

## **FIFTH GRADE**

### **MATH**

#### *NUMBER CONCEPTS AND OPERATIONS*

- 5.1 Apply number concepts and operations to real world situations.
  - 5.1.1 Use place value to read, write, compare, and order whole numbers through the trillions place.
  - 5.1.2 Use place value to read, write, compare and order decimals through the thousandths place.
  - 5.1.3 Generate equivalent fractions in written form.
  - 5.1.4 Relate decimals to fractions that name tenths, hundredths, and thousandths.
  - 5.1.5 Use division to solve problems involving whole numbers and two-digit divisors.
  - 5.1.6 Identify prime factors of a whole number and common factors of a set of whole numbers.
  - 5.1.7 Use least common denominator to solve and record addition and subtraction of fractions.
  - 5.1.8 Round whole numbers and decimals through tenths to approximate reasonable results in problem situations.
  - 5.1.9 Estimate to solve problems and justify the reasonableness of the answer.
  - 5.1.10 Use addition, subtraction, multiplication and division to solve problems involving dollars and cents.
  - 5.1.11 Calculate what percentage one number is of another.
  - 5.1.12 Select an appropriate problem-solving strategy including drawing a picture, looking for a pattern, estimating and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem.
  - 5.1.13 Use tools such as objects, manipulatives, calculators, and other technology to solve problems.

#### *PROBABILITY AND STATISTICS*

- 5.2 Gather, organize, display and interpret data.
  - 5.2.1 Use fractions to describe the results of an experiment.
  - 5.2.2 Graph a given set of data using an appropriate graphical representation (picture, line, circle, bar).
  - 5.2.3 Use results of experiments to make predictions.

#### *PATTERNS, FUNCTIONS AND ALGEBRAIC THINKING*

- 5.3 Use patterns as a tool for problem solving.
  - 5.3.1 Use concrete objects or pictures to make generalizations about determining all possible combinations.
  - 5.3.2 Use lists, tables, charts, and diagrams to find patterns and make generalizations such as a procedure for determining equivalent fractions.
  - 5.3.3 Identify prime and composite numbers using concrete models and patterns in factor pairs.

## ***GEOMETRY AND SPATIAL REASONING***

- 5.4 Apply principles of geometry to the environment.
  - 5.4.1 Identify and compare attributes such as parallel, perpendicular, and congruent parts of geometric shapes and solids.
  - 5.4.2 Use attributes to define geometric shapes or solids.
  - 5.4.3 Locate and name points on a coordinate grid using ordered pairs of whole numbers.
  - 5.4.4 Predict and verify the effects of combining, subdividing, and changing basic shapes.

## ***MEASUREMENT***

- 5.5 Interpret real world situations using measurement concepts.
  - 5.5.1 Measure volume using concrete models of cubic units.
  - 5.5.2 Estimate volume in cubic units.
  - 5.5.3 Measure to solve problems involving length (including perimeter), weight, capacity, time, temperature, and area.
  - 5.5.4 Describe numerical relationships between units of measure within the same measurement system such as an inch is one-twelfth of a foot.

## **READING/LANGUAGE ARTS**

### ***READING***

- 5.1 Use strategies to comprehend more complex informational text and novels.
  - 5.1.1 Make and revise predictions before, during and after reading of fiction and non-fiction text.
  - 5.1.2 Expand vocabulary (key selection vocabulary, semantic mapping, analogies, etc.)
  - 5.1.3 Activate and expand background knowledge.
  - 5.1.4 Draw conclusions using key points and main ideas.
  - 5.1.5 Infer the author's purpose.
  - 5.1.6 Interpret literary elements (character analysis, setting, theme, problem/solution, plot, author's point of view, cause/effect).
  - 5.1.7 Adjust reading strategies for different types of reading material.
  - 5.1.8 Compare/classify literature by characteristics of genre (poetry, biographies, fiction, non-fiction).
  - 5.1.9 Use conventions of informational text to enhance comprehension (study guides, glossary, index, manuals, unit overviews, etc.).
  - 5.1.10 Infer meaning from context.
  - 5.1.11 Develop an appreciation for reading and increase fluency through frequent, regular independent practice.
  - 5.1.12 Monitor comprehension (self correct, re-read, use a variety of cueing systems).
  - 5.1.13 Set and monitor goals for growth as a reader (assess strengths and weaknesses).
  - 5.1.14 Apply knowledge of rate, volume, expression, rhythm and inflection when reading.
  - 5.1.15 Recognize literature as an expression of human experience (cultural awareness and appreciation, diversity, etc.).

