Students will access, generate, process and transfer information using appropriate technologies.**

**A. Information Systems**

**1. Information technology is used to retrieve, process, and communicate information and as a tool to enhance learning.**

**Students:**

- Use a range of equipment and software to integrate several forms of information in order to create good quality audits, video, graphic, and text-based presentations
- Use spreadsheets and database software to collect, process, display and analyze information. Students access needed information from electronic databases and on line telecommunication services
- Systematically obtain accurate and relevant information pertaining to a particular topic from a range of sources, including local and national media, libraries, museums, governmental agencies, industries, and individuals
- Collect data from probes to measure events and phenomena
- Use simple modeling programs to make predictions
  - Use classroom technology (e.g., Excel spreadsheet, Power Point) to research and report to the class your insight into an issue in Queens (e.g., the West Nile virus, noise from planes, number of shopping centers vs. ball fields by neighborhood)
  - Use graphics to present findings insuring that “information/insight” is gleaned from analyzing the raw data that is gathered and present a possible solution

**2. Knowledge of the impacts and limitations of information systems is essential to its effective and ethical use.**

**Students:**

- **Understand the need to question the accuracy of information displayed on a computer because the results produced by a computer may be affected by incorrect data entry**
  - Understand the need to check data sources for accuracy as well as data input for quality control
- **Identify advantages and limitations of data-handling programs and graphic programs**
  - Use graphic software programs to present project reports (e.g., bar graphs, pie charts, line graphs, scatter diagrams) working as teams. Understand the best software to use for each need recognizing the each has its limitations
- **Understand why electronically stored personal information has greater potential for misuse than records kept in conventional form**
  - a) Know the risks involved with electronic information (e.g., privacy, loss due to viruses and theft)

**3. Information technology can have positive and negative impacts on society, depending upon how it is used.**

**Students:**

- **Use graphical, statistical and presentation software to present projects to fellow classmates**
- **Describe applications of information technology in mathematics, science and other technologies that address needs and solve problems in the community**
- **Explain the impact of the use and abuse of electronically generated information on individuals and families**
  - For one team project, present the recommendation and its supporting evidence as if the analysis was done 40 years ago, i.e., without the benefit of any technology. Discuss how the data gathering and analysis would change and if the recommendation would vary.

**Standard #4** Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.

**A. Physical Setting**

- 1. The Earth and celestial phenomena can be described by principles of relative motion and perspective.**

**Students:**

- **Explain daily, monthly and seasonal changes on earth**
  - Know that most objects in the solar system are in regular and predictable motion
  - Know why the points of sunrise and sunset vary with the season
  - Know that because the earth turns daily on an axis that is tilted relative to the plane of the earth's orbit around the sun, season patterns occur

- 2. Many of the phenomena that we observe on Earth involve interactions among components of air, water, and land.**

**Students:**

- **Explain how the atmosphere (air), hydrosphere (water), and lithosphere (land) interact, evolve, and change.**
  - Know that the earth is mostly rock and three-quarters of the earth's surface is covered by water (some frozen)
  - Understand the reasoning for Global Warming and possible solutions
- **Describe volcano and earthquake patterns, the rock cycle, and weather and climate changes.**
  - Compare an earthquake in San Francisco with the most recent earthquake in India.
  - Write a report on the Mt. St Helen's volcano and its impact – both immediately and as of today

- 3. Matter is made up of particles whose properties determine the observable characteristics of matter and its reactivity.**

**Students:**

- **Observe and describe properties of materials, such as density, conductivity, and solubility.**
  - Select three materials and evaluate their density, boiling point, conductivity and solubility

- Measure whether equal volumes of four different materials have similar weights
  - **Distinguish between chemical and physical changes.**
    - Observe, describe and identify physical and chemical changes of mixing sugar and water, then oil and water
  - **Develop their own mental models to explain common chemical reactions and changes in the states of matter**
    - Understand by watching demonstrations that increased temperature means greater average energy of motion, so most substances expand when heated
4. **Energy exists in many forms, and when these forms change, energy is conserved.**

**Students:**

- **Describe the sources and identify the transformations of energy observed in everyday life.**
  - Know that energy, in the form of heat, is almost always one of the products of energy transformation
  - Energy is either kinetic or potential
- **Observe and describe heating and cooling events**
  - Know that heat moves in predictable ways flowing from warmer objects to cooler ones, until both reach the same temperature
  - Know that heat can be transferred through materials by the collisions of atoms or across space by radiation
- **Observe and describe energy changes as related to chemical reactions**
  - Know that in chemical reactions energy is transferred into or out of a system
- **Observe and describe the properties of sound, light, magnetism and electricity**
  - Electrical circuits provide a means of transferring electrical energy when heat, light, sound, and chemical changes are produced
- **Describe situations that support the principle of conservation of energy**

- Know that energy cannot be created or destroyed, but only changed from one form to another

**5. Energy and matter interact through forces that result in changes in motion.**

**Students:**

- **Describe different patterns of motion of objects**
  - Understand that an object that is not being subjected to a force will continue to move at a constant speed and in a straight line
  - Know that changes in speed or direction of motion are caused by forces.
- **Observe, describe and compare effects of forces (gravity, electric current, and magnetism) on the motion of objects**
  - Know that whenever an object is seen to speed up or slow down or change directions, an unbalanced force acts on it
  - Know that friction is a force that opposes motion

**Social Studies Alignment to New York Learning Standards**  
**Intermediate Level**

**Standard 1. History of the United States and New York: Students will use a variety of intellectual skills to demonstrate their understanding of major ideas, eras, themes, developments, and turning points in the history of the United States and New York.**

- 1. The study of New York State and United States history requires an analysis of the development of American culture, its diversity and multicultural context, and the ways people are unified by many values, practices, and traditions.**

**Students:**

- **explore the meaning of American culture by identifying the key ideas, beliefs, and patterns of behavior, and traditions that help define it and unite all Americans**
  - a) Understands that each culture has distinctive patterns of behavior that are usually practiced by most of the people who grow up in it
  - b) Understands popular and high culture in growing urban areas during the 19th century (e.g., novels, theater, minstrel shows, P.T. Barnum's "American Museum")
  - c) Understands elements of suffrage in the antebellum years (e.g., contradictions between the movement for universal white male suffrage and disenfranchisement of free African Americans and women, the influence of the West and western politicians in supporting equality in the political process)
  - d) Understands divisive issues prior to the Civil War (e.g., the Missouri Compromise and its role in determining slave and non-slave land areas, the issues that divided the North and the South)
  - e) Understands social activities in the late 19th century (e.g., new forms of popular culture and leisure activities at different levels of American society, entertainment for children)
- **interpret the ideas, values, and beliefs contained in the Declaration of Independence and the New York State Constitution and United States Constitution, Bill of Rights, and other important historical documents**
  - a) Understands the development of colonial governments (e.g., how early colonies differed in the way they were established and governed, how

characteristics of colonial self-government such as the right to vote and hold office were reflected in the Mayflower Compact)

- b) Understands the events that contributed to the outbreak of the American Revolution and the earliest armed conflict of the Revolutionary War (e.g., opponents and defenders of England's new imperial policy, the idea of "taxation without representation," the battle at Lexington and Concord)
- c) Understands the major ideas in the Declaration of Independence, their sources, and how they became unifying ideas of American democracy (e.g., major terms, why the document was written, what the signers risked)
- d) Understands the major developments and chronology of the Revolutionary War and the roles of its political, military, and diplomatic leaders (e.g., George Washington, Benjamin Franklin, Thomas Jefferson, John Adams, Samuel Adams, John Hancock, Richard Henry Lee)
- e) Understands perspectives of and the roles played in the American Revolution by various groups of people (e.g., men, women, white settlers, free and enslaved African-Americans, and Native Americans)
- f) Understands the United States relationships with European countries and the contributions of each European power to the outcome of the Revolution (e.g., relations with France, Holland and Spain; consequences of the Treaty of Paris; Ben Franklin's negotiations with the French)
- g) Understands the factors involved in calling the Constitutional Convention (e.g., Shay's Rebellion)
- h) Understands the issues and ideas supported and opposed by delegates at the Constitutional Convention (e.g., enduring features of the Constitution, such as the separation of powers, and checks and balances; the Virginia Plan; the New Jersey Plan; the Connecticut Compromise; abolition)
- i) Understands the significance of the Bill of Rights and its specific guarantees (e.g., the relevance of the Bill of Rights in today's society)
- j) Understands the differences in leaders (e.g., Alexander Hamilton and Thomas Jefferson) and the social and economic composition of each political party in the 1790s

**2. Important ideas, social and cultural values, beliefs, and traditions from New York State and United States history illustrate the connections and interactions of people and events across time and from a variety of perspectives.**

**Students:**

- **describe the reasons for periodizing history in different ways**
  - a) Understands the major political issues in the thirteen colonies after their independence from England (e.g., arguments over the Articles of Confederation, arguments over how to govern themselves) including the establishment of New York City as the first site of government
  - b) Understand how and why family and community life differed in various regions of colonial North America contrasting New York with Philadelphia, Boston and Williamsburg
  - c) Understand the location of different Native American tribes that were located in New York State
  - d) Understand significant events for Native American tribes in New York State in the late 19<sup>th</sup> century and how they responded
  - e) Understands the major technological developments that influenced land and water transportation, the economy, international markets, and the environment between 1801 and 1860 (e.g., the importance of the spinning jenny, steam locomotive, and telegraph; the development of the canal system after 1825 and railroad system after 1860)
  - f) Understands social and economic elements of urban and rural life in the early and mid-19th centuries (e.g., the impact of the factory system on gender roles and the daily life of men, women, and children; factors that caused rapid urbanization; city life in the 1840s; differences in urban and rural children's lives, life in New England mill towns in the early 1800s, the impact of the canal and railroad on the locations and size of cities after 1820)
  - g) Understand why people were drawn to big cities, particularly New York City
  - h) Understands military, political, and social factors affecting the post Civil War period (e.g., the basic provisions of the 13th, 14th, and 15th amendments, and the political and social forces that opposed and supported them, how the lives of African Americans were changed by these amendments; demobilization of the Union and Confederate armies; how the leadership of Presidents Lincoln and Johnson affected reconstruction)

- i) Know which Presidents came from New York State; understand the background and leadership style of Franklin D. Roosevelt within the context of the Great Depression
- j) Understand New York State geography including population and population densities, land forms, climate, major exports and imports, the state flag and seal, flower, tree, bird, motto and song
- k) Understand when and how New York became a state; the location of the state capital as well as the three temporary capitals; the state government and number of representatives to the federal government; places of interest (e.g., Niagara Falls, Finger Lakes, Lake Placid Olympic site), industries and products
- l) Understand the impact of the canal system on the New York economy and the construction of the Erie Canal (and the still-in-use canal system in New York State)
- m) Understands the lives of immigrants in American society during the antebellum period (e.g., factors that led to increased immigration from China, Ireland, and Germany; how immigrants adapted to life in the United States and to hostility from the nativist movement and the "Know-Nothing" party)
- n) Understand the impact of immigration, the role of New York as a major point of entry, and the lives of immigrants in American and New York society
- o) Through a visit to the Ellis Island museum and the Statue of Liberty gain an appreciation for the lives of immigrants over the years. During the study of the French Revolution, understand that the Statue was a gift from France
- p) Understands the major technological developments that influenced land and water transportation, the economy, international markets, and the environment between 1801 and 1860 (e.g., the importance of the spinning jenny, steam locomotive, and telegraph; the development of the canal system after 1825 and railroad system after 1860)
- q) Understands social and economic elements of urban and rural life in the early and mid-19th centuries (e.g., the impact of the factory system on gender roles and the daily life of men, women, and children; factors that caused rapid urbanization; city life in the 1840s; differences in urban and rural children's lives, life in New England mill towns in the early 1800s, the impact of the canal and railroad on the locations and size of cities after 1820)

- r) Understands how slavery shaped social and economic life in the South after 1800 (e.g., how the cotton gin and the opening of new lands in the South and West led to increased demands for slaves; differences in the lives of plantation owners, poor free black and white families, and slaves; methods of passive and active resistance to slavery; escaped slaves and the Underground Railroad)
- s) Understands elements of early western migration (e.g., the lure of the West and the reality of life on the frontier; motivations of various settlers; Mormon contributions to the settlement of the West; differences in the settlement of California and Oregon in the late 1840s and 1850s; routes taken by settlers of the Western U.S.; interactions between settlers and Native Americans and Mexicans in the western territories)
- **investigate key turning points in New York State and United States history and explain why these events or developments are significant**
  - a) Understands how the Mohawk, Oneida, Onondaga, Cayuga, and Seneca united to form the Iroquois nation and to solve conflicts peaceably
  - b) Understands the social, political, and economic effects of the American revolutionary victory on different groups (e.g., rural farmers, wealthy merchants, enslaved and free African Americans, abolitionists, women who contributed to the war effort)
  - c) Understands the factors that led to Shay's Rebellion
  - d) Understands slavery prior to the Civil War (e.g., the importance of slavery as a principle cause of the Civil War, the growing influence of abolitionists, children's roles and family life under slavery)
  - e) Understands the technological, social, and strategic aspects of the Civil War (e.g., the impact of innovations in military technology; turning points of the war; leaders of the Confederacy and Union; conditions, characteristics, and armies of the Confederacy and Union; major areas of Civil War combat)
- **understand the relationship between the relative importance of United States domestic and foreign policies over time**
  - a) Understands the factors that led to U.S. territorial expansion in the Western Hemisphere (e.g., Napoleon's reasons for selling the Louisiana Territory, expeditions of American explorers and mountain men)
  - b) Understands the impact of territorial expansion on Native American tribes (e.g., the Cherokee, Chickasaw, Choctaw, Creek and Seminole removals, the significance of the Trail of Tears, the original lands held by various tribes of the Southeast and those held in the Old Northwest territory)

- c) Understands the origins of Manifest Destiny and its influence on the westward expansion of the United States (e.g., its role in the resolution of the Oregon dispute with Great Britain, how it led to the Mexican-American war)
- d) Understands elements of the relationship between Texas and Mexico in the mid-19<sup>th</sup> century (e.g., the Texas War for Independence, American settlement in Mexico's Texas, the American defeat at the Alamo)
- e) Understands events that led to the Mexican-American war (e.g., the idea of Manifest Destiny, U.S. annexation of Texas, the invasion of Mexico by U.S. troops) and the consequences of the Treaty of Guadalupe Hidalgo
- f) Understands the impact of the Reconstruction period on politics in the South (e.g., the increase in corruption in the post-Civil War period, the importance of political cartoonists in drawing attention to corruption)
- **analyze the role played by the United States in international politics, past and present**
  - a) Understands the United States relationships with European countries and the contributions of each European power to the outcome of the Revolution (e.g., relations with France, Holland and Spain; consequences of the Treaty of Paris; Ben Franklin's negotiations with the French)

**3. Study about the major social, political, economic, cultural, and religious developments in New York State and United States history involves learning about the important roles and contributions of individuals and groups.**

**Students:**

- **complete well-documented and historically accurate case studies about individuals and groups who represent different ethnic, national, and religious groups, including Native American Indians, in New York State and the United States at different times and in different locations**
  - a) Understands Puritanism in colonial America (e.g., how Puritanism shaped New England communities, the changes in Puritanism during the 17<sup>th</sup> century, opposition to King James I, why Puritans came to America, the Puritan family structure)
  - b) Understands how and why family and community life differed in various regions of colonial North America (e.g., Williamsburg, Philadelphia, Boston, New York, French Quebec, Santa Fe)
  - c) Understands the lives of immigrants in American society during the antebellum period (e.g., factors that led to increased immigration from China, Ireland, and Germany; how immigrants adapted to life in the United States and to hostility from the nativist movement and the "Know-Nothing" party)

- d) Understands influences on African American culture during the 1920s (e.g., the Harlem Renaissance)
- e) Understands the effects of women's suffrage on politics (e.g., the major events of women's suffrage movement from the Seneca Falls Convention of 1848 to the ratification of the 19th amendment; how the 19th Amendment changed political life in America)
- **gather and organize information about the important achievements and contributions of individuals and groups living in New York State and the United States**
  - a) Understands the influence of Enlightenment ideas on American society (e.g., Benjamin Franklin's experiments with electricity)
  - b) Understands the major developments and chronology of the Revolutionary War and the roles of its political, military, and diplomatic leaders (e.g., George Washington, Benjamin Franklin, Thomas Jefferson, John Adams, Samuel Adams, John Hancock, Richard Henry Lee)
  - c) Understands perspectives of and the roles played in the American Revolution by various groups of people (e.g., men, women, white settlers, free and enslaved African-Americans, and Native Americans)
  - d) Understands the impact of the Civil War on social and gender issues (e.g., the roles of women on the home front and on the battlefield; the human and material costs of the war; the degree to which the war united the nation; how it changed the lives of women, men, and children) and the role of New York State in the war
- **describe how ordinary people and famous historic figures in the local community, State, and the United States have advanced the fundamental democratic values, beliefs, and traditions expressed in the Declaration of Independence, the New York State and United States Constitutions, the Bill of Rights, and other important historic documents**
  - a) Understands the major ideas in the Declaration of Independence, their sources, and how they became unifying ideas of American democracy (e.g., major terms, why the document was written, what the signers risked)
  - b) Understands the factors involved in calling the Constitutional Convention (e.g., Shay's Rebellion)
  - c) Understands the issues and ideas supported and opposed by delegates at the Constitutional Convention (e.g., enduring features of the Constitution, such as the separation powers, and checks and balances; the Virginia Plan; the New Jersey Plan; the Compromise; abolition)

- d) Understands the significance of the Bill of Rights and its specific guarantees (e.g., the relevance of the Bill of Rights in today's society)
- e) Understands the role of women in the reform movements in antebellum America (e.g., the contributions of individuals of different racial and social groups, the types of reforms women sought, how fashion became a part of the movement for women's rights)
- f) Understands the provisions and significance of the Emancipation Proclamation (e.g., reasons Abraham Lincoln issued it, public reactions to it in the North and the South)
- **classify major developments into categories such as social, political, economic, geographic, technological, scientific, cultural, or religious**
  - a) Understands how literary and artistic movements fostered a distinct American identity among different groups and in different regions
  - b) Understands changes in social relations in the South during Reconstruction (e.g., the role of the Freedmen's Bureau, the impact of emancipation in the South, how former slaves improved their position in society, how people from the North traveled to aid in Reconstruction)
  - c) Understands the economic and social changes that occurred in late 19th century American cities (e.g., where industries and transportation expanded; geographic reasons for building factories, commercial centers, and transportation hubs; why different groups moved from the farms to the big cities and how they adjusted; living conditions in the growing cities)
- 4. **The skills of historical analysis include the ability to: explain the significance of historical evidence; weigh the importance, reliability, and validity of evidence; understand the concept of multiple causation; understand the importance of changing and competing interpretations of different historical developments.**

**Students:**

- **consider the sources of historic documents, narratives, or artifacts and evaluate their reliability**
  - a) Knows how to diagram the temporal structure of events in autobiographies, biographies, literary narratives, and historical narratives, and understands the differences between them
- **understand how different experiences, beliefs, values, traditions, and motives cause individuals and groups to interpret historic events and issues from different perspectives**

