

Grade 5 -- Mathematics

Enduring Understandings

- The magnitude of numbers affects the outcome of operations on them.
- Algebraic and numeric procedures are interconnected and build on one another to produce a coherent whole.
- Mathematical models can be used to describe and quantify physical relationships.
- Patterns and relationships can be represented graphically, numerically, symbolically, or verbally.
- Coordinate geometry can be used to verify and represent geometric/algebraic relationships.
- The likelihood of everyday events can be determined mathematically, and we can use fractions to express intuitive, experimental, and theoretical probabilities.

Areas of Focus

- Understand the number system by constructing meaning for the following sets of numbers: All fractions, all decimals
- Recognize the decimal nature of US currency and compute with money
- Develop and apply number theory concepts involving primes, factors, multiples
- Compare and order numbers
- Develop proficiency in the division of a three-digit number by a two-digit number
- Solve simple linear equations with manipulatives, whole number coefficients only with whole number answers and variable on one side of the equation
- Use number sentences to model situations
- Draw freehand sketches of graphs to model real phenomena or to predict events
- Recognize, describe, extend, and create patterns involving whole numbers
- Graph points satisfying a function from T-charts, verbal rules or simple equations
- Use a translation, a reflection, or a rotation to map one figure onto another congruent figure
- Create geometric shapes with specified properties in the first quadrant on a coordinate grid
- Determine probabilities of events
- Construct meaning of the following terms: event, complementary event
- Understand that certain events have a probability of 1 and impossible events have a probability of 0
- Given data obtained experimentally, what is the likely distribution of items in a bag
- Recognize and understand the connections among concepts of independent outcomes, picking at random and fairness

Grade 5 -- Mathematics

Enduring Understandings

- Geometric relationships provide a means to make sense of a variety of phenomena.
- The results of a statistical investigation can be used to support or refute an argument.
- Linear measurement can be used to describe and compare lengths.

Areas of Focus

- Use a protractor to measure angles
- Understand and apply the following concepts: notation for line, ray, angle, line segment, properties of parallel, perpendicular, and intersecting lines
- Apply the theorem that the sum of the measures of the interior angles of a triangle is 180 degrees
- Identify, describe, compare, and classify polygons and circles
- Identify similar figures
- Understand the concepts of congruence and symmetry (line and rotational)
- Develop strategies for finding perimeter and area of a square and rectangle
- Recognize that rectangles with the same perimeter do not necessarily have the same area and vice versa
- Select and use appropriate representations for sets of data and measures of central tendency (range, mean and median)
- Analyze data and statistics to create and interpret graphs and displays, specifically, bar graphs, line graphs, circle graphs, tables,
- Select and use appropriate units when measuring
- Convert measurement units within a system
- Know approximate equivalents between the standard and metric systems
- Use measurements and estimates to describe and compare phenomena

Grade 5 -- Science

Enduring Understandings

- Scientific inquiry involves asking scientifically-oriented questions, collecting evidence safely, forming explanations, connecting explanations to scientific knowledge and theory, and communicating and justifying explanations.
- All living things must share all six basic processes.
- All living things are made of cells, whose parts have specific functions. Cells work together to make up tissues, organs, and organ systems.
- Organisms are grouped in taxonomy based upon similarity.
- Body systems work together for the total function of a living organism.
- Lifestyle choices affect the body systems and overall health.
- Ecosystems change over time, both naturally and as a result of human activities
- Earth's surface is constantly changing.
- Rocks and minerals are formed and changed through different Earth processes.
- The Earth changes over time, both naturally and as a result of human activities.
- People use resources to meet their needs in many ways, sometimes causing pollution that affect the environment
- All matter has properties that can be observed, described, and measured.
- The way a material behaves depends on how its atoms are arranged.
- Chemical reactions occur all around us.
- Forces interact with objects, such as you and Earth, to produce motion.
- Electric fields provide the force that moves charged particles.
- Electricity is a form energy that plays an important role in our lives.
- Electricity is a form of energy that can be transferred by moving electric charges doing work in various devices.