- 5.1.16 Interpret an author's use of figurative language.
- 5.1.17 Demonstrate a basic familiarity with the characters and plots in selected classical mythology.
- 5.1.18 Demonstrate a familiarity with a variety of selected classic fiction and non-fiction including folk tales, poetry, informational texts, biographies, etc.

## *WRITING*

- 5.2 Prepare multi-paragraph compositions.
  - 5.2.1 Apply the writing process to create a composition (pre-writing strategies, drafting, revising, editing, publishing).
  - 5.2.2 Use correct forms of grammar, word usage, parts of speech, mechanics, punctuation and spelling.
  - 5.2.3 Write legibly in cursive handwriting in daily writing.
  - 5.2.4 Adapt writing style to fit a variety of audiences and purposes (letters, stories, poetry, reports, etc.).
  - 5.2.5 Apply organizational skills in paragraph writing (topic sentence, supporting sentences, closing sentence, sequential information, relationship of ideas to topic).
  - 5.2.6 Incorporate introduction, body, and conclusion into written compositions.
  - 5.2.7 Revise and edit to clarify and enhance meaning using checklists and conferences with peers, self, teachers, etc.
  - 5.2.8 Set and monitor personal writing goals (assess personal strengths/weaknesses).
  - 5.2.9 Develop a formal paragraph to respond in writing to presented information (oral, printed, media, etc.).
  - 5.2.10 Develop a formal research report (cover page, title, table of contents, glossary, and bibliography).
  - 5.2.11 Choose writing to express ideas and increase fluency through frequent, regular independent practice (journals, writers' workshop, etc.).
  - 5.2.12 Incorporate figurative language into creative writing (simile, metaphor, personification).
  - 5.2.13 Apply correct spelling of core high frequency words in daily writing.
  - 5.2.14 Demonstrate ability to write autobiographically (i.e., relates single incident, provide context within the incident occurs, apply simple narrative strategies, and provide some insight into why the event is memorable).
  - 5.2.15 Demonstrate ability to write compositions that speculate on causes and effects (i.e., describe situation to be speculated about, establish the connection between the situation and the postulated causes or effects, and offer persuasive evidence of the validity of the proposed causes or effects).

## *LISTENING*

- 5.3 Demonstrate purposeful listening by analyzing orally presented material.
  - 5.3.1 Recognize different purposes for listening and/or viewing (follow directions, gain information, enjoyment, etc.).

- 5.3.2 Identify and infer the speaker's purpose, point of view and main idea.
- 5.3.3 Identify important facts, ideas and details.
- 5.3.4 Ask relevant questions about information/ideas presented.
- 5.3.5 Expand vocabulary and background knowledge.
- 5.3.6 Analyze media impact on target audiences.

### ***SPEAKING***

- 5.4 Develop and deliver a group presentation.
  - 5.4.1 Demonstrate positive expressive body language (posture, eye contact, awareness of audience, facial expressions, gestures, confidence, etc.).
  - 5.4.2 Use appropriate rate and volume.
  - 5.4.3 Use appropriate vocabulary.
  - 5.4.4 Participate in class/group discussions.
  - 5.4.5 Make logical relevant and appropriate responses.
  - 5.4.6 Deliver oral responses to literature.
  - 5.4.7 Give clear, concise and sequential instructions, directions, and messages.
  - 5.4.8 Develop an oral presentation using a variety of sources.

### **SCIENCE**

Please see the [Core Knowledge Sequence](#) that is used in this area for additional curriculum standards and information.