- a) Understands the significance of beliefs held by both Native Americans and Europeans (e.g., Native American beliefs about their origins in America, ideas of land use held by Native Americans and Europeans)
  - b) Understands the differences in leaders (e.g., Alexander Hamilton and Thomas Jefferson) and the social and economic composition of each political party in the 1790s
  - c) Understands elements of early western migration (e.g., the lure of the West and the reality of life on the frontier; motivations of various settlers; Mormon contributions to the settlement of the West; differences in the settlement of California and Oregon in the late 1840s and 1850s; routes taken by settlers of the Western U.S.; interactions between settlers and Native Americans and Mexicans in the western territories)
- **compare and contrast different interpretations of key events and issues in New York State and United States history and explain reasons for these different accounts**
    - a) Understands the events that contributed to the outbreak of the American Revolution and the earliest armed conflict of the Revolutionary War (e.g., opponents and defenders of England's new imperial policy, the idea of "taxation without representation," the battle at Lexington and Concord)
    - b) Understands the major characteristics of the abolition movement in the antebellum period (e.g., different viewpoints within the abolitionist movement, arguments of those opposed to and those who supported slavery, the Underground Railroad)
- **describe historic events through the eyes and experiences of those who were there**
    - a) Understands how slavery shaped social and economic life in the South after 1800 (e.g., how the cotton gin and the opening of new lands in the South and West led to increased demands for slaves; differences in the lives of plantation owners, poor free black and white families, and slaves; methods of passive and active resistance to slavery; escaped slaves and the Underground Railroad)
    - b) Understands the lives of African Americans during the Reconstruction era (e.g., the progress of "Black Reconstruction" and the impact of legislative reform programs, contributions of individual African Americans who served as teachers and political leaders, why some abolition leaders voiced opposition to the 15th amendment)
    - c) Understands how economic conditions and family life in the North and South changed over the war years

- d) Understands the experiences of diverse groups and minorities in different regions of the country (e.g., the experiences of African Americans, Asian Americans, and Hispanic Americans; the anti-Chinese movement in the West; the rise of lynching in the South; the impact of Jim Crow laws on African Americans)

**Standard 2. World History: Students will use a variety of intellectual skills to demonstrate their understanding of major ideas, eras, themes, developments, and turning points in world history and examine the broad sweep of history from a variety of perspectives.**

- 1. The study of world history requires an understanding of world cultures and civilizations, including an analysis of important ideas, social and cultural values, beliefs, and traditions. This study also examines the human condition and the connections and interactions of people across time and space and the ways different people view the same event or issue from a variety of perspectives.**

**Students:**

- **know the social and economic characteristics, such as customs, traditions, child-rearing practices, ways of making a living, education and socialization practices, gender roles, foods, and religious and spiritual beliefs that distinguish different cultures and civilizations**
  - a) Understands social, economic, and cultural characteristics of European society (e.g., the customary European family organization, gender roles, property holding, education and literacy, linguistic diversity, religion)
  - b) Understands the role of agriculture in early settled communities (e.g., how archaeological evidence explains the technology, social organization, and cultural life of settled farming communities in Southwest Asia; differences between wild and domestic plants and animals; how patterns of settlement were influenced by agricultural practices)
  - c) Understands the development of early agricultural communities in different regions of the world (e.g., differences between hunter-gatherer, fishing, and agrarian communities; social, cultural, and economic characteristics of large agricultural settlements and their unique problems; the development of tropical agriculture in Southeast Asia)
  - d) Understands elements of Judaism and how it compares to other religions (e.g., the differences between Jewish monotheism and the polytheism of Southwest Asia, the ethical teachings of Judaism illustrated in stories from the Hebrew Scriptures, the major events in the early history of Judaism through the Babylonian Captivity)

- e) Understands characteristics of pastoral nomadic societies (e.g., the importance of the horse to the development of pastoral nomadism and cavalry warfare; reasons for conflict economic interdependence between pastoral nomadic peoples of Central Asia and major agrarian states of Eurasia, the location and range of nomadic peoples in the 1<sup>st</sup> millennium BCE and how they moved their herds and belongings)
- f) Understands the social and political characteristics of Greek city-states (e.g., significant similarities and differences between Athenian democracy and Spartan military aristocracy; hierarchical relationships in Greek societies and the civic, economic, and social tasks performed by men and women of different classes; the location and political structure of the major Greek city-states)
- g) Understands the major cultural elements of Greek society (e.g., the major characteristics of Hellenic sculpture, architecture, and pottery and how they reflected or influenced social values and culture; characteristics of Classical Greek art and architecture and how they are reflected in modern art and architecture; Socrates' values and ideas as reflected in his trial; how Greek gods and goddesses represent non-human entities, and how gods, goddesses, and humans interact in Greek myths)
- h) Understands the origins and social framework of Roman society (e.g., the geographic location of different ethnic groups on the Italian peninsula in the late 6th century BCE and their influences on early Roman society and culture, how legends of the founding of Rome describe ancient Rome and reflect the beliefs and values of its citizens, what life was like for the common people living in Rome and Pompeii)
- i) Understands the fundamental elements of Chinese society under the early imperial dynasties (e.g., policies and achievements of the Qin emperor Shi Huangdi, the life of Confucius and the fundamentals of Confucianism and Daoism, what life was like for ordinary people in ancient China as illustrated in Chinese folktales)
- j) Understands the commercial and cultural significance of the trans-Eurasian "silk roads" to the Roman and Chinese Empires and the peoples of Central Asia
- k) Understands the major characteristics and contributions of Olmec civilization (e.g., how maize cultivation influenced the development of the Olmec civilization, the major contributions of Olmec civilization to Mesoamerican civilization, the achievements of Olmec civilization circa 1200 to 400 BCE, how geography influenced the development of Olmec civilization, the essential aspects of the Olmec civilization)

- l) Understands various characteristics of Christianity and Buddhism (e.g., methods used to spread the two religions to new areas and people; possible aspects of Christianity and Buddhism that appealed to people living between the 3rd and 5th centuries CE; the approximate geographical realms of Buddhism, Christianity, Hinduism, and Confucianism until the 5th century CE)
- m) Understands fundamental Hindu beliefs (e.g., how the concept of dharma reflects a social value for the ideal king, husband and wife, brother and friend; the concepts of Brahma, dharma, and karma, the caste system, ritual sacrifice, and reincarnation)
- n) Understands significant religious and cultural features of the Gupta era (e.g., Gupta achievements in art, literature, and mathematics; the relationship among various religions in India during Gupta times)
- o) Understands characteristics of Japanese society through the imperial period (e.g., aspects of the indigenous development of Japanese society until the 7th century CE; the establishment of the imperial state in Japan and the role of the emperor in government; the political, social, and cultural role of women and their contributions to the court of Heian; how the geography of Japan affected its development and its relations with China and Korea)
- p) Understands the significant features of Mayan civilization (e.g., locations of Mayan city-states, road systems, and sea routes in Mesoamerica and the influence of the environment on these developments; the role and status of elite women and men in Mayan society as indicated by their portrayal in Mayan monumental architecture; the importance of religion in Mayan society; the structure and purpose of Mayan pyramids; ceremonial games among the Mayans)
- q) Understands the cultural characteristics of Islamic society (e.g., the importance of scientific, literary, and artistic contributions made by the Islamic civilization between the 11th and 13th centuries; how these contributions helped communication between different Islamic peoples; the diverse, multiethnic character of the Islamic state)
- r) Understands the systems of feudalism and manorialism (e.g., the principles of feudalism, manorialism, and serfdom, and their widespread use in parts of Europe in the 11th century; how population growth and agricultural expansion affected the legal, economic, and social position of peasant men and women; how the lives of peasants and serfs differed; how their lives were affected by the manors and castles)
- s) Understands the lives of different groups of people in Medieval Europe (e.g., life in Jewish communities and what Jews added to the cultural and

- economic development of Europe; the influence of ideals of chivalry and courtly love on feudal society; how the status of women changed in medieval European life). Understands the significance of the university in Medieval Europe (e.g., how universities contributed to literacy, learning, and scientific advancement; why universities were founded in certain parts of Europe; the meaning of the word “university”)
- t) Understands how the Aztec Empire arose in the 14th century (e.g., major aspects of Aztec government, society, religion and culture; the construction of Tenochtitl (the “Foundation of Heaven”)
  - u) Understands social and political elements of Incan society (e.g., Incan methods for expansion and unification of their empire, daily life for different people in Incan society, the food plants that formed the basis of Incan as compared with Aztec agriculture)
  - v) Understands the character and impact of Portuguese maritime expansion to Africa, India, and Southeast Asia upon local populations (e.g., relations between King Affonso II of the Kongo and Portuguese, why Bartholomew de las Casas was considered the “defender of the Indians”)
  - w) Understands the social characteristics of European society from 1450 to 1750 (e.g., how lifestyles were different among varied social classes in early modern Europe, changes in institutions of serfdom, changes in the social status of women)
  - x) Understands the power and limit of imperial absolutism under the Ming Dynasty (e.g., variations in control over society and the bureaucracy)
  - y) Understands social and political features of Japanese society under the Tokugawa shogunate (e.g., centralized feudalism in Japan and how Japan achieved political stability, economic growth, and cultural dynamism; the nature of the relationship between Japan and European powers between the 16th and 18th centuries)
  - z) Understands events that shaped African relations with other countries (e.g., the rise of the Zulu empire and its effects on African societies and European colonial settlements; how the discovery of gold and diamonds in South Africa affected British investors and race relations among Africans, Afrikaners, and British colonial authorities; the relationship between European and African merchants and the types of products traded between the two in the period after slavery ended)
  - aa) Understands how ideals and institutions of freedom, equality, justice, and citizenship have changed over time and from one society to another

- **know some important historic events and developments of past civilizations**
  - a) Understands the lives of free and indentured immigrants who came to North America and the Caribbean from Europe (e.g., religious, political, and economic motives of free immigrants from different parts of Europe; why indentured servants risked the hardships of bound labor overseas; opportunities and challenges encountered by European immigrants)
  - b) Understands growth and change in the European colonies during the two centuries following their founding (e.g., the arrival of Africans in the European colonies in the 17<sup>th</sup> century, the rapid increase of slave importation in the 18th century)
  - c) Understands significant characteristics of early Chinese society and religion (e.g., the influence of the natural environment on Huang He [Yellow River] civilization compared to its impact on Mesopotamia, Egypt, and the Indus Valley; early Chinese urban societies and how they compare to those of Mesopotamia and the Indus Valley, the nature of Shang ancestor worship and what it illustrates about concepts of life and death in Shang society)
  - d) Understands the role of technology in early agrarian societies (e.g., how the advent of the plow influenced new agrarian societies in Southwest Asia, the Mediterranean basin, and temperate Europe; how megalithic stone buildings, such as Stonehenge, indicate the emergence of complex agrarian societies in Europe; changes for humankind and civilization brought on by the bow and arrow and by pottery; what physical evidence indicated about the characteristics of the agrarian society of ancient Egypt and the life of the Pharaoh)
  - e) Understands how the rise of pastoral societies was linked to the climate and geography of the Central Asian steppes, and how kinship-based pastoral society differed from the social organization of agrarian states
  - f) Understands shifts in the political and social framework of Roman society (e.g., political and social institutions of the Roman Republic and reasons for its transformation from Republic to Empire; how values changed from the early Republic to the last years of the Empire as reflected through the lives of such Romans as Cincinnatus, Scipio Africanus, Tiberius Gracchus, Cicero, Julius Caesar, Augustus, Nero, Marcus Aurelius, and Constantine)
  - g) Understands the influence of Hinduism and Buddhism in East and Southeast Asia (e.g., the role of trade in spreading these religions; the geographical limits of Hindu and Buddhist influence; the presence and influence of Hinduism and Buddhism in India, Malaysia, and Southeast

Asia; how ocean currents affected cultural contact between India and Southeast Asia, and the evidence for this contact)

- h) Understands different elements of Japanese feudal society (e.g., Japanese government during the Kamakura and Ashikaga periods, and whether it was feudalism; the rise of the warrior class in feudal Japan and the values it prescribed; how the economic and social status of women and peasants changed in feudal Japanese society; how art and aesthetic values were cherished in the warrior culture in Japan and what this art reveals about Japanese values; how the Japanese successfully defended themselves against Mongol invasions in the 13th century)
- i) Understands influences on the economic development of Sub-Saharan empires (e.g., the importance of agriculture, gold production, and the trans-Saharan caravan trade to the growth of the Mali and Songhay Empires; the importance of trade within the major city-states and populations of Sub-Saharan Africa)
- j) Understands the emergence of commercial towns on the East African coast and the significance of Swahili as the language of trade
- k) Understands the origins and early expansion of the Ottoman Empire up to the capture of Constantinople in 1453
- l) Understands elements of the trans-Atlantic African slave trade (e.g., how slaves were transported to the Americas via the “middle passage”; how European firms and governments organized and financed the slave trade; conditions of slave life on plantations in the Caribbean, Brazil, and British North America; how slaves resisted servitude and preserved their African heritage)
- m) Understands elements of the slave trade in Africa (e.g., how the Atlantic slave trade affected population, economic systems, family life, polygamous marriage, and the use of male and female slave labor in West and Central Africa; what narratives reveal about the experiences of Africans sold into slavery)
- n) Understands factors that transformed American and European society in the early 20<sup>th</sup> century (e.g., how industrial development affected the culture and working lives of middle and working class people in the United States, Japan, and Europe; major scientific, medical, and technological advances in Europe and the United States at the turn of the century; popular attitudes regarding material progress and the West’s global leadership)

- **interpret and analyze documents and artifacts related to significant developments and events in world history**
  - a) Understands what archaeological, artistic, and written sources can illustrate and pre-European life in the Americas
  - b) Understands the major ideas in the Declaration of Independence, their sources, and how they became unifying ideas of American democracy (e.g., major terms, why the document was written, what the signers risked)
  - c) Understands the significance of developments in medieval English legal and constitutional practice and their importance for modern democratic thought and institutions
- 2. **Establishing timeframes, exploring different periodizations, examining themes across time and within cultures, and focusing on important turning points in world history help organize the study of world cultures and civilizations.**

**Students:**

- **develop timelines by placing important events and developments in world history in their correct chronological order**
  - a) Knows how to construct and interpret multiple tier time lines (e.g., a time line that contains important social, economic, and political developments in colonial history; a time line that compares developments in the English, French, and Spanish colonies in North America)
  - b) Knows how to periodize events of the nation into broadly defined eras
  - c) Knows the features of the major European explorations that took place between the 15th and 17th centuries (e.g., the routes and motives of Spanish, French, Dutch, and English explorers; the goals and achievements of major expeditions; problems encountered on the high seas; fears and superstitions of the times; what sailors expected to find when they reached their destinations)
  - d) Understands possible reasons for the decline of the Roman and Han Empires (e.g., possible factors that motivated nomadic peoples to move into the Roman Empire and China, common patterns of decline and fall in the Roman and Han Empires, the chronological order of significant historical events for Rome from the late Empire through the reign of Justinian, how differences in architecture can illustrate unity and alienation between the Eastern and Western halves of the Roman Empire)
  - e) Understands major changes in the religious map of Eurasia and Africa between 300 and 1000 CE (e.g., the success of Christianity, Buddhism,

Hinduism, and Islam in making converts among peoples of differing ethnic and cultural traditions)

- f) Understands the impact of urbanization and commercial expansion on Chinese society between the 10th and 13th centuries (e.g., the effects of major technological and scientific inventions in the Song era on Chinese life, China's trade with Southeast Asia and the lands rimming the Indian Ocean, how this trade affected China internally)
- g) Understands major changes in the social, political, and cultural characteristics of European society after the 14th century (e.g., the effect of population decline on European agrarian and commercial economies; causes of and major figures in the Hundred Years War; the causes of peasant rebellions in Europe between 1300 and 1500; how the techniques of painting, sculpting, and architecture changed in this period)
- h) Understands the English civil war and the Revolution of 1688 (e.g., how these events affected government, religion, economy, and society in England; how the English Revolution influenced political institutions and attitudes in the English colonies and the outbreak of the American Revolution; new freedoms granted to the English people after 1688). Understands the significance of the Scientific Revolution and the Age of Enlightenment (e.g., the impact of astronomical discoveries from Copernicus to Newton; principal ideas of the Enlightenment, from rationalism to theories of education; the word "revolution" and what is meant by the term "Scientific Revolution"; the lives and achievements of significant figures of the Scientific Revolution; how Diderot's encyclopedia contributed to the Age of Enlightenment)
- i) Understands European influence in the Americas between the 16th and 18th centuries (e.g., European activity and control in the Americas in the form of territorial empires, trading-post empires, plantation colonies, and settler colonies; how the Netherlands, England, and France became naval, commercial, and political powers in the Atlantic basin; the locations of the British and French in the Americas, and their interest in trade there; the concept of mercantilism and its advantages and disadvantages for the colonies and the mother country)
- j) Understands major shifts in world demography and urbanization between 1450 and 1770 and reasons for these changes
- k) Understands the major changes in world political boundaries that took place between 1450 and 1770, and how far European nations had extended political and military influence in Africa, Asia, and the Americas as of the mid-18th century

- **measure time periods by years, decades, centuries, and millennia**
  - a) Knows how to calculate calendar time BC (before Christ) or BCE (before the Common Era), and AD (Anno Domini) or CE (in the Common Era), determining the onset, duration, and ending dates of historical events or developments
- **study about major turning points in world history by investigating the causes and other factors that brought about change and the results of these changes**
  - a) Understands patterns of change and continuity in the historical succession of related events
  - b) Knows how to impose temporal structure on their historical narratives (e.g., working backward from some issue, problem, or event to explain its causes that arose from some beginning and developed through subsequent transformations over time)
  - c) Knows legends of pre-Columbus explorations and the technological, scientific, and geographic factors that led to the age of exploration in the Americas
  - d) Understands aspects of the Spanish exploration, conquest, and immigration to the Americas in the centuries following Columbus (e.g., Spanish interactions with the Aztec, Inca, and Pueblo; the expeditions of Cabeza de Vaca and Francisco Vasquez de Coronado in the American Southwest; the conquest of Spanish America)
  - e) Understands peaceful and conflictory interaction between English settlers and Native Americans in the New England, Mid-Atlantic, Chesapeake, and lower South colonies (e.g., how Native American and European societies influenced one another, differing European and Native American views of the land and its use)
  - f) Understands influences on the development of various civilizations in the 4th and 3<sup>rd</sup> millennia BCE (e.g., how the natural environment of the Tigris-Euphrates, Nile, and Indus Valleys shaped the early development of civilization; different characteristics of urban development in Mesopotamia, Egypt, and the Indus Valley)
  - g) Understands how economic, political, and environmental factors influenced the civilizations of Mesopotamia, Egypt, and the Indus Valley (e.g., the impact of trade networks connecting various regions of Southwest Asia on Mesopotamian civilization; the importance of commercial, cultural, and political connections between Egypt and peoples of Nubia along the upper Nile; how geography and climate affected trade in the Nile Valley)

- h) Understands how the development of different types of tools influenced Chinese civilization (e.g., the uses and significance of bronze tool-making technology, weapons, and luxury goods in the 3rd and 2nd millennia BCE; the unique nature of Chinese writing tools, surfaces, and styles in the 2nd millennium BCE)
- i) Understands what contributed to increasing oceanic travel in the 15th and 16th centuries (e.g., major Spanish and Portuguese technological innovations in shipbuilding, navigation, and naval warfare; navigational inventions such as the compass, astrolabe, and quadrant; trade routes of prominent Asian and European explorers and how prevailing wind currents influenced these routes; the features of Chinese and Arab sailing vessels that made long-distance travel easier)
- j) Understands the ideas and events that shaped the Revolution in France (e.g., the causes, character, and consequences of the American and French revolutions; the meaning of the revolutionary slogan in France, “Liberty, Equality, Fraternity,” and the social ideals it embodied; the legacy of leading ideas of the revolution; how the wars of the revolutionary and Napoleonic periods changed Europe and Napoleon’s effects on the aims and outcomes of the revolution; connections between political events in the Americas and France between 1770 and 1815)
- k) Understands the origins and development of Latin American independence movements (e.g., how the American, French, and Haitian revolutions and South American rebellions influenced the development of independence movements in Latin America; the political and ideological objectives, and the success of the independence movements between 1808 and 1830; how the colonial powers and independent countries of Latin America changed between 1790 and 1828; the role of geography in the outcome of the Latin American independence movements)
- l) Understands the emergence and impact of industrialism in 18th-century England (e.g., the effects of the agricultural revolution on population growth, industrialization, and patterns of land-holding; major characteristics of industrialization; how the industrial revolution affected population shifts; how the industrial revolution in the textile industry changed the way people worked; how figures such as John Kay, James Hargreaves, James Watt, Edmund Cartwright, and Richard Arkwright contributed to industrialization in England)
- m) Understands the impact of the industrial revolution in Europe and the Atlantic Basin (e.g., connections between population growth, industrialization, and urbanization; the quality of life in early 19-century cities; the effects of urbanization on the development of class distinctions, family life, and the daily working lives of men, women, and children;

advances made in communication and transportation; effects upon the political and economic status of women)