Areas of Focus

- Question, Hypothesize, Conduct Experiment, Observe and Collect Data, Analyze Data, Draw and Share Conclusions
- Safety
- Living v. Nonliving Things
- Animal and Plant Cells
- 6 Kingdoms with a focus on Animal Kingdom (taxonomy, vertebrate/invertebrate)
- Cells to Systems
- Respiratory (Circulatory) and Excretory Systems
- Ecosystems and Habitats
- Food Chains & Food Webs
- Endangered species
- Natural disasters
- Weathering, erosion, deposition
- Plate tectonics (mountains, earthquakes, volcanoes)
- Rock Cycle
- Global Warming and Greenhouse Effect
- Conservation of resources
- Water Cycle being affected by pollution
- Solids, liquids, and gases
- Atoms (basic unit of matter)
- Elements on Periodic Table
- Molecules and Compounds
- Mixtures v. Solutions
- Physical v. Chemical Properties
- Chemical Reactions
- Newton's Laws of Motion
- Speed, Acceleration, and Inertia
- Action & Reaction Forces
- Review positive/negative, open/closed, series, and parallel circuits
- Creating devices

Grade 5 -- Language Arts

Enduring Understandings	Areas of Focus
<ul style="list-style-type: none"> • As a basis of learning and communication, reading, writing, speaking and listening are life skills that are built throughout grades K – 12. • We can comprehend and evaluate texts across a range of disciplines. • We build upon others’ ideas, articulate our own, and confirm our ideas have been understood. • We use standard English and a wide-ranging vocabulary to communicate orally and in writing. • We adapt our communication in relation to audience, task, purpose, and discipline. • We set and adjust purpose for reading, writing, speaking, listening, and language as warranted by the task. • We appreciate nuances, such as how the composition of an audience should affect tone when speaking and how the connotations of words affect meaning. • We know that different disciplines call for different types of evidence. • We are engaged and open-minded – but discerning – readers and listeners. • We cite specific evidence when offering an oral or written interpretation of a text. • We use relevant evidence when supporting our own points in writing and speaking, making our reasoning clear to the reader or listener, and constructively evaluate others’ use of evidence. • We use technology thoughtfully to enhance our reading, writing, speaking, listening, and language use. 	<ul style="list-style-type: none"> • Reader’s Workshop: <ul style="list-style-type: none"> ○ Become Engaged Avid Readers ○ Reviewing Strategies: Monitoring for Meaning, Making Connections, Creating Sensory Images, Monitoring Comprehension ○ Using Characters to Develop Meaning in Fiction: making connections, envisionment, visualizing, and inferring ○ Using Characters to Develop Meaning in Fiction: building theories and gathering Evidence ○ Poetry, Drama ○ Working Through Non-fiction: Expository – determining importance, summarizing and synthesizing, activating and connecting prior knowledge ○ Working Through Non-fiction: Narrative – biography, autobiography ○ Traditional Literature: Folktales, Myths, Fairy Tales, Tall Tales – making connections, determining importance, inferring ○ Tackling Complex Text: Historical Fiction – synthesize information, questioning, background knowledge ○ Mystery – summarizing, questioning, inferring • Writer’s Workshop: <ul style="list-style-type: none"> ○ Personal Narrative ○ Expository (compare and contrast) ○ Writing Fiction ○ Persuasive Writing ○ Writing about Reading (literary essays) ○ Short Research Project ○ Memoir • Word Study <ul style="list-style-type: none"> ○ Letter-Sound Relationships ○ Spelling Patterns ○ High-Frequency Words ○ Word meaning and Vocabulary ○ Word Structure ○ Word-Solving Actions

Grade 5 -- Social Studies

Enduring Understandings

- Learning about other cultures can inspire the desire to explore.
- Technological inventions can give some major advantages over others.
- Geography is the why of where.
- Geography can be a determining factor in how a civilization develops.

Areas of Focus

- World History --Exploration through early Colonial America

Grade 5 -- Health & PE

Enduring Understandings

- Knowledge about drugs and medicines informs decision making related to personal wellness and the wellness of others.
- Understanding the various aspects of human relationships and sexuality assists in making good choices about healthy living.
- The use of critical thinking, decision making, problem solving, leadership and communication skills are essential to making informed personal, family and community health services.
- Current and emerging diagnostic, prevention and treatment strategies can help people live healthier and longer than ever before.
- Taking responsibility for one's own health is essential step towards developing and maintaining a healthy, active lifestyle.
- Performing movement skills in a technically correct manner improves overall performance and increases the likelihood of participation in lifelong physical activity. Knowing and understanding concepts of movement will improve performance in a specific skill and provide the foundation for transfer of skill in a variety of sport and activities.
- Understanding fitness concepts and skills and integrating them into your everyday routine supports wellness. Physical fitness is the ability of your whole body to work together efficiently to be able to do the most work with the least amount of effort. Achieving and maintaining fitness requires age-appropriate intensity, duration and frequency of exercise. Developing and implementing a program that utilizes appropriate training principles is necessary for lifetime fitness.
- In order for all participants and spectators to experience the maximum benefit from games and sports, everyone must demonstrate knowledge and commitment to sportsmanship, rules and safety guidelines.
- Making good health decisions requires the ability to access and evaluate reliable resources. Effective communication skills enhance a person's ability to express and defend their beliefs. Decision-making can be affected by a variety of influences that may not be in a person's best interest.