#### ***LIFE SCIENCE***

- 5.1 Understand the characteristics of living things, diversity of life, and how living things interact with their environment.
  - 5.1.1 Explain the interaction and interdependence of non-living and living components within ecosystems.
  - 5.1.2 Describe how an environment's ability to provide food, water, space, and essential nutrients determines the capacity for supporting life.
  - 5.1.3 Create and interpret food chains and food webs.
  - 5.1.4 Describe the basic processes of photosynthesis and respiration and their importance to life.

#### ***EARTH SCIENCE***

- 5.2 Understand the composition of the earth, its history, the processes that shape it, and its place in the universe.
  - 5.2.1 Describe the basic components, composition, and size of solar system.
  - 5.2.2 Explain the effects of relative motion and positions of the sun, earth and moon (i.e., seasons, eclipses, moon phases, tides).
  - 5.2.3 Describe evidence that supports past and current scientific theories of the origin of the universe.
  - 5.2.4 Interpret the changes in land forms as a result of constructive and destructive forces (i.e., deposition of sediment and weathering, faults, volcanoes, formation of mountains, etc.).
  - 5.2.5 Describe processes responsible for the formation of coal, oil, gas, and minerals.
  - 5.2.6 Draw conclusions about the past using data (i.e., tree-growth rings, sedimentary rock sequences, fossils, etc.).

- 5.2.7 Illustrate and describe the rock cycle (i.e., formation, weathering, sedimentation, and reformation of rock).
- 5.2.8 Describe the structure of the earth (solid crust, layers, plates, etc.).
- 5.2.9 Describe the pattern of stars and galaxies in the night sky relative to earth's rotation.

### *PHYSICAL SCIENCE*

- 5.3 Understand common properties, forms, and changes in matter and energy.
  - 5.3.1 Identify and demonstrate common examples of how light is reflected (tinted windows, etc.) and refracted (cameras, telescopes, etc.)
  - 5.3.2 Differentiate among forms of energy including light, heat, electrical, and solar energy.
  - 5.3.3 Classify matter based on its physical properties including magnetism, physical state, and the ability to conduct or insulate heat, electricity, and sound.
  - 5.3.4 Identify properties of sound (pitch, loudness, vibration).
  - 5.3.5 Demonstrate the relationship between force and change in motion.
  - 5.3.6 Explain the relationship between gravitational force, mass and distance.

### *HEALTH*

- 5.4 Understand how to maintain and promote personal health.
  - 5.4.1 Describe the structures, functions, and interdependence of major body systems.
  - 5.4.2 Explain how to maintain the healthy status of body systems.
  - 5.4.3 Analyze the short-term and long-term effects of alcohol, nicotine, and other substances on the functions of the body systems.

Focus: U.S. History

### **SOCIAL STUDIES**

Please see the [Core Knowledge Sequence](#) that is used in this area for additional curriculum standards and information.

### *HISTORY*

- 5.1 Understand the causes and effects of European colonization in the United States.
  - 5.1.1 Describe cultural and ecological interactions resulting from early European exploration and colonization (before 1620).
  - 5.1.2 Explain when, where, and why groups of people colonized and settled in the United States (1620-1763).
  - 5.1.3 Describe the contributions of significant colonial leaders.
  - 5.1.4 Explain how political institutions and religious freedom emerged in the North American colonies.
  - 5.1.5 Explain how the values and institutions of European economic life affected the economic development of the colonies and how slavery reshaped American life.
- 5.2.0 Understand the ideas and interests shaping the conflict between Great Britain and the American colonies.
  - 5.2.1 Identify the contributions of significant individuals during the