- n) Understand causes of large-scale population movements from rural areas to cities in continental Europe and how these movements affected the domestic and working lives of men and women
  - o) Understands the political and social changes in 19th-century Latin America (e.g., where democracy failed and succeeded in Latin American nations after independence was achieved, how geography possibly influenced nation-building in Latin America, the class system in Latin America and its racial core)
  - p) Understands the economic and social impact of the Great Depression (e.g., how the Great Depression affected industrialized economies and societies around the world; the human cost of the depression; how governments, businesses, social groups, families and individuals coped with hardships of world depression and the impact on workers in New York City, Albany, Rochester and Buffalo)
  - q) Understands political and social change in the developing countries of the Middle East, Africa, and Asia after World War II (e.g., how Israel was created, and why persistent conflict developed between Israel and both Arab Palestinians and neighboring states; the African experience under European colonial rule; major social and economic forces that compelled many Vietnamese to seek refuge in foreign countries)
  - r) Understands cultural trends of the second half of the 20th century (e.g., the influence of television, the Internet, and other forms of electronic communication on the creation and diffusion of cultural and political information worldwide; how the world's religions have responded to challenges and uncertainties in society and the world)
3. **Study of the major social, political, cultural, and religious developments in world history involves learning about the important roles and contributions of individuals and groups.**

**Students:**

- **investigate the roles and contributions of individuals and groups in relation to key social, political, cultural, and religious practices throughout world history**
- a) Understands that group identity may create a feeling of superiority, which increases group cohesion, but may also occasion hostility toward and/or from other groups

- b) Understands how various institutions (e.g., banks, schools, hospitals, the military) influence people, events, and elements of culture and how people interact with different institutions
- c) Understands Alexander's achievements as a military and political leader (e.g., reasons for the disintegration of the empire into smaller areas after his rule; the campaigns, battles, and cities founded in Alexander's imperial conquests)
- d) Understands the significance of Jesus of Nazareth (e.g., the story of the life of Jesus, the messages of Jesus' prominent parables)
- e) Understands events in the rise of Christianity (e.g., the life of Paul the Apostle and his contribution to the spread of Christian beliefs, how Christianity spread widely in the Roman Empire, how the New Testament illustrates early Christian beliefs)
- f) Understands the origins of Buddhism and fundamental Buddhist beliefs (e.g., the life story of Buddha and his essential teachings; how the Buddhist teachings were a response to the Brahmanic system; the contributions of the emperor Ashoka to the expansion of Buddhism in India; how Indian epic stories reflect social values, and how the Jakata tales reveal Buddhist teachings)
- g) Understands how new religious or ethical systems contributed to cultural integration of large regions of Afro-Eurasia
- h) Understands the spread of Islam in Southwest Asia and the Mediterranean region (e.g., the life of Muhammad, his devotion to God, and the basic beliefs and values he preached; how Islam spread in Southwest Asia and the Mediterranean and evidence for its influence; importance to Islam of the Hegira [Hirjah], the Ka'abah, the Qur'an, the Sunnah, the Hajj, the daily prayer [Salat], the poor due [Zakat] and Ramadan)
- i) Understands the influence of Islamic ideas and practices on other cultures and social behavior (e.g., the origin and development of Islamic law; the influence of Islamic law and Muslim practice on family life, morals, marriage, inheritance, and slavery; the possible appeal of Islam to culturally diverse non-Muslims across Afro-Eurasia in the Abbasid era)
- j) Understands the influence of the monastery in European development (e.g., the importance of monasteries, convents, and missionaries from Britain and Ireland in the Christianizing of Western and Central Europe; the individual duties of monks and nuns)
- k) Understands the significance of Norse migrations and invasions (e.g., how Norse explorations stimulated the emergence of independent lords and the

knightly class; locations of Norse settlements, including routes to North America, Russia, Western Europe, and the Black Sea)

- l) Understands the significance of developments in medieval English legal and constitutional practice and their importance for modern democratic thought and institutions
- m) Understands the influence of Christianity in Medieval Europe (e.g., how successful the Christian states were in overthrowing Muslim powers in Central and Southern Iberia, the reasons for and consequences of the European Crusades against Syria and Palestine)
- n) Understands the significance of William the Conqueror in English society (e.g., why William invaded England; how he won control of England after the Battle of Hastings; what changes he made in governing England)
- o) Understands the significance of Chinggis Khan (e.g., the major achievements of Chinggis Khan, the geographical extent of Chinggis Khan's conquests, the role military technology may have played in the success of Mongol military campaigns)
- p) Understands Mongol interaction with different cultures (e.g., how Mongol rule affected economy, society, and culture in China and Korea; how Southeast Asians and Japanese resisted incorporation into the Mongol empire; how citizens responded to Mongol rule)
- q) Knows the major accomplishments of Columbus (e.g., his voyages off the coast of Africa and to North America)
- r) Understands political and cultural achievements of the Ottoman Empire (e.g., the significance of the capture of Constantinople for Christians and Ottomans; how the Ottoman military succeeded against various enemies; artistic, architectural, and literary achievements of the Ottoman Empire in the 15th and 16th centuries; achievements of Sulieman the Magnificent; the extent of the Byzantine and Ottoman Empires in the 14th and 15th centuries)
- s) Understands political achievements of the Safavid and Mughal Empires (e.g., how Persia was unified by the Turkic Safavids, the political and cultural achievements of the Safavid Golden Age under Shah Abbas I, the Mughal conquest of India and how the Turkic warrior class united diverse peoples of the Indian continent)
- t) Understands how the acceleration of scientific and technological innovations in this era affected social, economic, and cultural life in various parts of the world (e.g., the broad effects of navigational and ship-building innovations such as astrolabe and lateen sails)

- u) Understands aspects of the abolition movement in the 18th and 19th centuries (e.g., the organization and arguments of movements in Europe and the Americas that sought to end slavery, and how the trans-Atlantic slave trade was suppressed; why and how the slave trade continued after it had been outlawed; major accomplishments of the American abolitionist Frederick Douglass)
- v) Understands the impact of cultural achievements on 19th-century Europe and America (e.g., movements in literature, music, and the visual arts, and ways in which they shaped or reflected social and cultural values)
- w) Understands the impact of new inventions and technological developments in various regions of the world (e.g., how new inventions transformed patterns of global communication, trade, and state power; how new machines, fertilizers, transport systems, and commercialization affected agricultural production; significant inventions and inventors in 19th-century Europe and America)
- x) Understands factors that contributed to European imperialist expansion between 1850 and 1914 (e.g., advances in transportation, medicine, and weaponry that helped European imperial expansion in the late 19th century)
- y) Understands the consequences of the significant revolutions of the early 20th century (e.g., the prominent figures in the Mexican Revolution and its significance as the first 20<sup>th</sup> century movement in which peasants played a prominent role)
- **interpret and analyze documents and artifacts related to significant developments and events in world history**
  - a) Understands the impact of postwar scientific research on contemporary society (e.g., the work of pioneers in modern scientific research, the significance of research and scientific breakthroughs in promoting the U.S. space program)
  - b) Understands characteristics of Mycenaean Greek society and culture (e.g., the political and social organization of the Mycenaean Greeks as revealed in archaeological and written records, how geography influenced the development of Mycenaean society, the significance of the story of the siege of Troy)
  - c) Understands methods used to study Zapotec, Teotihuacan, and Moche civilizations (e.g., locations of these communities and their major archaeological remains, what archaeological evidence such as clay pottery and figures reveal about Moche civilization, what remains of planned cities reveal about the structure of Zapotec and Teotihuacan civilization)

- **classify historic information according to the type of activity or practice: social/ cultural, political, economic, geographic, scientific, technological, and historic**
    - a) Compares political, social, economic, and religious systems of Africans, Europeans, and Native Americans who converged in the Western Hemisphere after 1492 (e.g., concepts of political authority, civic values, and the organization and practice of government; population levels, urbanization, family structure, and modes of communication; systems of labor, trade, concepts of property, and exploitation of natural resources; dominant ideas and values including religious beliefs and practices, gender roles, and attitudes toward nature)
    - b) Understands the interregional trading system that linked peoples of Africa, Asia, and Europe on the eve of the European overseas voyages
4. **The skills of historical analysis include the ability to investigate differing and competing interpretations of the theories of history, hypothesize about why interpretations change over time, explain the importance of historical evidence, and understand the concepts of change and continuity over time.**

**Students:**

- **explain the literal meaning of a historical passage or primary source document, identifying who was involved, what happened, where it happened, what events led up to these developments, and what consequences or outcomes followed**
  - a) Understands the characteristics of writing forms in Mesopotamia, Egypt, and the Indus Valley and how written records shaped political, legal, religious, and cultural life
- **analyze different interpretations of important events and themes in world history and explain the various frames of reference expressed by different historians**
  - a) Understands the role of oral history in understanding West African history (e.g., the griot “keeper of tales” and other sources used to understand history) (7-8)
  - b) Understands features of Spanish exploration and conquest (e.g., why the Spanish wanted to invade the Incan and Aztec Empires, and why these empires collapsed after the conflict with the Spanish; interaction between the Spanish and indigenous populations such as the Inca and the Aztec; different perspectives on Cortes’ journey into Mexico)

- c) Understands Chinese policies toward foreign trade and immigration to other countries (e.g., why China resisted political contact and trade with Europeans, and how the opium trade contributed to European penetration of Chinese markets; motivations behind the Chinese trading policy and China's desire to keep out foreigners; motivations behind Chinese immigration to the U.S. and Southeast Asia)
- **view history through the eyes of those who witnessed key events and developments in world history by analyzing their literature, diary accounts, letters, artifacts, art, music, architectural drawings, and other documents**
  - a) Understands how language, literature, the arts, architecture, other artifacts, traditions, beliefs, values, and behaviors contribute to the development and transmission of culture
  - b) Understands aspects of the architecture of Medieval Europe (e.g., different architectural styles from this period; how some elements may still be seen in local, modern architecture)
  - c) Understands social and religious features of West Africa (e.g., what art reveals about the societies and rulers of Benin and Ile-Ife, the story of Solomon and Sheba and the role of Shebā in African history)
  - d) Understands what archaeological, artistic, and written sources can illustrate about pre-European life in the Americas
  - e) Understands significant contributions of the Renaissance and Reformation to European society (e.g., major achievements in literature, music, painting, sculpture, and architecture in 16th-century Europe; the life and accomplishments of select figures from the Renaissance to the Reformation)
  - f) Understands how China viewed its role in the world during the Ming Dynasty (e.g., why China's attitude toward external political and commercial relations changed after the Zheng He voyages from 1405 to 1433, the Chinese belief that other countries had a tributary relationship to the celestial empire)
  - g) Understands the role of art in conveying ideas in China and Japan (e.g., how nature is portrayed in Chinese and Japanese brush paintings)
  - h) Understands aspects of Russian expansion and settlement in the late 18th and 19<sup>th</sup> centuries (e.g., why Russia was successful in wars of expansion against the Ottoman empire; why and how Russia expanded across Asia into Alaska, and along the California coast; what archaeological evidence reveals about daily life in the Russian settlements at Sitka and Bogeda Bay)

- **investigate important events and developments in world history by posing analytical questions, selecting relevant data, distinguishing fact from opinion, hypothesizing cause-and-effect relationships, testing these hypotheses, and forming conclusions**
  - a) Understands possible causes of the decline and collapse of Indus Valley civilization (e.g., possible causes for the disappearance of cities such as Mohenjo-Daro, the role changes played in the fall of Indus cities)
  - b) Understands how new ideas, products, techniques, and institutions spread from one region to another and the conditions under which people assimilated or rejected new ideas or adapted them to cultural traditions
  - c) Understands how the Byzantine state withstood attacks between the 8th and 10<sup>th</sup> centuries (e.g., military technology and the successful defense of Byzantium against Arab Muslim attacks)
  - d) Understands influences on the growth of long-distance exchanges between different regions (e.g., the continuing spread of Islam, and the importance of Muslim civilization in mediating long-distance commercial, cultural, and intellectual exchanges; why new ports, manufacturing centers, merchant communities, and long-distance-trade routes emerged in the region of the “Southern Seas,” from the Arabian Sea to the coasts of China)
  - e) Understands the impact of European military and commercial involvement in Asia (e.g., how the Netherlands, England, and France became naval and commercial powers in the Indian Ocean basin in the 17th and 18th centuries; the impact of British and French commercial and military penetration on politics, economy, and society in India; why the Dutch wanted military and commercial influence in Indonesia and how this imperialism affected the region’s economy and society; why Asian trade was so important within the British economic and political structure)

**Standard 3. Geography: Students will use a variety of intellectual skills to demonstrate their understanding of the geography of the interdependent world in which we live; local, national, and global, including the distribution of people, places, and environments over the Earth's surface.**

1. **Geography can be divided into six essential elements which can be used to analyze important historic, geographic, economic, and environmental questions and issues. These six elements include: the world in spatial terms, places and regions, physical settings (including natural resources), human systems, environment and society, and the use of geography.**

**Students:**

- **map information about people, places, and environments**
  - a) Knows the locations of the southern and northern states and their economic resources (e.g., the industries and small family farms of the industrial North, the agricultural economy and slavery of the South)
  - b) Understands major changes in the political geography of Africa between 1880 and 1914
- **understand the characteristics, functions, and applications of maps, globes, aerial and other photographs, satellite-produced images, and models**
  - a) Understands geographical and architectural features of Egypt and Kush (e.g., the locations of Egypt and Kush on the African continent and the geographic features that either assisted or hampered communication between these two kingdoms, what architectural evidence suggests about the relationship between Egypt and Kush)
- **investigate why people and places are located where they are located and what patterns can be perceived in these locations**
  - a) Understands the migration and settlement patterns of peoples in the Americas (e.g., the archaeological and geological evidence that explains the movement of people from Asia to Americas, the spread of human societies and the rise of diverse cultures from hunter-gatherers to urban dwellers, use of the Bering land bridge)
  - b) Knows the geographic characteristics of Western and Central Africa and understands the impact of geography on settlement patterns, cultural traits, and trade (e.g., in political kingdoms such as Mali, Songhai, and Benin; in urban centers such as Timbuktu and Jenne)
  - c) Knows areas of Eurasia and Africa where cities and dense farming populations appeared between 4000 and 1000 BCE, and understands the connection between the spread of agriculture and the acceleration of world population growth
  - d) Understands the development of Greek city-states (e.g., common features of Greek city-states in the Aegean region; the political, social, and legal character of the polis; how geography influenced the location and development of Greek city-states)
  - e) Knows the maritime and overland trade routes linking regions of Afro-Eurasia and understands the importance of international trade for African and Eurasian societies
  - f) Understands features of trade routes in Asia, Europe, and Africa (e.g., how goods traveled from East Asia to Europe and the importance of the Indian

Ocean to the societies of Asia, East Africa, and Europe; the usefulness of the camel in desert transportation and trade)

- **describe the relationships between people and environments and the connections between people and places**
  - a) Understands that there are similarities and differences within groups as well as among groups
  - b) Understands the economic, social, and cultural influence of location and physical geography on different Native American societies (e.g., Iroquois and Pueblo, Northwest and Southeast societies)
  - c) Understands the effect of geography on different groups and their trade practices (e.g., nomads, town-dwellers, trade practices on the Arabian peninsula; the goods traded and the origins of these goods)
  - d) Understands the significance of Baghdad (e.g., the trade network and goods traded, its role as a center of commerce in the 8th to 10th centuries CE)
  - e) Understands geographic and political features of Tang China (e.g., the imperial conquests of the empire in Southeast and Central Asia; the locations of major cities in Tang China and their attraction for diverse people of differing religions; major geographical features of the area incorporated by the Tang Dynasty, the location of the network of canals, and how the Great Canal changed life in China; features of government and administration of Tang China)
  - f) Understands different farming methods of Teotihuacan and Moche civilization (e.g., agricultural methods, water utilization, and herding methods used by the Teotihuacan and Moche peoples, and how the natural environment of the Andes helped to influence these methods)
  - g) Understands the network of Afro-Eurasian trade in the 16th and 17th centuries (e.g., the importance of Indian textiles, spices, and other products in the trade; how spices brought to Europe by Vasco da Gama initiated the spice trade between India and Europe)
  - h) Understands features of the labor system and economy in the Americas (e.g., why sugar, tobacco, coffee, tea, and other crops grown in the colonies became so important in the world economy; different jobs performed by indigenous peoples in the Americas)
  - i) Understands global influences on the environment (e.g., how population growth, urbanization, industrialization, warfare, and the global market economy have contributed to environmental alterations; how effective

governments and citizens' groups have been at protecting the global natural environment)

- j) Understands ways in which human action has contributed to long-term changes in the natural environment in particular regions or worldwide
- k) Understands influences on state-building in West Africa (e.g., how the natural environments of West Africa defined agricultural production, and the importance of the Niger River in promoting agriculture, commerce, and state-building; the growth of the Ghana empire; how Islam, labor specialization, regional commerce and the trans-Saharan camel trade promoted urbanization in West Africa; the governing system of the royal court in Ghana, and how the effectiveness of imperial efforts was aided by a belief in the king's divinity) (7-8)

**2. Geography requires the development and application of the skills of asking and answering geographic questions; analyzing theories of geography; and acquiring, organizing, and analyzing geographic information.**

**Students:**

- **formulate geographic questions and define geographic issues and problems**
  - a) Understands the causes, consequences, and major patterns of international migration in the late 20th century compared to world population movements of the 19th century and the first half of the 20<sup>th</sup>
- **use a number of research skills (e. g., computer databases, periodicals, census reports, maps, standard reference works, interviews, surveys) to locate and gather geographical information about issues and problems**
  - a) Understands how to make use of the multimedia resources (i.e. web searches, periodicals such as Cobblestones, census reports, Nystrom atlases and correlating classroom pull-down maps and globes, maps from various sources, standard reference works, interviews, surveys, Black Line Masters) to locate and gather geographical information about issues and problems.
- **present geographic information in a variety of formats, including maps, tables, graphs, charts, diagrams, and computer-generated models**
  - a) Understands trends in the population of Europe for the last three and a half centuries, and at what time Europe had the greatest number of inhabitants
- **interpret geographic information by synthesizing data and developing conclusions and generalizations about geographic issues and problems**
  - a) Understands major shifts in world population and urbanization in this era and how factors such as industrialization, migration, changing diets, and

scientific and medical advances affected worldwide demographic trends (e.g., the changes large cities around the world went through during this period, such as Guangzhou [Canton], Cairo, Tokyo, Buenos Aires, Bombay, San Francisco, and London). Understands the experiences of immigrants to North and South America in the 19<sup>th</sup> century

- b) Understands why humans have built cities and how the character, function, and number of cities have changed over time

**Standard 4. Economics:** Students will use a variety of intellectual skills to demonstrate their understanding of how the United States and other societies develop economic systems and associated institutions to allocate scarce resources, how major decision-making units function in the United States and other national economies, and how an economy solves the scarcity problem through market and non-market mechanisms.

1. The study of economics requires an understanding of major economic concepts and systems, the principles of economic decision-making, and the interdependence of economies and economic systems throughout the world.

**Students:**

- explain how societies and nations attempt to satisfy their basic needs and wants by utilizing scarce capital, natural, and human resources
  - a) Understands that various factors (e.g., wants and needs, talents, interests, influence of family and peers and media) affect decisions that individuals make
  - b) Understands that the evaluation of choices and opportunity costs is subjective and differs across individuals and societies
  - c) Understands that the United States government uses laws and regulations to maintain competition, but sometimes the government reduces competition unintentionally or in response to special interest groups
  - d) Understands that wages and salary are influenced by forces of supply and demand for labor, as well as an individual's productivity, education, training and skills
  - e) Knows that the government defines "the labor force" as people at least 16 years old who either have a job or are actively looking for work
  - f) Understands that the unemployment rate (i.e., the percentage of the labor force considered to be unemployed) rises during a recession, and the economy's production is less than its potential level

- g) Understands the factors that shaped the economic system in the colonies and the Americas (e.g., labor systems, natural resources, relations with other countries and the home country)
- h) Understands the economic and social importance of slavery and other forms of coerced labor in various societies
- **define basic economic concepts such as scarcity, supply and demand, markets, opportunity costs, resources, productivity, economic growth, and systems**
  - a) Knows that all decisions involve opportunity costs and that effective economic decision -making involves weighing the costs and benefits associated with alternative choices
  - b) Knows that productivity can be measured as output per worker, per hour, per machine, or per unit of land
  - c) Understands that employers are willing to pay wages and salaries to workers because they expect to sell the goods and services those workers produce at prices high enough to cover the wages and salaries and all other costs of production
  - d) Understands that economic incentives such as wanting to acquire money or goods and services and wanting to avoid loss are powerful forces affecting the way people behave
  - e) Understands that entrepreneurs respond to incentives such as profits, the opportunity to be their own boss, the chance to achieve recognition, the satisfaction of creating new products, and disincentives such as losses and the responsibility, long hours, and stress of running a business
  - f) Knows that relative prices refer to the price of one good or service compared to the prices of others goods and services
  - g) Understands that the price of any one product is influenced by and also influences the prices of many other products
  - h) Understands that scarce goods and services are allocated in a market economy through the influence of prices on production and consumption decisions
  - i) Understands the “law of demand”(i.e., an increase in the price of a good or service encourages people to look for substitutes, causing the quantity demanded to decrease, and vice versa)
  - j) Understands that an increase in the price of a good or service enables producers to cover higher costs and earn profits, causing the quantity

supplied to increase (and vice versa), but that this relationship is true only as long as other factors influencing costs of product and supply do not change

- k) Understands that not all competition is on the basis of price for identical products and that non-price competition includes style and quality differences, advertising, customer services, and credit policies
- l) Understands how competition among buyers of a product results in higher prices for the product
- m) Understands that money encourages people to specialize because they can operate more efficiently in an exchange (i.e., sell what they produce to anyone, not just to someone who has something they want)
- n) Knows the four basic categories of earned income: wages and salaries, rent, interest, and profit
- o) Understands that funds are channeled from savers to borrowers through banks.
- p) Knows that inflation refers to a sustained increase in the average price level of the entire economy
- q) Knows that deflation refers to a sustained decrease in the average price level of the entire economy
- r) Understands that inflation reduces the value of money and that people's purchasing power declines if their incomes increase more slowly than the inflation rate
- s) Knows that an exchange rate is the price of one nation's currency in terms of another nation's currency, and that exchange rates are determined by the forces of supply and demand
- t) Understands elements of African slavery during the colonial period in North America (e.g., relocation of enslaved Africans to the Caribbean and North America, the slave trade and "the middle passage")
- **understand how scarcity requires people and nations to make choices which involve costs and future considerations**
  - a) Understands that scarcity of resources necessitates choice at both the personal and the societal levels
- **understand how people in the United States and throughout the world are both producers and consumers of goods and services**

- a) Knows that exports are goods and services produced in one nation but sold to buyers in another nation
- b) Knows that imports are goods or services bought from sellers in another nation
- c) Understands that international trade promotes greater specialization, which increases total world output, and increases material standards of living
- **investigate how people in the United States and throughout the world answer the three fundamental economic questions and solve basic economic problems**
  - a) Understands that national economies vary in the extent to which they rely on government directives (central planning) and signals from private markets
  - b) Understands that many non-economic factors (e.g., cultural traditions and customs, values, interests, abilities) influence patterns of economic behavior and decision making
  - c) Understands that relative prices and how they affect people's decisions are the means by which a market system provides answers to the basic economic questions: What goods and services will be produced? How will they be produced? Who will buy them?
  - d) Understands that governments provide public goods because of the properties of shared consumption (i.e., non-rival products that can be used simultaneously by more than one person without reducing the amount of the product available for others to consume) and non-exclusion (i.e., public goods and service provide benefits to more than one person at the same time, and their use cannot be restricted only to those people who have paid to use them)
  - e) Selects appropriate locations for specific service industries within the community
- **describe how traditional, command, market, and mixed economies answer the three fundamental economic questions**
  - a) Knows that in a command economic system a central authority, usually the government, makes the major decisions about production and distribution
  - b) Knows that in a market economic system individual households and business firms make the major decisions about production and distribution in a decentralized manner following their self-interests

- c) Understands the types of specialized economic institutions found in market economies (e.g., corporations, partnerships, cooperatives, labor unions, banks, nonprofit organizations)
- d) Understands that in a market economy the pursuit of economic self-interest directs people and businesses in most of their economic decisions (e.g., to work, to save, to invest)
- e) Knows that in a market economy the government helps markets to operate efficiently by protecting property rights (i.e. the right to exclude others from using a good or service and the right to transfer ownership) and by providing a system of weights and measures and a standard and stable currency
- f) Knows that Gross Domestic Product (GDP) is the total market value, expressed in dollars, of all final goods and services produced in the economy in a given year and is used as an indicator of the state of the economy
- **explain how nations throughout the world have joined with one another to promote economic development and growth**
  - a) Understands that affiliation with a group can increase the power of members through pooled resources and concerted action
  - b) Understands that extensive international trade requires an organized system for exchanging money between nations (i.e., a foreign exchange market)
  - c) Knows that despite the advantages of international trade (e.g., broader range of choices in buying goods and services), many nations restrict the free flow of goods and services through a variety of devices known as “barriers to trade” (e.g., tariffs, quotas) for national defense or because some companies and workers are hurt by free trade
  - d) Understands that increasing international interdependence causes economic conditions and policies in one nation to affect economic conditions in many other nations. Knows how the level of real GDP per capita is used to compare the level of economic development in different nations
  - e) Understands major patterns of long-distance trade from ancient times to the present and how trade has contributed to economic and cultural change in particular societies or civilizations

2. **Economics requires the development and application of the skills needed to make informed and well-reasoned economic decisions in daily and national life.**

**Students:**

- **identify and collect economic information from standard reference works, newspapers, periodicals, computer databases, textbooks, and other primary and secondary sources**
  - a) Compares different sources of information for the same topic in terms of basic similarities and differences
- **organize and classify economic information by distinguishing relevant from irrelevant information, placing ideas in chronological order, and selecting appropriate labels for data**
  - a) Selects criteria or rules for category membership that are relevant and important
  - b) Orders information and events chronologically or based on frequency of occurrence
  - c) Orders information based on importance to a given criterion
  - d) Identifies the abstract relationships that form the basis for analogies
- **evaluate economic data by differentiating fact from opinion and identifying frames of reference**
  - a) Compares consumer products on the basis of features, performance, durability, and cost, and considers personal tradeoffs
  - b) Makes effective decisions about consumer products based on important criteria, including external features, performance, durability, cost, and personal tradeoffs
  - c) Articulates abstract relationships between existing categories of information
- **develop conclusions about economic issues and problems by creating broad statements which summarize findings and solutions**
  - a) Understands that increasing labor productivity is the major way in which a nation can improve the standard of living of its people
  - b) Understands that an analogy not only contains some likenesses but also some differences

- **present economic information by using media and other appropriate visuals such as tables, charts, and graphs to communicate ideas and conclusions**
  - a) Creates a table to compare specific abstract and concrete features of two items
  - b) Uses a decision-making grid or matrix to make or study decisions involving a relatively limited number of alternatives and criteria

**Standard 5. Civics, Citizenship, and Government: Students will use a variety of intellectual skills to demonstrate their understanding of the necessity for establishing governments; the governmental system of the United States and other nations; the United States Constitution; the basic civic values of American constitutional democracy; and the roles, rights, and responsibilities of citizenship, including avenues of participation.**

1. **The study of civics, citizenship, and government involves learning about political systems; the purposes of government and civic life; and the differing assumptions held by people across time and place regarding power, authority, governance, and law.**

**Students:**

- **analyze how the values of a nation affect the guarantee of human rights and make provisions for human needs**
  - a) Understands the difference between the “rule of law” and the “rule of man” (e.g., government decisions and actions according to established laws vs. arbitrary action or decree)
  - b) Understands how and why the rule of law can be used to restrict the actions of private citizens and government officials
  - c) Understands the possible consequences of the absence of a rule of law (e.g., anarchy, arbitrary and capricious rule, absence of predictability, disregard for established and fair procedures)
- **consider the nature and evolution of constitutional democracies**
  - a) Knows some basic uses of constitutions
  - b) Knows that constitutions have been used to protect individual rights and promote the common good
  - c) Knows the type of citizenry needed to establish and maintain constitutional government

- d) Knows the type of public servants needed to help establish and maintain constitutional government
- **explore the rights of citizens in other parts of the hemisphere and determine how they are similar to and different from the rights of American citizens**
  - a) Understands that punishments vary widely among, and even within, different societies
  - b) Understands that most groups have formal or informal procedures for arbitrating disputes among their members
- **analyze the sources of a nation's values as embodied in its constitution, statutes, and important court cases**
  - a) Understands the development of colonial governments (e.g., how early colonies differed in the way they were established and governed, how characteristics of colonial self-government such as the right to vote and hold office were reflected in the Mayflower Compact)
  - b) Understands the events that contributed to the outbreak of the American Revolution and the earliest armed conflict of the Revolutionary War (e.g., opponents and defenders of England's new imperial policy, the idea of "taxation without representation," the battle at Lexington and Concord)
  - c) Understands the major ideas in the Declaration of Independence, their sources, and how they became unifying ideas of American democracy (e.g., major terms, why the document was written, what the signers risked)
  - d) Understands the significance of the Bill of Rights and its specific guarantees (e.g., the relevance of the Bill of Rights in today's society)
  - e) Knows various uses of the term "constitution"
- 2. **The state and federal governments established by the Constitutions of the United States and the State of New York embody basic civic values (such as justice, honesty, self-discipline, due process, equality, majority rule with respect for minority rights, and respect for self, others, and property), principles, and practices and establish a system of shared and limited government.**

**Students:**

- **understand how civic values reflected in United States and New York State Constitutions have been implemented through laws and practices**
  - a) Understands the major ideas in the Declaration of Independence, their sources, and how they became unifying ideas of American democracy (e.g., major terms, why the document was written, what the signers risked)

- b) Understands the significance of the Bill of Rights and its specific guarantees (e.g., the relevance of the Bill of Rights in today's society)
- **understand that the New York State Constitution, along with a number of other documents, served as a model for the development of the United States Constitution**
  - a) Understands the influence of the New York State Constitution in the formulation of the United States Constitutions
  - b) Understands that the United States Constitution was inspired by a variety of resources and precedents, all of which influenced its development. (e.g., major terms, why the document was written, what the Constitution attempted to convey)
- **compare and contrast the development and evolution of the constitutions of the United States and New York State**
  - a) Understands the influence of the New York State Constitution in the formulation of the United States Constitutions
  - b) Understands that the United States Constitution was inspired by a variety of resources and precedents, all of which influenced its development. (e.g., major terms, why the document was written, what the Constitution attempted to convey)
- **define federalism and describe the powers granted the national and state governments by the United States Constitution**
  - a) Understands the development of colonial governments (e.g., how early colonies differed in the way they were established and governed, how characteristics of colonial self-government such as the right to vote and hold office were reflected in the Mayflower Compact)
  - b) Understands the events that contributed to the outbreak of the American Revolution and the earliest armed conflict of the Revolutionary War (e.g., opponents and defenders of England's new imperial policy, the idea of "taxation without representation," the battle at Lexington and Concord)
  - c) Understands the major ideas in the Declaration of Independence, their sources, and how they became unifying ideas of American democracy (e.g., major terms, why the document was written, what the signers risked)
- **value the principles, ideals, and core values of the American democratic system based upon the premises of human dignity, liberty, justice, and equality**
  - a) Understands the difference between the "rule of law" and the "rule of man" (e.g., government decisions and actions according to established laws vs. arbitrary action or decree)

- b) Understands how and why the rule of law can be used to restrict the actions of private citizens and government officials
- c) Understands the possible consequences of the absence of a rule of law (e.g., anarchy, arbitrary and capricious rule, absence of predictability, disregard for established and fair procedures)
- **understand how the United States and New York State Constitutions support majority rule but also protect the rights of the minority**
  - a) Understands that usually within any society there is broad general agreement on what behavior is “unacceptable,” but that the standards used to judge behavior vary for different subgroups may change with time and in response to different and economic conditions
  - b) Understands how tensions might arise between expressions of individuality and group or institutional efforts to promote social conformity

**3. Central to civics and citizenship is an understanding of the roles of the citizen within American constitutional democracy and the scope of a citizen's rights and responsibilities.**

**Students:**

- **explain what citizenship means in a democratic society, how citizenship is defined in the Constitution and other laws of the land, and how the definition of citizenship has changed in the United States and New York State over time**
  - a) Identifies situations in the community and in one’s personal life in which a decision is required
- **understand that the American legal and political systems guarantee and protect the rights of citizens and assume that citizens will hold and exercise certain civic values and fulfill certain civic responsibilities**
  - a) Knows the type of citizenry needed to establish and maintain constitutional government
- **discuss the role of an informed citizen in today's changing world**
  - a) Analyzes personal decisions in terms of the options that were considered
- **explain how Americans are citizens of their states and of the United States**
  - a) Understands the respective obligations, responsibilities and privileges ascribed to local, state and national citizenship

- 4. The study of civics and citizenship requires the ability to probe ideas and assumptions, ask and answer analytical questions, take a skeptical attitude toward questionable arguments, evaluate evidence, formulate rational conclusions, and develop and refine participatory skills.**

**Students:**

- **respect the rights of others in discussions and classroom debates regardless of whether or not one agrees with their viewpoint**
  - a) Knows the value of the intra- and interpersonal intelligences and works collaboratively with classmates, in both brainstorming and debates. Understands that our perspective is enlarged and we become highly effective if we have the emotional intelligence to seek first to understand, then to be understood.
- **explain the role that civility plays in promoting effective citizenship in preserving democracy**
  - a) Knows the type of citizenry needed to establish and maintain constitutional government
- **participate in negotiation and compromise to resolve classroom, school, and community disagreements and problems**
  - a) Identifies alternative courses of action and predicts likely consequences of each
  - b) Selects the most appropriate strategy or alternative for solving a problem
  - c) Examines different alternatives for resolving local problems and compares the possible consequences of each alternative
  - d) Secures factual information needed to evaluate alternatives
  - e) Identifies the values underlying the alternatives that are considered and the criteria that will be used to make a selection among the alternatives
  - f) Predicts the consequences of selecting each alternative
  - g) Makes decisions based on the data obtained and the criteria identified
  - h) When appropriate, takes action to implement the decision



THE STATE EDUCATION DEPARTMENT / THE UNIVERSITY OF THE STATE OF NEW YORK / ALBANY,  
NY 12234  
Office for Elementary, Middle, Secondary and Continuing Education  
Office of New York City School and Community Services

---

Office of the Associate Commissioner  
55 Hanson Place, Brooklyn New York 11217  
Telephone: (718) 722-2796  
Fax: (718) 722-4559

March 12, 2001

Mr. Robert J. Bellafiore  
President  
Charter Schools Institute  
74 North Pearl Street, 4<sup>th</sup> Floor  
Albany, New York 12207

Dear Mr. Bellafiore:

The Charter School Review Panel met on March 8, 2001 to review the changes to the proposed charter for Our World Neighborhood Charter School. As a result, additional information and clarification is needed in several areas. Please provide the following information:

1. Item 7 requested that the applicant cite how curriculum is aligned, by grade level, with State learning standards. The applicant submitted curriculum only for a few content areas and for Grades K-5 instead of K-8. Alignment was provided with Bloom's Taxonomy, National Standards and the ITBS. The applicant's submission of March 6, 2001 was not responsive to the request. Please show how the curriculum will be aligned with the New York State Learning Standards.
2. Applicant response to item 13 needs clarification in one area referred to on p. 14 - math and science curriculum and materials for grades 6-8.
3. In response to item 25, in the second to last paragraph, we recommend changing the phrase "authorized employees" to "school officials with legitimate educational interests."
4. In response to item 22(b), in the second paragraph, please change the last sentence to read "The Principal shall personally monitor..."
5. On page 26, section B, paragraph two: The last sentence conflicts with information on page 30 (last paragraph). It is not clear whether or not the liaison is a charter school staff member or the CSE chair. From the description given about the liaison role, it appears that the charter school person should be the liaison. Please clarify.

6. In response to item 25, on page 28, the proposed charter school must ensure that whoever provides special education services is properly licensed and/or certified. Please modify.
7. On the top of page 29, please note that the CSE determines disability and eligibility of children for special education services. Revise to indicate that the proposed charter school will refer students suspected of having a disability to the child's CSE for evaluation.
8. There is a discrepancy in the response to item 25. Please clarify the statement on page 30, "The chairperson of the CSE will serve..." and the last statement in item 22, second paragraph, page 26, "...and designate one staff person to serve as the liaison to the district's CSE."
9. In the third paragraph of the response to item 25, on page 31, the language that states "...keep these records for authorized employees" should be changed to read "... keep these records for legitimate employees. Please modify.
10. With respect to your response to item 29, under the FERPA regulations, the disclosure may only be to "school officials." Upon further consideration of the issue, SED has concluded that an MEI employee may be a "school official." Thus, please revise page 16 of the second amendments to read:

"Parents/guardians and eligible students will be provided their right to consent to any disclosures of personally identifiable information contained in a student's educational record, except if the disclosure is to school officials who need the information for legitimate and sound educational reasons. OWN Charter School considers such "school officials" to be one or more of the following: the CAO/Principal, the student's classroom teacher/paraprofessional, a learning specialist/therapist, the school nurse, Board member, Board attorney, and designated MEI employees. Furthermore, a school official must be fulfilling his/her professional responsibility to have a legitimate educational interest to review a student's educational record. In its annual notification required by the FERPA regulations, OWN Charter School will specify criteria for determining who constitutes a school official and what constitutes a legitimate educational interest as required by 34 CFR 99.7 (a)(3)(iii).
11. In response to item 35, on page 34, it was stated that the proposed charter school would delete the last sentence in the second to last paragraph on page 309 of the charter, which states, "OWN will work with the district CSE...." However, the sentence still appears in the revised document on page 27. Please clarify or delete. Also note that the proposed charter school will have no part in reviewing or revising a student's IEP. This is the sole responsibility of the CSE.

12. Please provide all of the assurances (2 – 4) that were requested in item 48: The proposed charter makes a number of references to before and after school programs and child care (e.g. pp. 30, 37, 38; First Amendment pp. 302; Second Amendment p. 14). Provide an assurance that any charter school programs will be consistent with the following principles: (1) a charter school corporation is not authorized to provide before or after school child care; (2) a charter school corporation may arrange to have an outside entity, including a management company, provide before and/or after school child care if such entity is licensed by the Department of Social Services, has the corporate authority to provide such services, and the fee for the child care is not paid by the charter school; (3) a charter school corporation may provide tutoring to its students, but may not charge a fee for such tutoring; (4) an outside agency, including a management company, may provide tutoring services to charter school students, but charter school students may not be charged any fee for any tutoring that is an essential component of the charter school's program.
13. A response was not provided for item 54, please respond: Page 422 of the proposed charter states that judicial and quasi-judicial proceedings, and deliberations of political conferences and caucuses, need not be discussed at open meetings because such discussions are exempted by the Open Meetings Law. This misinterprets the law. Open Meetings Law Section 108 provides that the Open Meetings Law does not apply to judicial and quasi-judicial proceedings, and deliberations of political conferences and caucuses. This does not mean that discussions of such matters at Board meetings are exempt from the Open Meetings Law. Accordingly these provisions should be deleted.