## *ECONOMICS*

- 5.8 Understand the basic economic patterns in the early United States.
  - 5.8.1 Explain the economic patterns of various early Native American groups in the United States.
  - 5.8.2 Explain the economic patterns of early colonization.
- 5.9 Understand the economic motivation for European exploration and colonization.
  - 5.9.1 Identify the major industries of the American colonies.
  - 5.9.2 Identify the economic reasons for European exploration and settlement in the United States.
- 5.10 Understand characteristics and benefits of the free enterprise system in the United States.
  - 5.10.1 Describe the development of the free enterprise system in colonial America and the United States.
  - 5.10.2 Give examples of the benefits of the free enterprise system in the United States.
- 5.11 Understand the impact of supply and demand on consumers and producers in a free enterprise system.
  - 5.11.1 Recognize the causes and results of economic depression.
  - 5.11.2 Explain how supply and demand affects consumers.
  - 5.11.3 Evaluate the effects of supply and demand on business, industry and agriculture in the plantation system of the 19th century.

## *CIVICS/GOVERNMENT*

- 5.12 Understand the organization of government in colonial America.
  - 5.12.1 Identify examples of government (i.e., the Mayflower Compact, etc.) in the colonies.
  - 5.12.2 Compare the different types of government in the colonies.
- 5.13 Understand the importance of the Declaration of Independence and the U.S. Constitution.
  - 5.13.1 Identify the purposes of the Declaration of Independence.
  - 5.13.2 Identify the purposes of the U.S. Constitution.
- 5.14 Understand the framework of government created by the U.S. Constitution.
  - 5.14.1 Describe the basic functions of the three branches of government.
  - 5.14.2 Describe the reasons for the system of checks and balances outlined in the U.S. Constitution.
  - 5.14.3 Compare the responsibilities of the federal and state governments.
- 5.15 Understand the fundamental rights of American citizens guaranteed in the Bill of Rights and other amendments to the U.S. Constitution.
  - 5.15.1 Summarize the reasons for the creation of the Bill of Rights.
  - 5.15.2 Describe important individual rights (i.e.: freedom of religion, speech, press, and the right to assemble and to petition the government).
  - 5.15.3 Summarize selected amendments.

## *SOCIOLOGY/ANTHROPOLOGY*

- 5.16 Understand the effect of various periods in U. S. history on the arts.
  - 5.16.1 Identify significant examples of art, music, and literature from various

- periods in U. S. history.
- 5.16.2 Explain how specific examples of art, music and literature reflect the historical periods in which they were created.
- 5.17 Understand and appreciate the contributions of various groups (ethnic, racial, religious) to the culture of the United States.
  - 5.17.1 Describe customs, celebrations, and traditions of selected groups in the United States.
  - 5.17.2 Identify contributions of selected groups to the American identity.

## **MUSIC**

Please see the [Core Knowledge Sequence](#) that is used in this area for additional curriculum standards and information.

- 5.1 The student describes and analyzes musical sound and demonstrates musical artistry. The student is expected to:
  - 5.1.1 Use musical terminology in explaining music, music notation, musical instruments and voices, and musical performances.
  - 5.1.2 Identify forms presented aurally such as AB, ABA, rondo and theme and variations.
- 5.2 The student performs a varied repertoire of music. The student is expected to:
  - 5.2.1 Perform independently, with accurate intonation and rhythm, demonstrating fundamental skills and basic performance techniques.
  - 5.2.2 Perform expressively, from memory or notation, a varied repertoire of music representing styles from diverse cultures.
- 5.3 The student reads and writes music notations. The student is expected to:
  - 5.3.1 Read standard notation;
  - 5.3.2 Identify music symbols and terms referring to dynamics, tempo, and articulation.
- 5.4 The student relates music to history, to society, and to culture. The student is expected to:
  - 5.4.1 Identify aurally presented excerpts of music representing diverse genres, styles, periods, and cultures.
  - 5.4.2 Perform songs and movement from diverse cultures.
  - 5.4.3 Identify concepts taught in other fine arts and their relationships to music concepts.
  - 5.4.4 Perform music representative of America.
- 5.5 The student responds to and evaluates music and musical performance. The student is expected to:
  - 5.5.1 Apply criteria in evaluating musical performances and compositions.
  - 5.5.2 Exhibit audience etiquette during live performance.
  - 5.5.3 Evaluate, using music terminology, personal preferences for specific music works and styles.