Please provide the responses to the above directly to the Office of New York City School and Community Services Charter Schools Unit by the close of business **March 13, 2001**. The Charter School Review Panel will meet to consider the responses and develop a recommendation for the Board of Regents regarding the adequacy of the proposed charter. If you have any questions, please call Dr. Lisa Long at 718-722-2796.

Sincerely,

Shelia Evans-Tranum

cc: Review Panel

74 NORTH PEARL STREET, 4<sup>TH</sup> FLOOR  
ALBANY, NEW YORK 12207  
PHONE: 518-433-8277  
FAX: 518-427-6510  
www.newyorkcharters.org

ROBERT J. BELLAFFIORE  
PRESIDENT

March 7, 2001

Charter Schools Unit

APR 20 2001

**VIA HAND DELIVERY**

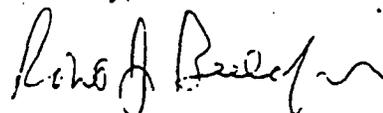
James R. Butterworth  
Assistant Commissioner  
New York State Education Department  
Office of Regional & Community Services  
Room 475 EBA  
Albany, New York 12234

Dear Mr. Butterworth:

Please find enclosed responses to the Department's request for information, dated February 27, 2001, from the following proposed charter schools: The Icahn Charter School and Our World Neighborhood Charter School. It is our understanding that the responses to your requests from the proposed Family Life Academy Charter School and RiverView Academy Charter School were forwarded directly to Commissioner Trannum.

Please be advised that the responses enclosed herein, together with responses to any further requests from the Department, will be subsequently submitted to the Department as an exhibit to a formal amendment to the proposed charter once all signatures will have been obtained. In the meantime, the instant submission allows the Department to proceed with its review without delay.

Sincerely,



Robert J. Bellafiore  
President

Enclosures

c: Shelia Evans-Trannum (w/enclosures) (via facsimile)

# **OUR WORLD NEIGHBORHOOD CHARTER SCHOOL**

**Response to the State Education Department's Letter**

**3/6/01**

1. Provide a list of all applicant's telephone numbers, addresses, district(s) of residence, and indicate whether each is a teacher, school administrator, parent, or community resident in the district of location of the proposed charter school, per the requirements of §2851(2)(m) of Education Law.

§2851(2)(m) of the Education Law requests "identification and background information on all applicants". All applicants reside in Western Queens (in District 30 of the New York City School District). All applicants are members of the Astoria Parents Network and are parents. Two applicants, Tammy Kao and Dana Cotton, have worked as educators. The address and phone number of each applicant follows:

Mary Bogle

[REDACTED]  
Astoria, NY [REDACTED]  
[REDACTED]

Michael Buonasora

[REDACTED]  
Astoria, NY [REDACTED]  
[REDACTED]

Lisa Caballero

[REDACTED]  
Astoria, NY [REDACTED]  
[REDACTED]

Dana Cotton

[REDACTED]  
Astoria, NY [REDACTED]  
[REDACTED]

Dora Galacatos

[REDACTED]  
Astoria, NY [REDACTED]  
[REDACTED]

Tammy Kao

[REDACTED]  
Astoria, NY [REDACTED]  
[REDACTED]

Anastasia Macris

[REDACTED]  
Astoria, NY [REDACTED]  
[REDACTED]

**REDACTED**

Yuri Ono

Astoria, NY

Lauren Garay Vicuna

East Elmhurst, N

- 2. The date of birth for each applicant was not included in the background information. Please provide this information.

Each applicant is over 18 years of age.

- 3. On page 7 of the application, the date for the opening of the charter school is August 24. However, according to the school calendar, teacher training begins on August 13 and the first day of class is August 27. Please clarify.

The first day of class will be August 27.

- 4. On page 3-5 of the Amendments, the language regarding how the educational program will create new professional opportunities for teachers, administrators, etc. was omitted. Please revise.

In the Executive Summary, the Application contains a thorough discussion of professional opportunities the School will create for teachers on pages 28 and 29. There is no reference to the educational program on pages 3-5 of either the 1st or 2nd Amendment, nor are there questions regarding professional opportunities for teachers in either RFA. Therefore it is unclear to the applicants what "omitted" language the question, as written, is referencing.

- 5. According to page 29 – 30, regarding the admissions policy, preference is given to students in Community School District 30. This process is not in compliance with state law. No student shall be given preference in admission based upon where they reside within the New York City school district. Please revise.

There is no reference on pages 29-30 of the application to admission policy. The School's proposed admission policy is outlined on Pages 407 and 408 of the application.

We amend our response by replacing the 2nd paragraph of page 407 with the following text:

**REDACTED**

Own Charter School will give preference in the following order to these categories of students:

Returning students;  
 Siblings of currently enrolled students;  
 Students residing in the New York City School District  
 Students residing outside the New York City School District

6. Citing the relationship of the curriculum to the Iowa test for grades K-5 does not equate to citing the alignment of the curriculum to all State learning standards (K-8). There is material in the application related to outdated assessments and high school requirements. These references should be deleted. The applicant needs to include the intermediate level technology assessment in grades 7 or 8, depending on when the course is given. Considering the application's strong emphasis on a dual language program, the applicant should reference the second language proficiency exam.

The references in the application to outdated assessments and high school requirements will be deleted.

Given the integration of technology into the curriculum starting in Kindergarten and the daily use of the eight intranet- and internet-linked classroom-based computers, the applicants do not foresee a problem in meeting the technology assessment by grade 7. Also, there is no specific technology course given that students use technology as a learning tool as soon as they begin attending OWN Charter School.

More specifically, the integration of technology into the classroom activities will enable students, by grade 2, to:

- know the alphanumeric keys and special keys on the keyboard
- know the proper finger placement on the home row keys
- know how to start the computer and type logins and passwords as well as shut down
- understand the proper usage policy for school technology
- handle diskettes, CD-ROMs and other computer equipment with care
- type on the computer keyboard using correct hand and body positions
- print pages of work onto the classroom printer
- know the basic distinctions among computer software programs such as word processing, special-purpose programs and games
- use menu options and commands
- understand that when an individual creates something on a computer, the created work is that person's property, and only that person has the right to change it

By grade 5, students will be able to:

- know the basic functions of hardware (e.g., keyboard and mouse provide input; printer and monitor provide output; hard and floppy disk provide storage; the CPU processes information)
- use database software to add, edit and delete records, and to find information through simple sort or search techniques
- know how format differ among software applications and hardware platforms
- know ways that technology is used at home and school (e.g., paging systems, telephones, VCRs)
- troubleshoot simple problems in software and/or hardware (e.g., re-boots, uses help functions, uses print monitor)
- understand the concept of software privacy (i.e., illegally copying software) and that piracy is a violation of copyright laws
- use word processing software as a writing tool
- use presentation software (e.g., Hyperstudio, KidPix) for class projects
- access a specific Internet address given the URL
- send an e-mail message to a friend or pen pal

By grade 7, students will be able to:

- research specific questions or subject matters using the internet or other electronic sources
- use word processing software to draft, edit and finalize reports and research papers
- use presentation software that incorporates text, video and audio
- use spreadsheet and database software to analyze information and present it graphically
- understand the potential for misuse of information that is stored electronically
- understand how to use multi-media tools such as scanners and digital cameras to enhance their presentation and communications
- understand how to create web pages using Front Page and Publisher

A proficiency exam in Spanish will be given in grade 7. By that time students will be able to

- know how to express likes, dislikes and simple preferences in Spanish in everyday situations
- know how to give and follow instructions in Spanish

- know how to exchange information with peers in Spanish
  - know how to exchange information in Spanish about general events and transportation
  - understand the main ideas and/or principal characters in Spanish in age-appropriate video or television programs on familiar topics
  - understand the main ideas and/or principal characters in Spanish in written poems, short folk tales, or illustrated stories
  - comprehend the spoken language in the form of directions, commands, questions, structured conversations and simple narrative descriptions
  - use appropriate vocabulary, gestures and oral expressions in Spanish for greetings, introductions, and other common or familiar interactions
  - identify people and objects in the environment based on oral and written descriptions in Spanish
  - present oral reports and lead discussions about family members and friends and common activities in Spanish
  - write descriptions and messages in Spanish that describe or provide information about activities, people or places
  - recite poetry, songs, proverbs or short anecdotes/narratives that are common for early teens in a Spanish culture
  - present information about family, school events and celebrations in Spanish via letters, e-mail, or in audio and video tapes
  - write a newspaper article in Spanish about a current event
  - converse with a native Spanish speaker about a current event or classroom occurrence
7. Applicant must cite how curriculum is aligned, by grade level, with all 28 learning standards. This information was not provided in the amended materials. The applicant submitted curriculum only for a few content areas and for Grades K-5 instead of K-8. Alignment was provided with Bloom's Taxonomy, National Standards and the ITBS. Please show how the curriculum will be aligned with the New York State Learning Standards.

The Board of Trustees of OWN Charter School embraces its responsibility to meet and exceed State Performance Standards. We strongly believe that the curriculum that we propose will enable the students who attend the charter school to meet and exceed all Performance Standards and to achieve mastery of all learning standards, particularly those in core academic areas. In addition, the Board is committed to continue to work throughout the life of the school to enhance the curriculum, the learning tools and the skills and abilities of the faculty in response to the needs of the specific students we serve in attaining mastery of State Performance Standards.

8. The applicant should state the percentage of students who are expected to achieve Level 3 or above on Grade 4 State ELA and math assessments. In addition, please provide a timeframe for attaining these student achievement goals.

Our school is designed to ensure that all students are prepared to meet or exceed the Regent's Performance Standards by scoring at level three or above on the ELA and math assessments. We look forward to working with the Charter Schools Institute on our accountability plan to set the timeframe and specifics for achieving these goals. We will be able to begin to plan for these specific goals as soon as we know which students are enrolled at the school and their achievement level upon entering.

9. Page 311-312 of the first Amendment indicates that ELLs/LEPs will categorically be excluded from Spanish Language classes. SED has serious concerns about whether this is consistent with Title VI of the Civil Rights Act of 1964. Please provide authority supporting the proposition that such exclusion is consistent with Title VI of the Civil Rights Act of 1964.

ELL/LEP students will not be categorically excluded from Spanish Language classes. However, given that these students will need to spend significantly more time on English it is likely that, with parental agreement, some or all of these students may be best served by delaying the study of Spanish until a later point in time. The decision regarding the placement of each such child will be carefully made according to both the needs of the individual student, the wishes of the parents, and the requirements of all applicable laws including Title VI of the Civil Rights Act of 1964.

10. On page 329, the applicant makes LEP/ELL placement a sole responsibility of the ESL teacher. The application does not indicate use of instruments or how assessment will be conducted. Please revise.

As described on page 314 of the first set of Amendments to the application:

"To identify potential LEP students at the time of enrollment, all parents or guardians will be required to complete a home language questionnaire. The purpose of this questionnaire will be to determine whether the dominant language used at home is a language other than English and to gather information from the parents or guardians about the child's skills in understanding, speaking, reading, and writing English. For continuing and transfer students, a determination will be made as to whether the student shows limited English proficiency, as defined by a score at or below the 40th percentile, or its equivalent, on an English Language assessment instrument approved by the New York State Commissioner. In addition, a New York State credentialed TESOL teacher will conduct interviews with students whose home language is not English to identify students with limited English proficiency (LEP), to make

recommendations for placement in the Portal Program as needed, and to gather information for the preparation of each student's personalized learning plan.

Entering students who speak no English will qualify for placement in the Portal Program. Entering students who demonstrate some English-speaking ability during the informal interview will be tested with an approved oral English language assessment instrument. Entering students who score at or below the "cut-off point on the oral English language assessment will also qualify for Portal Program placement. Entering students who score above the "cut-off point" on the approved oral English language assessment instrument, and are not of pre-reading age, will then have their English reading skills assessed with an approved English Language reading skills assessment instrument. Those entering students who score at or below the 40th percentile will also qualify for Portal Program placement. Those entering students who score above the 40th percentile will be assigned to mainstream classes.

Instructional time:

1. 450 minutes combined ESL and ESL math/science per week (during the 90 minutes of Language Arts time each morning.)
2. 120 minutes Compass Learning per week
3. 80 minutes ESL social studies/accluturation curriculum (during Spanish time)

Total ESL time for OWN Portal Program: 650 minutes per week

Additionally, all OWN students performing below grade level in Language Arts and Mathematics will be eligible for tuition-free tutorial assistance in Compass Learning to accelerate them up to grade level at their individualized rate of instruction.

Transitional services will be provided for former LEP students during their first year in the mainstream program. These may include counseling groups, cultural awareness activities, specific interest groups, additional Compass Learning tutorial work if needed, enhancement of public speaking skills, and other guidance and assistance as needed.

To identify potential LEP students, at the time of enrollment, parents will be asked whether the dominant language at home is a language other than English and whether the child is bilingual. A Language Assessment Battery will then be given to all students who are not native English language speakers. Bilingual New York State certified school psychologists will conduct further evaluations and then work with the school's professional staff to personalize the programs for the students."

11. On page 329, the applicant refers to a first-year immersion "Portal Program," but does not explain the program or how it articulates to the overall curriculum. Please provide additional information.

A description of the "Portal Program" , as well as how it fits into the overall curriculum, is detailed on pages 314 through 317 and page 319 of the first set of Amendments. Pages 314 and 315 of the first Amendment are repeated in the answer to question #10, above; pages 316 and 317 are repeated below:

"The "Portal Program" is a focused first-year program consisting of ESL instruction; core content instruction in English supported by ESL methodologies, and English language immersion. During the morning Language Arts time, Portal Program students will be pulled out to receive intensive ESL instruction from a New York State credentialed TESOL instructor and be introduced to core content in Math and Science through an ESL approach. Portal Program students will further build their language arts and math skills during two sessions each week with Compass, a software tutorial that emphasizes mastery. Compass is individualized to the needs of each student and also provides tools for ongoing evaluation, so that each individual student's progress can be monitored (see 7F).

During the morning Math and Science times, Portal Program students will take part in hands-on activities with mainstream students in an English immersion environment. To provide support for LEP students in the immersion environment, all classroom teachers at OWN will receive specialized pre-service training conducted by New York state credentialed TESOL instructors. The immersion experience gets students

speaking English in a meaningful, communicative way quickly, and makes use of the younger child's greater natural facility for foreign language acquisition. Using English for real communication as soon as possible in their educational experience increases student chances for long-term success in mastering in written and spoken English. Portal Program students will develop skills in understanding, speaking, reading, and writing English and will immediately begin using these skills to communicate as they explore core content in language arts, mathematics and science.

The immersion environment will continue each afternoon, as Portal Program students work together with mainstream students to learn social studies content during the hands-on, interdisciplinary Paragon Curriculum sessions. During the two afternoon sessions of Spanish instruction for mainstream students, Portal Program students will be pulled out to receive instruction in core social studies content through an ESL approach, and a specialized acculturation curriculum featuring US customs, cultures, and related language. These social studies topics will draw from and extend the afternoon Paragon Curriculum, building LEP students' vocabulary and conversation practice, and providing them with the linguistic tools with which to take full advantage of the learning opportunities afforded by Paragon. Additionally, because Paragon is a multicultural, hands-on journey through time and place, OWN teachers will solicit parent and student support to enrich the study of the countries of origin represented by the charter school's culturally diverse community of learners.

In keeping with the philosophy of OWN, linguistic and cultural diversity will be celebrated as a true asset throughout the educational program. OWN will create a school environment in which all students and their families can feel free to take part in curricular and extra-curricular activities regardless of English language proficiency. When possible, OWN will make native language versions of the language arts curriculum and other materials available to parents for supplementary work at home and for use in after-school tutorial programs. As needed, OWN will make translations of

school notices available to families of LEP students in their home language.

12. The methods and strategies that would be used to serve LEP students does not fully meet the requirements of Title VI of the Civil Rights Act. The application must specifically state: (a) appropriate evaluative standards for measuring the progress of LEP students, including program exit criteria; (b) a process for continued program assessment and modification where needed; and; (c) an indication that national origin minority students are not assigned to classes for the disabled because of their lack of English.

Pages 318 through 320 of the first set of Amendments detail our evaluative standards for measuring the progress of LEP students.

Page 318 of the first set of Amendments states that "LEP students scoring above the 40th percentile on the annual English language assessment will be eligible to transition out of the Portal Program ... subject to instructor recommendation" and discusses exit criteria generally.

Page 311 of the first set of Amendments, specifically states "Students who lack English skills will not be assigned to classes for the disabled due to their LEP status regardless of their national origin or status as a member of any minority group".

No LEP/ELL student will be assigned to a program for disabled students based upon his or her lack of facility with the English language. Placement in Special Education programs will *only* be made to address a specific learning disability and in accordance with procedures outlined in the application and its amendments.

13. On page 42 and following in Attachment 14, Volume 1 and Appendix 2, Volume 2, the information on the following State Learning Standard areas needs to be submitted: (a) K-8 Family and Consumer Sciences and Career Development and Occupational Education Standard areas; (b) Grades 5-8 Languages Other than English, Technology; Grades 6-8 Math and Science; and (c) No school curricular material or resources provided for New York State history, although reference was made to its need. The applicant should review Social Studies standards and the SED website for Grades K-5 to ensure that students are prepared for Grades 5 and 8 Social Studies assessment.
- The Board of Trustees of OWN Charter School embraces its responsibility to meet and exceed State Performance Standards and looks forward to documenting the academic achievements of our students on all State Performance Assessments. We strongly believe that the curriculum that we

propose will enable the students who attend the charter school to meet and exceed these standards.