## **PHYSICAL EDUCATION**

The three basic concepts addressed in the physical education standards are movement, physical activity /health and social development.

- 5.1 The student demonstrates competency in fundamental movement patterns and proficiency in a few specialized movement forms. The student is expected to:
  - 5.1.1 Demonstrate attention to form, power, accuracy, and follow-through in

- performing movement skills.
- 5.1.2 Demonstrate the ability to contrast a partner's movement.
- 5.1.3 Demonstrate competence in manipulative skills in dynamic situations such as overhand throw, catch, shooting, hand dribble, foot dribble, kick, and striking activities such as hitting, softball.
- 5.1.4 Demonstrate combinations of locomotors and manipulative skills in complex and/or game-like situations such as pivoting and throwing, twisting and striking, and running and catching.
- 5.1.5 Demonstrate appropriate use of levels in dynamic movement situations such as jumping high for a rebound and bending knees and lowering center of gravity when guarding an opponent.
- 5.2 The student applies movement concepts and principals to the learning and development of motor skills. The student is expected to:
  - 5.2.1 Identify common phases such as preparation, movement, follow through, or recovery in a variety of movement skills such as tennis serve, handstand, and free throw.
  - 5.2.2 Choose appropriate drills/activities to enhance the learning of a specific skill.
- 5.3 The student exhibits a health enhancing, physically-active lifestyle that improves health and provides opportunities for enjoyment and challenge. The student is expected to:
  - 5.3.1 Participate in moderate to vigorous physical activities on a daily basis that develop health-related fitness.
  - 5.3.2 Identify appropriate personal fitness goals in each of the components of health-related fitness.
  - 5.3.3 Explain the value of participation in community physical activities such as organized recreational sports, dance classes, karate etc.
- 5.4 The student knows the benefits from being involved in daily physical activity and factors that affect physical performance. The student is expected to:
  - 5.4.1 Relate ways that aerobic exercise strengthens and improves the efficiency of the heart and lungs.
  - 5.4.2 Self-monitor the heart rate during exercise.
  - 5.4.3 Define the principle of frequency, intensity, and time and describe how to incorporate these principles to improve fitness.
  - 5.4.4 Describe the changes that occur in the cardio respiratory system as a result of smoking and how those changes affect the ability to perform physical activity.
  - 5.4.5 Describe how alcohol and other drugs effect movement and coordination.
- 5.5 The student understands safety practices associated with physical activity and space. The student is expected to:
  - 5.5.1 Use equipment safely and properly.
  - 5.5.2 Select and use appropriate attire that promotes participation and prevents injury.
  - 5.5.3 Describe the importance of taking personal responsibility for reducing hazards, avoiding accidents, and preventing injuries during physical activity.
- 5.6 The student understands basic components such as strategies and rules of

structured physical activities including, but not limited to, games, sports and dance. The student is expected to:

5.6.1 Explain the concept and importance of teamwork.

5.7 The student develops positive self-management and social skills needed to work independently and with others in physical activity settings. The student is expected to:

5.7.1 Follow rules, procedures, and etiquette.

5.7.2 Use sportsmanship skills for settling disagreements in socially acceptable ways such as remaining calm, identifying the problem, listening to others, generating solutions, or choosing a solution that is acceptable to all.

## **VISUAL ARTS**

Please see the [Core Knowledge Sequence](#) that is used in this area for additional curriculum standards and information.

5.1 Develop perceptions to increase visual awareness and sensitivity to surroundings. The student develops and organizes ideas from the environment. The student is expected to:

5.1.1 Communicates ideas about feelings, self, family, school, and community, using sensory knowledge and life experiences.

5.1.2 Identify in artworks that color, texture, form, line, space, and value are basic art elements and that principles such as emphasis, pattern, rhythm, balance, proportion, and unity serve as organizers.

5.2 Expresses ideas through original artworks, using a variety of media with appropriate skill. The student is expected to:

5.2.1 Combine information from direct observation, experience, and imagination to express ideas about self, family, and community in original artwork.