With respect to the specific standards that are referenced in this question:

- Family and Consumer Sciences --- Students will learn about family life in various cultures around the world and throughout world history, from 40,000 B.C.E. to contemporary times. In their hands-on journey through the history of great ideas in world culture, students will also study elements of culture that include: Architecture, Behavior, Beliefs, Dress, Economy, Food, Government, and Technology.
- Career Development and Occupational Education – Students will learn about the changing nature of the workplace, the value of work to society and the connection of work to the achievement of personal goals through the Paragon curriculum, a key component of the afternoon program. These areas of curricular focus are addressed within specific Paragon units where students will:
  - Understand family life today and how it compares with family life in the recent past and family life long ago (e.g., roles, jobs, schooling experiences)
  - Know that people tend to live in families and communities in which individuals have different roles
  - Understand the experience of immigrant groups and their search for employment
  - Understand cultural trends of the second half of the 20<sup>th</sup> century (e.g., the influence of television, the Internet, and other forms of electronic communication on the creation and diffusion of information and the changes in workforce)
  - Understand how the feminist movements and social conditions have affected the lives of women around the world and the extent of women's progress toward social equality and economic opportunity
  - Know that entrepreneurs are people who use resources to produce innovative goods and services they hope people will buy. Understand the benefits and challenges in creating and running one's own business
  - Understand changes in the contemporary workplace (e.g., how scientific and technological changes and the computer revolution affect the economy and nature of work, of education and skills required for available jobs)
  - Understand how historical figures in the U.S. and in other parts of the world have advanced the rights of individuals and promoted the common good, and the character traits that made them successful (e.g., persistence, problem solving, hard work, moral responsibility, respect for others)

- Understand the various factors (e.g., interest, capabilities, values) contribute to shaping a person's identity and choice of work
- Languages Other than English -- As described in the answer to question #6 above, the Spanish curriculum will meet the Languages Other than English standards in that students by grade 7 will:
  - know how to express likes, dislikes and simple preferences in Spanish in everyday situations
  - know how to give and follow instructions in Spanish
  - know how to exchange information with peers in Spanish
  - know how to exchange information in Spanish about general events and transportation
  - understand the main ideas and/or principal characters in Spanish in age-appropriate video or television programs on familiar topics
  - understand the main ideas and/or principal characters in Spanish in written poems, short folk tales, or illustrated stories
  - use appropriate vocabulary, gestures and oral expressions in Spanish for greetings, introductions, and other common or familiar interactions
  - identify people and objects in the environment based on oral and written descriptions in Spanish
  - present oral reports and lead discussions about family members and friends and common activities in Spanish
  - write descriptions and messages in Spanish that describe or provide information about activities, people or places
  - recite poetry, songs, proverbs or short anecdotes/narratives that are common for early teens in a Spanish culture
  - present information about family, school events and celebrations in Spanish via letters, e-mail, or in audio and video tapes
  - write a newspaper article in Spanish about a current event
  - converse with a native Spanish speaker about a current event or classroom occurrence
- Technology -- As described in the answer to question #6 above, technology is a component of OWN Charter School beginning in Kindergarten and students will use the eight intranet- and internet-linked classroom-based computers on a daily basis. The charter school students will meet the State Learning Standards for Technology in that they will:
  - by grade 2,
    - know the alpha-numeric keys and special keys on the keyboard
    - know the proper finger placement on the home row keys

- know how to start the computer and type logins and passwords as well as shut down
- handle diskettes, CD-ROMs and other computer equipment with care
- type on the computer keyboard using correct hand and body positions
- print pages of work onto the classroom printer
- know the basic distinctions among computer software programs such as word processing, special-purpose programs and games
- use menu options and commands
- understand that when an individual creates something on a computer, the created work is that person's property, and only that person has the right to change it

by grade 5,

- know the basic functions of hardware (e.g., keyboard and mouse provide input; printer and monitor provide output; hard and floppy disk provide storage; the CPU processes information)
- use database software to add, edit and delete records, and to find information through simple sort or search techniques
- know how format differ among software applications and hardware platforms
- know ways that technology is used at home and school (e.g., paging systems, telephones, VCRs)
- troubleshoot simple problems in software and/or hardware (e.g., re-boots, uses help functions, uses print monitor)
- understand the concept of software privacy (i.e., illegally copying software) and that piracy is a violation of copyright laws
- use word processing software as a writing tool
- use presentation software (e.g., Hyperstudio, KidPix) for class projects
- access a specific internet address given the URL
- send an e-mail message to a friend or pen pal

by grade 7:

- research specific questions or subject matters using the internet or other electronic sources
- use word processing software to draft, edit and finalize reports and research papers
- use presentation software that incorporates text, video and audio
- use spreadsheet and database software to analyze information and present it graphically

- understand the potential for misuse of information that is stored electronically
  - understand how to use multi-media tools such as scanners and digital cameras to enhance their presentation and communications
  - understand how to create web pages using Front Page and Publisher
- Math and Science for Grade 6-8 --- We will be using Impact Mathematics by Everyday Learning and Science Plus Technology by Holt. We have worked with each of these publishers to confirm that the scope and sequence of these materials are aligned with New York Math and Science Standards for Grades 6. We believe that our overall program will enable us to look forward to meeting and exceeding these standards.
  - New York State History --- The Paragon Curriculum includes a strong emphasis on the place of New York State in U.S. and World history. For example, a first grade unit focusing on the essential question, "Why are people drawn to cities" features New York City as the quintessential prototype. Paragon refers to New York in an integrated manner throughout its scope and sequence, sometimes subtly other times explicitly. Grade 6 includes an explicit focus on state history and teachers will be trained in professional development sessions to integrate fictional and non-fictional state history reading selections in the morning Language Arts period, as well. For example, students will:
    - Understand the major political issues of the thirteen colonies and the development of colonial governments including the establishment of New York City as the first site of government
    - Understand how and why family and community life differed in various regions of colonial North America contrasting New York with Philadelphia, Boston and Williamsburg
    - Understand the location of different Native American tribes that were located in New York State
    - Understand significant events for Native American tribes in New York State in the late 19<sup>th</sup> century and how they responded
    - Understand why people were drawn to big cities, in particular New York City
    - Understand the impact of immigration, the role of New York as a major point of entry, and the lives of immigrants in American and New York society

- Through a visit to the Ellis Island museum and the Statue of Liberty gain an appreciation for the lives of immigrants over the years. During the study of the French Revolution, understand that the Statue was a gift from France
- Understand divisive issues prior to the Civil War and the role of New York State in the war
- Understand military, political and social factors affecting the post Civil War period
- Understand the social and economic elements of urban and rural life in the early and mid-19<sup>th</sup> centuries
- Understand the environmental and social impact of the Great Depression (e.g., the causes and consequences of the Stock Market Crash of 1929; the factors that contributed to the Great Depression and the impact on workers in New York City, Albany, Rochester and Buffalo)
- Understand the influences on African American culture during the 1920s by studying The Harlem Renaissance
- Understand the effects of women's suffrage on politics (including the role of New York in the Seneca Falls Convention of 1848) and how the 19<sup>th</sup> Amendment changed political life in America
- Know which Presidents came from New York State; understand the background and leadership style of Franklin D. Roosevelt within the context of the Great Depression
- Understand New York State geography including population and population densities, land forms, climate, major exports and imports, the state flag and seal, flower, tree, bird, motto and song
- Understand when and how New York became a state; the location of the state capital as well as the three temporary capitals; the state government and number of representatives to the federal government; places of interest (e.g., Niagara Falls, Finger Lakes, Lake Placid Olympic site), industries and products
- Understand the impact of the canal system on the New York economy and the construction of the Erie Canal (and the still-in-use canal system in New York State).

We have reviewed in detail the five Learning Standards for Social Studies for elementary students and the five for intermediate students and compared these standards to the Paragon curriculum. Paragon is fully

aligned to the Social Studies standards and we welcome the opportunity to demonstrate our students' ability to master these elements of study

14. On page 319, the State assessments should include Technology assessment in grades 7 or 8, whichever year the course is given. Please revise.

We will revise the State assessments to include the Technology assessment in grade 7.

15. No mention is made of giving the second language proficiency exam. If a student wishes to earn one unit of credit toward the high school diploma, they must pass this exam by the end of Grade 8. (Section 100.2(d) of NYCRR). Please modify.

The Spanish proficiency exam will be given by the end of Grade 7 so that students can qualify for the unit of credit toward a high school diploma.

16. On pp. 38 – 40, the school schedule does not reflect, for elementary and intermediate levels, Career Development and Occupational Studies, Family and Consumer Sciences, Health, and Technology. Please provide a revised daily instructional schedule to show where these areas will be addressed and the amount of instructional time devoted to each.

The focus of OWN Charter School will be to meet and exceed State Performance Standards in core academic subjects (i.e., Language Arts, History and Social Studies, Mathematics and Science).

We do not plan to offer a specific course in Career Development and Occupational Studies, or Family and Consumer Sciences. As described in detail in question #13, the topics of work, careers and the changing nature of work are discussed within the Paragon curriculum. Also as noted in question #6, above, technology is not treated as a separate class but instead is woven into the reading, writing, mathematics, science and social studies disciplines.

In addition, our Health curriculum is included within Physical Education and it covers growth and development, nutrition and exercise, disease prevention, and studies on making smart and healthy choices to reduce health risks.

17. Please provide assurance pursuant to page 20 of the January 12, 2001 second amendment that alternative instruction will begin within 24 hours of suspension or expulsion.

Alternative instruction will begin within 24 hours of suspension or expulsion.

18. Please provide evidence of the soundness of the fiscal assumptions contained in the applications, including those for the construction of a new school. In particular,

please provide evidence that the school is likely to be able to attract qualified staff given the following facts:

- The salary schedule for teachers is lower than that for other public school teachers in New York City, which in turn is below that of surrounding communities;
- The salary schedule provides no additional payments for teachers with previous experience or advanced degrees;
- The teaching staff will be expected to work a longer school and school year than New York City public school teachers;
- The school plans to contribute only 1 percent of salary to a private pension plan for teachers and current teachers will not be able to remain in their public pension plan.

As stated in the first set of Amendments, the budget assumes that average classroom teacher compensation in year one is a salary of \$31,000 and a merit bonus of up to \$2,000 for a total of \$33,000. In addition to this cash compensation, each teacher and administrator receives a laptop computer with Internet access for use in the classroom and at home. This is more than competitive with the starting NYC salary of \$31,800.

The Curriculum Facilitator/Master Teacher salary is budgeted at \$40,000 for year one plus a \$2,000 merit bonus.

In subsequent years, the budget projects teacher salary increases of 5.0% per year even though the per pupil reimbursement rate is assumed to increase at just 3.5%.

The Board of Trustees of OWN Charter School believes that it will be possible to attract qualified, certified teachers to the school given the opportunity to work in this exciting, new environment.

Many teachers like to work in an environment where they are given greater freedom and held accountable for their performance and we, therefore, expect to draw many faculty members who choose to take the job based on the school's environment and philosophy and on the opportunity to better meet the needs of children as opposed to choosing solely on the basis of financial compensation. Based on comments from some teachers who have sought out charter school opportunities in the last years, some of the factors impacting these decisions include the fact that OWN Charter School:

- Is a school of choice for parents and students with parent involvement on an ongoing basis
- Provides an exciting, new curriculum with hands-on activities
- Provides an extensive program of professional development
- Provides opportunities for advancement/promotion
- Limits class size to 25 students
- Provides each teacher with a laptop computer

- Provides in each classroom a TV monitor, VCR and overhead projector
- Provides each classroom with eight PCs that have Internet and Intranet access and a printer
- Involves teachers in the continuing process of enhancing the curriculum

With respect to the permanent facility, the budget assumes a cost of \$5.5 million at an 8% cost of capital that would be amortized over 20 years. This would require an initial annual debt service of \$519,000 plus \$200,000 for a land lease. We have seen attractive buildings in Queens in this price range. In addition, Mosaica Education has successfully helped other charter schools obtain tax-exempt financing at even more attractive terms than 8% over 20 years. Furthermore, Mosaica Education has acted as the developer of a number of 40,000 square foot school facilities at lower construction costs than provided for in the budget. (However, given that none of these schools was in New York City, we are using the higher figure).

19. Please provide an update on efforts to ensure that a satisfactory facility will be available for occupation by the school by the end of August.

The Board of Trustees of the Variety Boys and Girls Club voted last week to lease a portion of their lot to OWN Charter School for one year. We are in the final stages of negotiating the details of the lease.

20. The fourth and fifth bullets on page 334 concerning parent seminars and classes should be deleted because charter schools do not have the authority to provide such classes. We note that it is permissible for a charter school to offer programs to parents of charter school students for the purpose of assisting in their child's education.

None of the seminars in the fourth bullet will be provided by the charter school; two are offered by community organizations, and the third by a government subsidized insurance program. The school will offer a space for these seminars as a service to the families of our students, recognizing that health issues, parenting skills and the stresses facing immigrant families can impact their children's education.

Given the high number of immigrants in our community and our school's emphasis on technology, we believe that ESL and computer classes for parents would serve the "purpose of assisting in their child's education". Nevertheless, we withdraw the paragraph marked by the fifth bullet on page 334.

21. The Students with Disabilities discipline section on page 413 clearly does not comply with the IDEA regulations. Revise in accordance with VESID's recommendations or, at a minimum, delete the section entirely and replace with a statement that the school will follow the IDEA and its regulations governing the discipline of students with disabilities, and attach a copy of 34 CFR 300.519 - 529.

If a child with a disability infringes upon the established rules of the school, disciplinary action shall be in accordance with procedures set forth in the Discipline Code and in conjunction with applicable law and the determination of the Committee on Special Education. Any student with a disability who is suspended in excess of ten (10) cumulative days in a given year will be referred to the Committee on Special Education; for suspensions of less than 10 days (as defined below in a and b), the CAO/Principal will have the authority.

More specifically, OWN Charter School will adhere to the following procedures to determine the appropriate steps to take throughout the process when there is a discipline issue involving a child with a disability.

These procedures address the potential removal of the child from OWN Charter School. This "change of placement" would only be in consideration if:

- (a) The removal is for more than 10 consecutive school days; or
- (b) The child is subjected to a series of removals that constitute a pattern because they cumulate to more than 10 school days in a school year, and because of factors such as the length of each removal, the total amount of time the child is removed, and the proximity of the removals to one another.

OWN Charter School personnel may order--

- To the extent removal would be applied to children without disabilities, the removal of a child with a disability from the OWN Charter School for not more than 10 consecutive school days for any violation of school rules, and additional removals of not more than 10 consecutive school days in that same school year for separate incidents of misconduct
  - After a child with a disability has been removed from OWN Charter School for more than 10 school days in the same school year, during any subsequent days of removal OWN Charter School must provide for educational services
- A change in placement of a child with a disability to an appropriate interim alternative educational setting for the same amount of time that a child without a disability would be subject to discipline, but for not more than 45 days, if:

- The child carries a weapon to school or to a school function; or
- The child knowingly possesses or uses illegal drugs or sells or solicits the sale of a controlled substance while at school or a school function.

(The interim alternative educational setting referenced above must be determined by the IEP team and must: (1) be selected so as to enable the child to continue to progress in the general curriculum, although in another setting, and to continue to receive those services and modifications, including those described in the child's current IEP, that will enable the child to meet the goals set out in that IEP; and (2) Include services and modifications to address the behavior that are designed to prevent the behavior from recurring.)

Either before or not later than 10 business days after either first removing the child for more than 10 school days in a school year or commencing a removal that constitutes a "change of placement":

- If the CSE did not conduct a functional behavioral assessment and implement a behavioral intervention plan for the child before the behavior that resulted in the removal, the CSE shall convene an IEP meeting to develop an assessment plan
- If the child already has a behavioral intervention plan, the IEP team shall meet to review the plan and its implementation, and, modify the plan and its implementation as necessary, to address the behavior.

As soon as practicable after developing the plan (described in the first bullet above) and completing the assessments required by the plan, the CSE shall convene an IEP meeting to develop appropriate behavioral interventions to address that behavior and shall work with OWN Charter School to implement those interventions.

If subsequently, a child with a disability who has a behavioral intervention plan and who has been removed from OWN Charter School for more than 10 school days in a school year is subjected to a removal that does not constitute a "change of placement" the IEP team members shall review the behavioral intervention plan and its implementation to determine if modifications are necessary. If one or more of the team members believe that modifications are needed, the team shall meet to modify the plan and its implementation, to the extent the team determines necessary.

A hearing officer may order a change in the placement of a child with a disability to an appropriate interim alternative educational setting for not

more than 45 days if the hearing officer, in an expedited due process hearing:

- (a) Determines that the public agency has demonstrated by substantial evidence that maintaining the current placement of the child is substantially likely to result in injury to the child or to others;
- (b) Considers the appropriateness of the child's current placement;
- (c) Considers whether OWN Charter School has made reasonable efforts to minimize the risk of harm in the child's current placement, including the use of supplementary aids and services; and
- (d) Determines that the interim alternative educational setting that is proposed by school personnel who have consulted with the child's special education teacher, meets the requirements of the law

If an action is contemplated due to carrying a weapon to school, possessing, using or selling illegal drugs, or as the result of a decision by a hearing officer, or involving a removal that constitutes a "change of placement" for a child with a disability who has engaged in other behavior that violated any rule or code of conduct that applies to all children:

- (1) Not later than the date on which the decision to take that action is made, the parents must be notified of that decision and be provided the procedural safeguards notice
- (2) Immediately, if possible, but in no case later than 10 school days after the date on which the decision to take that action is made, a review must be conducted of the relationship between the child's disability and the behavior subject to the disciplinary action. This review must be conducted by the IEP team and other qualified personnel in a meeting.

In carrying out this review, the IEP team and other qualified personnel may determine that the behavior of the child was not a manifestation of the child's disability only if the IEP team and other qualified personnel:

- (1) First consider, in terms of the behavior subject to disciplinary action, all relevant information, including:
  - (i) Evaluation and diagnostic results, including the results or other relevant information supplied by the parents of the child;
  - (ii) Observations of the child; and
  - (iii) The child's IEP and placement; and
- (2) Then determine that:
  - (i) In relationship to the behavior subject to disciplinary action, the child's IEP and placement were appropriate and the special education services, supplementary aids

- and services, and behavior intervention strategies were provided consistent with the child's IEP and placement;
- (ii) The child's disability did not impair the ability of the child to understand the impact and consequences of the behavior subject to disciplinary action; and
  - (iii) The child's disability did not impair the ability of the child to control the behavior subject to disciplinary action.

If the IEP team and other qualified personnel determine that any of the standards discussed above were not met, the behavior must be considered a manifestation of the child's disability.

If, in this review, the CSE or other public agencies identifies deficiencies in the child's IEP or placement or in their implementation, the CSE must take immediate steps to remedy those deficiencies.

If the result of the review is a determination that the behavior of the child with a disability was not a manifestation of the child's disability, the relevant disciplinary procedures applicable to children without disabilities may be applied to the child in the same manner in which they would be applied to children without disabilities, except as provided in Sec. 300.121(d).

If the child's parent disagrees with a determination that the child's behavior was not a manifestation of the child's disability or with any decision regarding placement, the parent may request a hearing. The State or OWN Charter School shall arrange for an expedited hearing if a hearing is requested by a parent.

In reviewing a decision with respect to the manifestation determination, the hearing officer shall determine whether the IEP Team has demonstrated that the child's behavior was not a manifestation of the child's disability consistent with the requirements of the law.

If a parent requests a hearing or an appeal regarding such a disciplinary action to challenge the interim alternative educational setting or the manifestation determination, the child must remain in the interim alternative educational setting pending the decision of the hearing officer or until the expiration of the time period provided for, whichever occurs first, unless the parent and the State agency or OWN Charter School agree otherwise.

If a child is placed in an interim alternative educational setting and school personnel propose to change the child's placement after expiration of the

interim alternative placement, during the pendency of any proceeding to challenge the proposed change in placement the child must remain in the current placement (the child's placement prior to the interim alternative educational setting), except:

If school personnel maintain that it is dangerous for the child to be in the current placement (placement prior to removal to the interim alternative education setting) during the pendency of the due process proceedings, the OWN Charter School may request an expedited due process hearing.

A child who has not been determined to be eligible for special education and related services under this part and who has engaged in behavior that violated any rule or code of conduct of the OWN Charter School, may assert any of the protections provided for above if the OWN Charter School or the CSE had knowledge (as defined below) that the child was a child with a disability before the behavior that precipitated the disciplinary action occurred.

Own Charter School and/or the CSE must be deemed to have knowledge that a child is a child with a disability if:

- (1) The parent of the child has expressed concern in writing (or orally if the parent does not know how to write or has a disability that prevents a written statement) to personnel of the OWN Charter School that the child is in need of special education and related services;
- (2) The behavior or performance of the child demonstrates the need for these services
- (3) The parent of the child has requested an evaluation of the child
- (4) The teacher of the child, or other personnel of OWN Charter School, has expressed concern about the behavior or performance of the child to the director of special education of the agency or to other personnel in accordance with the agency's established child find or special education referral system.

However, the OWN Charter School or the CSE would not be deemed to have knowledge if, as a result of receiving the information specified above, the agency either:

- (i) Conducted an evaluation and determined that the child was not a child with a disability, or
- (ii) Determined that an evaluation was not necessary; and provided notice to the child's parents of its determination

If OWN Charter School and the CSE does not have knowledge that a child is a child with a disability (as described above) prior to taking disciplinary measures against the child, the child may be subjected to the same disciplinary measures as measures applied to children without disabilities who engaged in comparable behaviors.

However, if a request is made for an evaluation of a child during the time period in which the child is subjected to disciplinary measures, the evaluation must be conducted in an expedited manner. Until the evaluation is completed, the child remains in the educational placement determined by school authorities, which can include suspension or expulsion without educational services. If the child is determined to be a child with a disability, taking into consideration information from the evaluation conducted by the agency and information provided by the parents, the agency shall provide special education and related services in accordance with the law.

Expedited due process hearings must:

- (1) Meet the requirements of Sec. 300.509, except that a State may provide that the time periods identified in Secs. 300.509(a)(3) and Sec. 300.509(b) for purposes of expedited due process hearings under Secs. 300.521-300.526 are not less than two business days; and
- (2) Be conducted by a due process hearing officer who satisfies the requirements of Sec. 300.508.

A written decision must be mailed to the parties within 45 days of the public agency's receipt of the request for the hearing, without exceptions or extensions.

Note: Nothing in this procedure prohibits an agency from reporting a crime committed by a child with a disability to appropriate authorities or to prevent State law enforcement and judicial authorities from exercising their responsibilities with regard to the application of Federal and State law to crimes committed by a child with a disability.

An agency reporting a crime committed by a child with a disability shall ensure that copies of the special education and disciplinary records of the child are transmitted for consideration by the appropriate authorities to whom it reports the crime.

An agency reporting a crime under this section may transmit copies of the child's special education and disciplinary records only to the extent that the transmission is permitted by FERPA

As requested, a copy of 34 CFR 300.519-529 is attached. It is Appendix A.

22. It is difficult to determine the content of the sections pertaining to students with disabilities because of the series of amendments. For example, p.306 indicates that a paragraph should replace item 21 (page 327). What about pages, 326 and 328, which also contain item 21 information? It is suggested that the charter school submit attachment 21 in its entirety.

#### Methods And Strategies For Educating Students With Disabilities In Compliance With Applicable Federal Laws And Regulations

##### A. Philosophy and Approach

OWN Charter School's admissions philosophy welcomes children of diverse backgrounds and all abilities. Our admission criteria will not discriminate on the basis of race, socio-economic status, gender, national origin, religion, English language proficiency, special education needs, disability, intellectual ability, or academic achievement. Based on recent District statistics, we expect approximately 5 to 8 percent of children to require special education assessment and/or services.

According to the Board of Education 1998-1999 Annual School Report, in 1999 in School District 30:

- 5.6% of special education students received resource room, consultant teacher, and related services;
- 4.3% or 1222 special education students received instruction in self-contained classes; and
- staff made initial referrals for special education services for 3.2% of district students.

We believe in maximizing inclusion of all children and placing them in the least restricted environment (LRE) possible. Inclusion and LRE policies help all students learn actively and collaboratively. While inclusion creates opportunities conducive to positive self-identification for struggling students, all children benefit from learning with peers of differing talents. The MEI model is particularly suited to inclusion and LRE. The SchoolHouse arrangement with its smaller, more intimate schools within a school makes inclusion more workable by allowing a team of educators to know the dynamics of individual class groups and their member students over long periods of time. In addition, Paragon's interdisciplinary curriculum capitalizes on children's "multiple intelligences"—teaching cultural literacy

experientially. OWN'S rich, integrated use of technology provides us with yet another opportunity to tailor our school-wide program to students' unique skills and interests. The integrated high-tech/humanities approach helps students to realize their full potential, whether their needs are traditionally categorized as "at-risk," "disabled," "ESL," or "gifted and talented." Students who need additional and/or separate special education services, however, will receive them as needed.

#### B. Staffing and Training Related to Special Education Services

Pre- and in-service training for all teachers will cover successful inclusion strategies to ensure all children truly learn in their diverse classrooms. More specifically, trainers will focus on how best to address children's learning difficulties with for example basic reading (including comprehension), writing, math, critical thinking, and oral expression in the general classroom. Training will address ways in which to integrate special instruction into the class-wide curriculum. Training will also emphasize the importance of early detection, referral, assessment, and appropriate services for children with special educational needs and review all procedures and requirements associated with IEPs.

OWN will ensure sufficient staffing to meet the unpredictable and changing needs of our special education population. As part of start-up activities, OWN Charter School will reach out to Nellie R. Korb, the Chairperson of District 30's Committee on Special Education (CSE) to ensure a good working relationship with the district. The CAO/principal shall personally monitor the School's compliance with all IEPs and designate one key staff person to serve as the liaison to the district's CSE.

The professionals and other relevant service providers who know and work with special-needs students on a regular basis will employ a formalized team approach to ensure that each special-need child's educational goals are met, consistent with the child's IEP. This formalized team approach will involve the child's family to the greatest extent possible and provide regular reports to the child's family.

OWN Charter School will fully comply with federal laws and regulations governing children with disabilities, particularly the Individuals with Disabilities Education Act (IDEA) and meet the standards and guidelines established by the U.S. and New York State Charter School Law. OWN will avail itself of the exemption from complying in large part with Article 89 of the Education Law and Parts 100 and 200 of the Commissioner's regulations.

OWN's special education and regular education programs will represent equal partners among free, appropriate education offerings at the school. Faculty and support staff will work together to meet the challenges of

providing all students with an appropriate education in the least restrictive environment. As detailed in the budget, OWN will employ in year one a full-time, certified Special Education teacher, a Social Worker/Counselor and paraprofessionals and/or aides as needed to meet students' IEP requirements. Contracted professionals such as occupational and physical therapists and speech-language pathologists will support the special education program. These individuals will work collegially with regular classroom teachers, the social worker/counselor, the school nurse and building administrators to promote the success of students with special needs.

OWN Charter School will contact District 30 as soon as we know the complete enrollment list at the school so that we can identify any students who have been previously classified and recommended for special education services. (In addition, for any students who enroll in OWN from outside District 30, a similar contact will be made to the appropriate district.)

Given that it is our understanding that the evaluation and the development of the IEP is the district's responsibility, OWN will proactively work with District 30's Committee on Special Education to access these IEPs and consult with those most knowledgeable about the individual students involved so that the key people at OWN have a solid understanding of the child's needs and the progress that has been made to date.

The following individuals from OWN will attend these reviews with the district CSE: the CAO, the student's primary teacher, the Special Education teacher and, at times, the Social Worker as well as the LEP/ELL teachers. Also, wherever appropriate the student and a contractor of specific services would attend. (Note: The primary teacher will be relieved from classroom responsibilities so that he/she will be able to attend these meetings.) Together with the district CSE, this team will review the current IEP and provide comments about the student's progress and an opinion on whether the recommendation remains the same, or if the revisions to the IEP are needed. OWN will work with the district CSE and the child's parents to request full involvement in any new evaluation.

This OWN team will consult with the district CSE on a regular basis regarding the progress of any students with an IEP.

23. The application estimates that 5-8% of their student population will be students with disabilities. It is suggested that the 10-12% guide is used and other sections of the application, such as staffing and budgets, are revised accordingly.

Our estimate that 5-8% of our student population will need special education services was based on current statistics provided by our school district. We

realize that it is difficult to predict how many students with disabilities will attend the school and that our estimates might not be perfectly accurate, however, we believe it is reasonable to use existing District averages as the best available information.

We look forward to working with District 30 and with the State Education Department to provide innovative and quality services to all disabled students enrolled at our school.

24. On page 15 of the Jan. 12, 2001 amendments, the first sentence is not totally accurate and should be revised. The child's CSE is responsible for conducting an evaluation of the child and the CSE determines a child's eligibility for special education services.

We will turn to the CSE to conduct the evaluation of the student and will rely on the CSE to determine a child's eligibility for special education services.

25. The applicant should describe the range of special education services to be provided either directly by the charter school, by the district or by contract. References to providing services according to a student's disability should be deleted. Federal definitions of special education services and the continuum of services are not described according to disability. The application should also describe the procedures that will be followed to ensure that parents are informed of child's progress at least as often as are parents of students without disabilities and include how school will provide child progress and student information data for district reports. Procedures must also include how staff will be informed of IEP, their responsibilities and how services will be coordinated among staff and with the CSE. Specific procedures to ensure compliance with FERPA and IDEA regarding confidentiality of student records should also be included. Discipline procedures must also follow federal requirements.

Although the Board of OWN Charter School can only speculate on the number of students it will be serving with specific types of disabilities, it hopes to use the following guideline for determining when the school will provide a given service, when the school will turn to the school district for the service and when a outside service provider will be engaged. References to providing services according to a student's disability will be deleted.

The school will employ a full-time, certified Special Education teacher, a full-time Social Worker/Counselor and a full-time School Nurse (in addition to a Basic Skills and ESL/ELL teacher.)

**Types of Services**

- Audiology Services
- Counseling Services

**Who Will Provide**

- School District
- OWN Charter School

- Early identification and assessment of disabilities in children	OWN Charter School
- Medical Services	School District
- Occupational Therapy	School District
- Orientation and Mobility Services	School District
- Physical Therapy	School District
- Psychological Services	School District/OWN
- Recreation	OWN Charter School
- Rehabilitation Counseling Services	School District
- School Health Services	OWN Charter School
- Social Work Services in Schools	OWN Charter School
- Speech/Language Pathology Services	School district
- Transportation	Contracted service

Parents/guardians of students with disabilities will be advised of student progress through parent conferences, report cards, updated personalized learning plans and via grade updates that will be provided via "back pack express" just as parents/guardians of students without disabilities. These communications will occur periodically throughout the school year as noted below:

<u>Parent Conferences</u> – required meetings in which the student's progress is discussed and samples of work provided	Every 13 weeks
<u>Report Cards</u> – distributed at the parent conference (only mailed home on exception basis)	Every 13 weeks
<u>Personalized Learning Plans</u> – either mailed home, given to parent or guardian when child is picked up, or sent home via back pack	Every 4 weeks
<u>Grade Updates</u> – although not specific to the achievement of a an individual child, provides parents and guardians with curriculum updates	Every 2 to 3 weeks
<u>Paragon Night Performances</u> - the culminating event that after each Paragon unit that allows	8 times a year

parents and guardians to see student portfolios and performances and provides for informal conversations between teachers and parents/guardians

In addition, OWN charter school will strive to include parents/guardians of students with disabilities throughout the process. Specifically, the meetings involving discussion of the needs of individual student with disabilities will be scheduled so that parents/guardians will be able to attend. These at which parents/guardians will be involved include:

- the initial review and discussion about the individual student with the Home Study Team as OWN charter school recognizes that the parent/guardian knows the child better than anyone
- each monthly meeting with District 30's Committee on Special Education when their child's IEP is being developed and/or progress discussed. Once again, OWN charter school believes that the school and the family must be working in concert to have maximum impact on the child's development and, therefore, will strive to ensure that both parents/guardians are in attendance at this meeting so that their understanding of the child and his/her needs are discussed as a critical input to the development of the IEP.
- the monthly personalized learning plan will also provide valuable information to parents/guardians as to how the student is progressing in meeting academic goals in each subject as well as achieving goals that are unique to their special needs.

Also, the Parent Satisfaction Survey that OWN charter school intends to use asks specific questions for parents/guardians of students with special needs. Parents/guardians are asked how they felt about: their degree of involvement in the development of the IEP, the extent to which their opinions have helped shape the special services their child is receiving, communication with the school and Special Education teacher, and the progress being made in carrying out the special education plan for their child. Although this survey is confidential, parents/guardians are provided with the opportunity to give their name and phone number if they want the CAO/Principal or another individual to contact them to discuss their comments.

The chairperson of the Committee on Special Education will serve as the liaison to the child's teachers. The chairperson will be responsible for coordinating services among staff and with the CSE.

Personal information about a child with a disability may not be released without written parental consent unless it is:

- Given to school officials or teachers with a legitimate educational interest, State and local educational authorities, or certain individuals designated under Federal Law.
- Used to meet a requirement under Federal Law

Personal information includes the following:

- The name of the child and the names of family members
- The home address of the child
- Personally identifiable information such as the child's social security number or description of the child

The school will keep a record of who has looked at the child's educational records. The record will include the person's name, the date permission was given, and the reason the person asked for the records. However, the school does not need to keep these records for authorized employees of the school district.

Each student with a disability will be assigned an identification number for purposes of internal record keeping. A special education database will be used for ISIS reports.

For details on discipline for students with disabilities, see question #21 above.

26. On page 15 of the amendments, please clarify that parental consent is necessary, prior to transfer of records.

We revise this statement and will incorporate a process that ensures that parental consent is obtained before transferring records.

27. On page 16 of the amendments, it is unclear why the information in the second bullet is included here. Please explain.

The information in the second bullet is not essential to answering item #4 on students with disabilities.

28. On page 16 of the amendments, FERPA regulations discuss the process for when student records are transferred from one school to another. The Charter School's policy should be consistent with FERPA. Parents can contest the records before they are transferred to the new school.

We recognize that parents can contest student records before the student's records are transferred to a new school. We will protect and enforce this right.

29. The Grievance Committee and designated MEI employee cannot be considered "school officials."

The Grievance Committee is a sub-committee of the Board of Trustees, and will consist of Board Members. MEI, in its capacity as a contracted provider of educational and administrative services, will be maintaining much of the school's financial, student and other records. They will maintain the proper confidentiality of such records as required by the law.

We amend page 18 of the second amendments to read:

"Parents/guardians and eligible students will be provided their right to consent to any disclosures of personally identifiable information contained in a student's educational record, except if the disclosure is to school officials or a designated MEI employee who need the information for legitimate and sound educational reasons. OWN Charter School considers such "school officials" to be one or more of the following: the CAO/Principal, the student's classroom teacher/paraprofessional, a learning specialist/therapist, the school nurse, Board member, Board attorney. Furthermore, a school official must be fulfilling his/her professional responsibility to have a legitimate educational interest to review a student's educational record.

30. On page 17 of the amendments, first bullet, please explain the "Home Study Time."

This is a typo and should have read "Home Study Team" in reference to the group of people who are involved in providing input into the child's assessment, namely the classroom teacher and aide, the Special Education teacher and the CAP/Principal.

31. On page 17 of the amendments, second bullet: If this meeting describes the type of consultation mentioned on page 309 of the Dec. 14 amendments, the procedure to meet with the CSE on a monthly basis regarding the progress of any students with an IEP might be difficult for the CSE to implement. Please confer with the CSE at this stage and revise this procedure, if necessary.

The team at OWN Charter School will follow the CSE's guidance in establishing the frequency of regular meetings to assess the progress of any students with an IEP. The Board of Trustees of OWN is committed to ensuring that we are doing what is required by law, at a minimum, in meeting the needs of all students with disabilities.

32. On page 18 of the amendments, first bullet: Please distinguish the IEP from the monthly-personalized learning plan.

All students receive a personalized learning plan that is sent home monthly via backpack express. These plans summarize the student’s progress for the month and provide comments on the student’s individual strengths and vulnerabilities as well as feedback on homework and the results of drills taken on the integrated learning system. The classroom teacher writes the personalized learning plans with input from other faculty. By contrast, the IEP is only for students with disabilities and it prescribes an individualized education plan within the requirements of IDEA.

33. On page 307, 2<sup>nd</sup> paragraph, delete the term “inclusion” to describe teacher aides.

The term “inclusion” has been deleted from the 2<sup>nd</sup> paragraph on page 307 and it now reads:

“The school will employ special educators, a social worker/counselor and paraprofessionals and/or aides as needed to meet students’ IEP requirements.”

34. On page 307, last two paragraphs; services should not be described according to disabilities. Revise to indicate the types of services to be provided and how they will be provided, that is directly by the charter school, school district or by contract. In addition, please revise the budget and staffing plan, as needed.

Although the Board of OWN Charter School can only speculate on the number of students it will be serving with specific types of disabilities, it hopes to use the following guideline for determining when the school will provide a given service, when the school will turn to the school district for the service and when a outside service provider will be engaged. The school will employ a full-time, certified Special Education teacher, a full-time Social Worker/Counselor and a full-time School Nurse (in addition to a Basic Skills and ESL/ELL teacher.)

<b>Types of Services</b>	<b>Who Will Provide</b>
- Audiology Services	School District
- Counseling Services	OWN Charter School
- Early identification and assessment of disabilities in children	OWN Charter School
- Medical Services	School District
- Occupational Therapy	School District
- Orientation and Mobility Services	School District
- Physical Therapy	School District

- Psychological Services	School District/OWN
- Recreation	OWN Charter School
- Rehabilitation Counseling Services	School District
- School Health Services	OWN Charter School
- Social Work Services in Schools	OWN Charter School
- Speech/Language Pathology Services	School district
- Transportation	Contracted service

35. On page 309, second to the last paragraph, it is the CSE's responsibility to review and revise the IEP. Revise and delete the last sentence.

As requested, the last sentence on page 309's second to the last paragraph will be deleted

36. On page 310, in the second paragraph, please explain the second sentence or delete. The CSE must classify a student according to one of the 13 classifications to receive special education services.

The second sentence in the second paragraph on page 310 has been deleted.

37. On page 310, in the last paragraph, does this pertain to all students and should it be moved to another section?

The last paragraph on page 310 does pertain to all students. It should be moved to another section.

38. In regard to discipline procedures, it is unclear what original parts and amendments is part of these procedures. The information in the original application needs to be revised to be consistent with all federal requirements regarding disciplinary procedures for students with disabilities. In general, the procedures should delineate who has the authority to suspend or remove a student for occurrences less than 10 days or more than 10 days; assurance of alternate instruction for students with disabilities; when to notify the CSE, etc.

- If a child with a disability infringes upon the established rules of the school, disciplinary action shall be in accordance with procedures set forth in the Discipline Code and in conjunction with applicable law and the determination of the Committee on Special Education. Any student with a disability who is suspended in excess of ten (10) cumulative days in a given year will be

referred to the Committee on Special Education; for suspensions of less than 10 days (as defined below in a and b), the CAO/Principal will have the authority.

More specifically, OWN Charter School will adhere to the following procedures to determine the appropriate steps to take throughout the process when there is a discipline issue involving a child with a disability.

These procedures address the potential removal of the child from OWN Charter School. This "change of placement" would only be in consideration if:

- (a) The removal is for more than 10 consecutive school days; or
- (b) The child is subjected to a series of removals that constitute a pattern because they cumulate to more than 10 school days in a school year, and because of factors such as the length of each removal, the total amount of time the child is removed, and the proximity of the removals to one another.

OWN Charter School personnel may order--

- To the extent removal would be applied to children without disabilities, the removal of a child with a disability from the OWN Charter School for not more than 10 consecutive school days for any violation of school rules, and additional removals of not more than 10 consecutive school days in that same school year for separate incidents of misconduct
  - After a child with a disability has been removed from OWN Charter School for more than 10 school days in the same school year, during any subsequent days of removal OWN Charter School must provide for educational services
- A change in placement of a child with a disability to an appropriate interim alternative educational setting for the same amount of time that a child without a disability would be subject to discipline, but for not more than 45 days, if:
  - The child carries a weapon to school or to a school function; or
  - The child knowingly possesses or uses illegal drugs or sells or solicits the sale of a controlled substance while at school or a school function.

(The interim alternative educational setting referenced above must be determined by the IEP team and must: (1) be selected so as to enable the child to continue to progress in the general curriculum, although in another setting, and to continue to receive those services and modifications, including those described in the child's current IEP, that will enable the child to meet the goals set out in that IEP; and (2) Include services and

modifications to address the behavior that are designed to prevent the behavior from recurring.)

Either before or not later than 10 business days after either first removing the child for more than 10 school days in a school year or commencing a removal that constitutes a "change of placement":

- If the CSE did not conduct a functional behavioral assessment and implement a behavioral intervention plan for the child before the behavior that resulted in the removal, the CSE shall convene an IEP meeting to develop an assessment plan
- If the child already has a behavioral intervention plan, the IEP team shall meet to review the plan and its implementation, and, modify the plan and its implementation as necessary, to address the behavior.

As soon as practicable after developing the plan (described in the first bullet above) and completing the assessments required by the plan, the CSE shall convene an IEP meeting to develop appropriate behavioral interventions to address that behavior and shall work with OWN Charter School to implement those interventions.

If subsequently, a child with a disability who has a behavioral intervention plan and who has been removed from OWN Charter School for more than 10 school days in a school year is subjected to a removal that does not constitute a "change of placement" the IEP team members shall review the behavioral intervention plan and its implementation to determine if modifications are necessary. If one or more of the team members believe that modifications are needed, the team shall meet to modify the plan and its implementation, to the extent the team determines necessary.