5.2.2 Create original artworks and explore photographic imagery, using a variety of art materials and media appropriately.

5.2.3 Compare relationships between design and everyday life.

5.3 Demonstrates an understanding of art history and culture as records of human achievement. The student is expected to:

5.3.1 Compare artworks from several national periods, identifying similarities and differences.

5.3.2 Compare cultural themes in artworks that honor history and traditions in America.

5.3.3 Identify the use of art skills in a variety of jobs.

5.4 Makes informed judgments about personal artworks and the works of others. The student is expected to:

5.4.1 Analyze original artworks, portfolios, and exhibitions by peers and others to form conclusions about properties.

## **FOREIGN LANGUAGE**

Language study is best begun in kindergarten (or earlier) and continued without interruption through grade 12 and beyond. Research confirms that children easily and naturally acquire language at an early age. The degree of proficiency is directly proportional to the amount of time spent by students in meaningful study. The student

develops insight into the nature of language and culture by comparing the student's own language and culture to another.

1.1 The student communicates in a language other than English using the skills of listening, speaking, reading, and writing.

1.1.1 Students listen to and derive meaning from a variety of foreign language sources. In order to meet this standard the student will:

- Recognize common expressions;
- Obtain meaning from diverse listening sources;
- Demonstrate comprehension through appropriate responses; and
- Engage in a variety of listening situations.
- Identify the main idea from simple instructions or conversations, basic survival situations, and familiar topics, such as school, leisure time activities, and family life;
- Obtain meaning from simple conversations at a normal rate of speech;
- Identify the main idea and/or specific information from a listening situation, live or recorded, such as stories, dialogue, film, songs, poems, plays, and conversations.

1.1.2 Students speak in a foreign language for a variety of purposes and for diverse audiences. In order to meet this standard, a student will:

- Apply pronunciation rules and intonation patterns;
- Use vocabulary, grammatical forms, and structures of the target language to convey meaning;
- Apply knowledge of cultural practices to spoken language;
- Express needs, tell stories, obtain and convey information, explain concepts and procedures, and persuade; and
- Interact with speakers of the language in a variety of venues: personal, business, dramatic presentations.
- Apply pronunciation and intonation patterns;
- Describe and narrate with learned vocabulary;
- Express and justify simple opinions;
- Maintain brief conversations on familiar topics;
- Ask and answer complex questions.

1.1.3 Students read and derive meaning from a variety of materials written in a foreign language. In order to meet this standard, students will:

- Recognize words, phrases, idiomatic expressions, and grammatical structures;
- Demonstrate comprehension of reading materials written for a variety of purposes;
- Use and apply the information gained from reading;
- Respond to the cultural elements contained in reading materials of the language.
- Comprehend main ideas of reading selections based on familiar vocabulary;
- Respond to the reading selection;
- Analyze cultural elements found in the reading materials.

1.1.4 Students write in a foreign language for a variety of purposes and for

diverse audiences. In order to meet this standards students will

- Write for purposes such as relating personal experiences, obtaining and conveying information, explaining ideas and opinions, and persuading;
- Write for audiences such as peers, teachers, and community members;
- Plan, draft, revise, proof read, and edit written communications;
- Use correct grammar, sentence structure, vocabulary, spelling, punctuation, and capitalization to convey meaning;
- Write descriptions and narrations, and express and justify opinions;
- Obtain and report factual information
- Develop and organize ideas, plan, draft, revise, proofread, and edit their own work and that of other students.

2.1 The student gains knowledge and understanding of other cultures. The student is expected to:

- Demonstrate knowledge of aspects of foreign cultures such as daily life, education, history, geography, government, economics, and the arts;
- Apply knowledge of cultural practices when communicating in a foreign language;
- Use the foreign language to access cultural information available only in that language.
- Discuss components of the social patterns of the cultures (practices, perspectives – how people perceive things, and products - what people make) being studied;
- Use culturally appropriate language and gestures to interact with peers and adults;
- Express themselves in writing in a culturally appropriate manner.