A hearing officer may order a change in the placement of a child with a disability to an appropriate interim alternative educational setting for not more than 45 days if the hearing officer, in an expedited due process hearing:

- (e) Determines that the public agency has demonstrated by substantial evidence that maintaining the current placement of the child is substantially likely to result in injury to the child or to others;
- (f) Considers the appropriateness of the child's current placement;
- (g) Considers whether OWN Charter School has made reasonable efforts to minimize the risk of harm in the child's current placement, including the use of supplementary aids and services; and

- (h) Determines that the interim alternative educational setting that is proposed by school personnel who have consulted with the child's special education teacher, meets the requirements of the law

If an action is contemplated due to carrying a weapon to school, possessing, using or selling illegal drugs, or as the result of a decision by a hearing officer, or involving a removal that constitutes a "change of placement" for a child with a disability who has engaged in other behavior that violated any rule or code of conduct that applies to all children:

- (1) Not later than the date on which the decision to take that action is made, the parents must be notified of that decision and be provided the procedural safeguards notice
- (2) Immediately, if possible, but in no case later than 10 school days after the date on which the decision to take that action is made, a review must be conducted of the relationship between the child's disability and the behavior subject to the disciplinary action. This review must be conducted by the IEP team and other qualified personnel in a meeting.

In carrying out this review, the IEP team and other qualified personnel may determine that the behavior of the child was not a manifestation of the child's disability only if the IEP team and other qualified personnel:

- (1) First consider, in terms of the behavior subject to disciplinary action, all relevant information, including:
  - (i) Evaluation and diagnostic results, including the results or other relevant information supplied by the parents of the child;
  - (ii) Observations of the child; and
  - (iii) The child's IEP and placement; and
- (2) Then determine that:
  - (i) In relationship to the behavior subject to disciplinary action, the child's IEP and placement were appropriate and the special education services, supplementary aids and services, and behavior intervention strategies were provided consistent with the child's IEP and placement;
  - (ii) The child's disability did not impair the ability of the child to understand the impact and consequences of the behavior subject to disciplinary action; and
  - (iii) The child's disability did not impair the ability of the child to control the behavior subject to disciplinary action.

If the IEP team and other qualified personnel determine that any of the standards discussed above were not met, the behavior must be considered a manifestation of the child's disability.

If, in this review, the CSE or other public agencies identifies deficiencies in the child's IEP or placement or in their implementation, the CSE must take immediate steps to remedy those deficiencies.

If the result of the review is a determination that the behavior of the child with a disability was not a manifestation of the child's disability, the relevant disciplinary procedures applicable to children without disabilities may be applied to the child in the same manner in which they would be applied to children without disabilities, except as provided in Sec. 300.121(d).

If the child's parent disagrees with a determination that the child's behavior was not a manifestation of the child's disability or with any decision regarding placement, the parent may request a hearing. The State or OWN Charter School shall arrange for an expedited hearing if a hearing is requested by a parent.

In reviewing a decision with respect to the manifestation determination, the hearing officer shall determine whether the IEP Team has demonstrated that the child's behavior was not a manifestation of the child's disability consistent with the requirements of the law.

If a parent requests a hearing or an appeal regarding such a disciplinary action to challenge the interim alternative educational setting or the manifestation determination, the child must remain in the interim alternative educational setting pending the decision of the hearing officer or until the expiration of the time period provided for, whichever occurs first, unless the parent and the State agency or OWN Charter School agree otherwise.

If a child is placed in an interim alternative educational setting and school personnel propose to change the child's placement after expiration of the interim alternative placement, during the pendency of any proceeding to challenge the proposed change in placement the child must remain in the current placement (the child's placement prior to the interim alternative educational setting), except:

If school personnel maintain that it is dangerous for the child to be in the current placement (placement prior to removal to the interim alternative education setting) during the pendency of the due process proceedings, the OWN Charter School may request an expedited due process hearing.

A child who has not been determined to be eligible for special education and related services under this part and who has engaged in behavior that violated any rule or code of conduct of the OWN Charter School, may assert any of the protections provided for above if the OWN Charter School or the CSE had knowledge (as defined below) that the child was a child with a disability before the behavior that precipitated the disciplinary action occurred.

Own Charter School and/or the CSE must be deemed to have knowledge that a child is a child with a disability if:

- (1) The parent of the child has expressed concern in writing (or orally if the parent does not know how to write or has a disability that prevents a written statement) to personnel of the OWN Charter School that the child is in need of special education and related services;
- (2) The behavior or performance of the child demonstrates the need for these services
- (3) The parent of the child has requested an evaluation of the child
- (5) The teacher of the child, or other personnel of OWN Charter School, has expressed concern about the behavior or performance of the child to the director of special education of the agency or to other personnel in accordance with the agency's established child find or special education referral system.

However, the OWN Charter School or the CSE would not be deemed to have knowledge if, as a result of receiving the information specified above, the agency either:

- (i) Conducted an evaluation and determined that the child was not a child with a disability, or
- (ii) Determined that an evaluation was not necessary; and provided notice to the child's parents of its determination

If OWN Charter School and the CSE does not have knowledge that a child is a child with a disability (as described above) prior to taking disciplinary measures against the child, the child may be subjected to the same disciplinary measures as measures applied to children without disabilities who engaged in comparable behaviors.

However, if a request is made for an evaluation of a child during the time period in which the child is subjected to disciplinary measures, the evaluation must be conducted in an expedited manner. Until the

evaluation is completed, the child remains in the educational placement determined by school authorities, which can include suspension or expulsion without educational services. If the child is determined to be a child with a disability, taking into consideration information from the evaluation conducted by the agency and information provided by the parents, the agency shall provide special education and related services in accordance with the law.

Expedited due process hearings must:

- (1) Meet the requirements of Sec. 300.509, except that a State may provide that the time periods identified in Secs. 300.509(a)(3) and Sec. 300.509(b) for purposes of expedited due process hearings under Secs. 300.521-300.526 are not less than two business days; and
- (2) Be conducted by a due process hearing officer who satisfies the requirements of Sec. 300.508.

A written decision must be mailed to the parties within 45 days of the public agency's receipt of the request for the hearing, without exceptions or extensions.

39. On page 428, regarding staff qualifications, please include that general classroom teacher responsibility would include participation in CSE meetings. Include roles and responsibilities of special education teachers and that they need to be certified.

Page 429 should be amended by adding the following line:

"Participate in CSE meetings and be a part of the IEP team of a student with disabilities. "

Special Education teachers must be certified and their roles/responsibilities include:

- Provides instruction to targeted students based on the plan specified in the IEP. This would take place in the resource room or the regular classroom
- Assess student performance
- Actively participate in CSE meetings
- Maintain classroom discipline in accordance with school property

40. Please clarify if the proposed sites will meet ADA requirements.

The proposed sites will meet ADA requirements.

41. Clarify whether the playground at the preferred site will be available to charter school students.

The recreation facilities of the Variety Boys and Girls club will be regularly available to OWN Charter School students.

42. In the teacher description on p. 428, delete the statement that most teachers will be New York State certified, "... as it is recognized that 75% must have this credential." This statement is not consistent with the teacher certification requirements set forth in Education Law § 2854(3)(a-1).

We recognize that the statement is in error and replace the 1st paragraph of p. 428 with the following:

**QUALIFICATIONS:** Degree in education or related discipline (i.e. social science, humanities.) All teachers will be of high caliber with expertise in their subject matter. Most will be New York State certified. Demonstrated competence as a Reading and Language Arts teacher, demonstrated competence in all areas of content responsibility, computer literate, respected as a student and as an individual, excellent verbal and written expression, strong interpersonal skills.

43. The job description for Teachers Aide on page 434 states that these employees will provide direct instruction to students, but will not need to be certified. Provide an assurance that the charter school recognizes that an employee who provides direct instruction to students must be certified or meet the qualifications set forth in Education Law §2854(3)(a-1). Moreover, any such employee will be included in the teacher certification counts set forth in Education Law §2854(3)(a-1).

Teacher Aides will not provide direct instruction but will be used to assist and support the classroom teacher by tutoring students individually and in small groups.

44. The teacher certification requirements on page 439 are not consistent with Education Law §2854(3)(a-1). For example, the proposed charter indicates that an uncertified teacher with a Bachelors degree in Education would qualify. However, an uncertified teacher with a Bachelors degree in Education with less than three years of teaching experience would not meet the requirements of Education Law §2854(3)(a-1). The section also does not recognize that non-certified teachers may not make up more than 30 per centum of the teaching staff or five teachers, whichever is less. Revise the section accordingly.

The Board of Trustees of OWN Charter School recognizes that non-certified teachers may comprise no more than 30% of the teaching staff, or five teachers, whichever is less. The following groups could be potential pools for non-certified teachers:

- Uncertified teachers with at least three years of elementary, middle or secondary classroom teaching experience
  - Tenured or tenure-track college faculty
  - Individuals with two years of satisfactory experience with Teach for America
  - Individuals who possess exceptional business, professional, artistic, athletic or military experience
45. The Additional assurances indicate that the applicants will revise the Child Find Procedures and alternative instruction policies to the satisfaction of the Institute. Provide these revised procedures and policies.

The Board of OWN Charter School recognizes its responsibility to locate, identify and evaluate all incoming and enrolled students in the school who are suspected of having, or known to be in need of special services so that a free appropriate public education can be made available to all these children. To ensure compliance with the Child Find provisions, the OWN Charter School will put in place the following processes:

When a parent/guardian is informed via a letter that his/her child has a place on the school's roster, that parent/guardian will be advised that any child who is in need of special services (e.g., a child with limited English skills, a child who has an IEP, a child who may be suspected of needing special care) be brought to the attention of the school's CAO/Principal.

This letter will request the signature of a parent/guardian on a Records Release Form to authorize OWN charter school to obtain the student's records from his/her prior school. OWN charter school will contact District 30 administration (as well as any other school districts involved) to obtain records for each enrolled student.

OWN charter school will also send to District 30's Committee on Special Education (and other districts as appropriate) a list of the enrolled students from that district to determine if there are any students with limited English skills, with IEPs or suspected of having other special needs to ensure that no student "falls between the cracks."

OWN charter school will include in its professional development training in the weeks prior to the school's opening, explicit instruction on Child Find provisions including guidelines and instructions for early identification of children who might be

suspected of having any of a number of special needs that may or may not have been identified to date.

OWN charter school will take steps to ensure that students are given opportunities to use all aspects of the school's curriculum to their unique skills and interests. Given the engaging nature of the Paragon curriculum it is our hope that students who are interested in music or drama or art might find that success through those disciplines will help boost their confidence in other subject areas to help overcome, or compensate, with difficulties or disabilities in other areas."

If any staff member identifies a student he/she suspects of having special needs, they will inform the CAO and the Counselor/Social Worker who will investigate further.

We amend page 412 of the application to include the following paragraph, inserted between the 2nd and 3rd paragraphs under "Definitions":

Within 24 hours of suspension/expulsion, OWN charter school will provide a qualified teacher to instruct the student, either at the school or at the child's home, so that actual instruction as well as assigned work is provided. This instruction will be provided for a minimum of two hours a day, three days a week.

46. The latest draft of the draft management agreement between Our World and Mosaica starts on page 33 of the "Second Amendment to the Charter Application" dated January 12, 2001. The following are our recommendations:

- a) The introductory paragraph (p. 33) indicates that the charter school will be "...established under a charter granted by the Board of Trustees of the State University of New York pursuant to Article 56 of the New York Education Law." Only the Board of Regents has the authority to issue or grant charters pursuant to Article 56. The introductory paragraph of the management agreement should be revised accordingly.
- b) The first sentence of the Recitals section A (p. 33) indicates that the charter will be "... issued by the Board of Regents of the State University of New York (the "Authorizer")..." There is no such entity as "the Board of Regents of the State University of New York." There is a Board of Regents of the University of the State of New York. Education Law § 2(4). There is also a Board of Trustees of the State University of New York. Education Law §353. Based on the remainder of the management agreement, it appears that the

drafters of the agreement intended to refer to Board of Trustees of the State University of New York. In any event, the agreement should be revised to indicate the correct entity. Note that if the sentence is revised to refer to the Board of Trustees of the State University of New York, the sentence should also be revised to eliminate any suggestion that the Board of Trustees of the State University of New York issues charters.

- c) Article 1.01 (c) (p. 34) should be revised to reflect that modification of educational services that amount to a material change to the charter must be approved by the Board of Regents in accordance with Education Law § 2852(7).
- d) Article 1.02 (c) (p. 37) should be revised to reflect that modification of administrative services that amount to a material change to the charter must be approved by the Board of Regents in accordance with Education Law § 2852(7).
- e) Article 2.02 (p. 37) refers to a charter agreement entered into by the Commissioner. The Commissioner does not have such authority. The drafters of the agreement probably intended to refer to the Board of Trustees of the State University of New York. Recommend revising accordingly.
- f) In Article 4.04(a) (p. 39) add the words “ and to the extent permitted by law” after the words “... consistent with the mission and Charter of the Academy.”
- g) In the second paragraph of Article 6.01 (p. 40), delete the references to vocational training and latchkey programs because charter school corporations do not have the authority to provide such services.
- h) With respect to Article 7.01(a), explain how the statement that MEI will have the sole responsibility and authority to determine staffing levels, etc. is consistent with Education Law §2853(f) which provides that the board of trustees of a charter school shall have final authority for policy and operational decisions of the school.
- i) Add the following sentence at the end of Article 14.01 (pp. 44-45): Nothing in this agreement shall be construed in any way to limit the authority of the Authorizer or the Board of Regents including, but not limited to, the authority to take and enforce action pursuant to Education Law §2855.
- j) Article 15.02 does not appear to address the contingent obligations and responsibilities of each party in the event that the contract must be modified in order to maintain the charter school’s status under federal law as a 501(c)(3) entity as required by Section 2.15 of the Charter Agreement. Explain the omission.

- k) Add the following sentence at the end of Article 15.09 (p. 46): It is also expressly understood that to the extent any assignments constitute material changes to the charter, such assignments must be approved by the Board of Regents in accordance with Education Law § 2852(7).

These changes have been made to the Management Agreement and it is attached as Appendix B.

47. Section 9.8 of the Charter Agreement does not have a contact name and address for purposes of notices to the charter school. Please provide this information.

The contact name and address for purposes of notices to the charter school is Lisa Caballero, 19-04 23<sup>rd</sup> Avenue, Astoria, NY 11105

48. The proposed charter makes a number of references to before and after school programs and child care (e.g. pp. 30, 37, 38; First Amendment pp. 302; Second Amendment p. 14). Provide an assurance that any charter school programs will be consistent with the following principles
- (1) a charter school corporation is not authorized to provide before or after school child care;
  - (2) a charter school corporation may arrange to have an outside entity, including a management company, provide before and/or after school child care if such entity is licensed by the Department of Social Services, has the corporate authority to provide such services, and the fee for the child care is not paid by the charter school;
  - (3) a charter school corporation may provide tutoring to its students, but may not charge a fee for such tutoring;
  - (4) an outside agency, including a management company, may provide tutoring services to charter school students, but charter school students may not be charged any fee for any tutoring that is an essential component of the charter school's program.

We realize that charter schools are not authorized to provide before or after school child care. OWN Charter School will apply for grants and private funding to provide before and after school programs to be offered to all OWN Charter School students, free of charge. The programs will include tutoring and study time for homework assignments, as needed, as well as other activities.

49. Page 305 of the first Amendment states that "Our goal is to improve the skills of OWN students so that within two year's of attending the school they perform above the district average on regents-mandated exams." Does the district average meet Regents' standards? If not, the goal appears inconsistent with the requirement that

the program meet or exceeds Regents' standards. In any event, explain why the school anticipates that students will initially perform below the district average.

Our school is designed to help all students meet the Regent's standards of level three or above on the ELA and Math assessments. We look forward to working with the Charter School Institute on our Accountability Plan to set the timeframe and specifics for achieving these goals. We will be able to begin to plan for these specific goals as soon as we know which students are enrolled at the school and their achievement level upon entering.

The SED and the Accountability Plan give schools the option of using a "comparative measure" (derived from an actual or virtual cohort based on the demographics used to divide New York Public Schools into 64 categories) rather than a simple comparison to the school's District.

The point of our response on page 305 was that we expect OWN Charter School to have similar demographics to District 30, and therefore plan to compare to District averages. We do not expect our incoming students to perform below the average, nor did we state that. On the contrary, we expect incoming students to perform at the district average, which is why we chose the District average as a comparative measure.

50. Revise Article 2.3.1 (p. 936) to provide that the number of voting trustees on the Board of Trustees shall not be less than 5 in accordance with Education Law §226(1).

The Board of Trustees of OWN Charter School shall not consist of fewer than five members.

51. Delete Article 2.19 or, at a minimum, add the following phrase to the beginning of Article 2.19 (p. 940): "To the extent permitted by the Open Meetings Law." We note that the Committee on Open Government has opined that the Open Meetings Law does not permit the holding of meeting by teleconference. We also note that the Open Meetings Law was recently amended to permit the conducting of meetings by videoconference.

We will add the phrase "To the extent permitted by the Open Meetings Law" at the beginning on Article 2.19. We recognize that the Open Meeting law permits the conducting of a meeting by video conference, but not by teleconference.

52. The fiscal year set forth in Article IX (p. 946, August 1 – July 31) is not consistent with the fiscal year in charter agreement section 5.4 (July 1 – June 30). The by-laws should be revised accordingly.

The by-laws will be revised to reflect the July 1 to June 30 fiscal year.

53. On page 421, the proposed charter states that under the Open Meetings Law, collective negotiations pursuant to Article 14 of the Civil Service Law are permissible topics for discussion in executive session, but the "Charter Schools Act excepts charter school employees from provisions of the Civil Service Law, and therefore any collective negotiations regarding OWN Charter School Employees will not be discussed in executive session." In fact, Education Law §2854(3) provides that charter school employees are deemed public employees for purposes of Article 14 of the Civil Service Law, except for Civil Service Law § 212. Thus, this section of the Open Meetings Law policy should be revised or deleted. Also, recommend revising the first item B(5) and renumbering the second item B(5), item B(6), and item B(7).

On page 421, in section B – Permissible Subjects for an Executive Session -- the following text should be considered the revised text:

Executive Sessions will be conducted for the following purposes only:

1. Matters which will imperil the public safety if discussed
2. Any matter which may disclose the identity of a law enforcement agent or informer
3. Information relating to current or future investigation or prosecution of a criminal offense which imperil effective law enforcement if disclosed
4. Discussions regarding proposed, pending or current litigation
5. The medical, financial, credit or employment history of a particular person or corporation, or matters leading to the appointment, employment, promotion, demotion, discipline, suspension, dismissal or removal of a particular person or corporation.
6. The preparation, grading or administration of examinations, and
7. The proposed acquisition, sale or lease of real property or the proposed acquisition of securities, or sale or exchange of securities held by such public body, but only when publicity would substantially affect the value thereof.

54. Page 422 of the proposed charter states that judicial and quasi-judicial proceedings, and deliberations of political conferences and caucuses, need not be discussed at open meetings because such discussions are exempted by the Open Meetings Law. This misinterprets the law. Open Meetings Law Section 108 provides that the Open Meetings Law does not apply to judicial and quasi-judicial proceedings, and deliberations of political conferences and caucuses. This does not mean that discussions of such matters at Board meetings are exempt from the Open Meetings Law. Accordingly these provisions should be deleted.
55. Please revise the charter agreement to add the following sentence to Section 1.4 (New Information) of the SUNY Charter Agreement :

"The Trustees will provide the Regents with a copy of any New Information it receives and any statement described by this paragraph within 5 days of the receipt of such New Information or the issuance of such statement."

56. Please include in the application the way in which the Charter School will implement the "additional assurances" provisions of the draft charter agreement.