Souderton Area School District

Fourth Grade Curriculum Overview

Reading:

I. Reading with Stamina and Meaning

- Readers read easy text with understanding.
- Readers read a lot of text with stamina.
- Readers read with fluency
- Readers read with friends.
- Readers celebrate reading.
- Readers read in a way that allows them to retell.
- Readers hold themselves accountable when reading.
- Readers read with stamina for test-taking purposes.

II. Fiction Texts

- Readers can navigate through a text before, during, and after reading by implementing reading strategies.
- Readers can understand story elements: characterization, plot, and setting.
- Readers can identify the theme of a narrative.
- Readers can identify conflict in a narrative.
- Readers can identify literary devices and their purpose as they are used in narratives.
- Readers can identify voice, tone, and mood as well as author's purpose in narrative and poetry.
- Readers can identify the various types of genre in fiction.

III. Responding to Fiction

- Readers think and grow ideas as they read.
- Readers are aware that they connect emotionally with the text as they read.
- Readers formulate questions while they read.
- Readers write to respond to text.
- Readers talk to respond to text.
- Readers use writing and conversations as tools to follow and extend trails of thought.
- Readers think, write, and talk about a variety of types of text.

IV. Nonfiction

- When starting a new nonfiction text, readers must engage in initial comprehension strategies.
- Prior to reading, readers must activate strategies for understanding vocabulary.
- While reading nonfiction, readers use self-monitoring comprehension strategies.
- Readers demonstrate an understanding and interpretation of nonfiction text.
- Readers read with fluency to better understand what they read.
- Readers utilize strategies to get through the hard parts of a nonfiction text.

V. Responding to Nonfiction

- Readers use conversation to respond to text(s) to follow and extend their thinking.
- Readers use writing to respond to text(s) to follow and extend their thinking.
- Readers think, write, and talk about texts of varying structures.
- Readers synthesize concepts to lead them to larger ideas and themes.
- Readers determine relevancy and credibility of sources.

VI. Developing and Extending Understanding

1. Readers use conversation (talking and listening) to deepen thinking and enhance learning.
2. Readers integrate and synthesize ideas across parts of a text as they talk together.
3. Readers use the text to support their conversation and thinking.
4. Readers respond critically to the text through conversation.
5. Readers select a variety of reading materials for conversations.
6. Readers reflect on their conversations about books.

VII. Reading as a *Test Genre*

1. Readers prepare for testing all year long by linking test talk and test-taking strategies within the Reading Workshop.
2. Readers learn to think of "testing" as a *genre*, distinguished by characteristics of form, style and content.
3. Readers learn strategies for taking tests, understanding the differences between general reading strategies and test-specific strategies.
4. Readers learn about different kinds of test questions/formats and how to answer them correctly.
5. Readers, knowing the different kinds of questions that appear on tests, discover that the same general reading strategies they have learned in Reading Workshop can help them take tests.
6. Readers take tests seriously, know they are important, and do their very best.

Writing:

I. Launching the Writing Workshop

- Writers view themselves as writers with something to say.
- Writers learn how to use a writer's notebook.
- Writers choose topics that are important to them.
- Writers learn and use the writing process.
- Writers need instruction and adequate time to develop habits that nurture independence.
- Writers thrive in a safe learning community.
- Writers celebrate their writing success.

II. Raising the Quality of Narrative Writing

- Writers study texts that resemble the sort of thing they hope to write.
- Writers draw on strategies they already know and learn new strategies for generating personal narratives.
- Writers select a seed idea, learning how to lift it beyond what they've already written, and rehearse for the draft that they will soon write.
- Writers understand that narratives have a focus that asks, "What am I really trying to say?"
- Writers draw on a growing repertoire of strategies for adding content to their stories.
- Writers craft leads and endings.
- Writers learn strategies to confer with partners.
- Writers revise in light of their focus and edit drafts drawing on all they've learned.
- Writers celebrate their success.
- Writers learn how to write a narrative for a writing prompt.

III. Informational Writing

- Writers study texts that resemble the sort of thing they hope to write.
- Writers generate ideas and select a topic.
- Writers go back into notebooks to write about their topic and to discover what they know and what they want to say about it.
- Writers understand that an informational text makes a point.
- Writers plan and organize their informational text by selecting details that support their point.
- Writers draw on a growing repertoire of strategies for adding content to their informational texts.
- Writers craft leads (introductions) and endings (conclusions).
- Writers organize their information to create an interesting and informative text.
- Writers learn strategies to confer with partners.
- Writers revise in light of their focus and edit drafts drawing on all they've learned.
- Writers celebrate their writing success.
- Writers learn how to write an informational essay for a writing prompt.

IV. Persuasive Writing:

- Writers study texts that resemble the sort of thing they hope to write.
- Writers generate ideas and select a topic.
- Writers go back into notebooks to write about what they believe about their issue.
- Writers understand that persuasive writing is controlled by a single point of view.
- Writers plan their persuasive texts by selecting details that support their point of view.
- Writers draw on a growing repertoire of strategies for adding content to their persuasive texts.
- Writers understand that persuasive texts have a unique structure.
- Writers learn strategies to confer with partners.
- Writers revise in light of their focus and edit drafts drawing on all they've learned.
- Writers celebrate their writing success.
- Writers learn how to write a persuasive essay for a writing prompt.

V. Poetry:

- Poets know that poetry comes from the heart, growing from the writer's passions and interests.
- Poets must read and collect LOTS of poetry before writing poetry themselves.
- Poets paint a picture with their words.
- Poets learn to revise and edit as they write.
- Poets celebrate their writing success.

Spelling & Writing Conventions:

Capital Letters:

- Beginning of sentences
- Proper nouns
- Book titles

Punctuation:

- Ending punctuation—question marks, periods, and exclamation marks
- Commas—dates, letter writing, and list in a series
- Quotation marks in dialogue

Spelling Strategies & Patterns: *From the Sitton and Zaner-Bloser Spelling Curricula*

- Homophones
- Qu and squ
- Silent consonants
- Ge and dge
- Ou, oi, oo, ew
- Contractions
- Possessives
- Endings—ed, ing, changing y to i
- Plurals
- Suffixes—ful, less, ly, ment, ness, er and or
- Homographs
- Long vowel patterns—v-C-e, vowel pairs, u-C-e, ue, oo, and ew
- Words ending in—en, in, on, an al, il, and le
- R-controlled vowels—er, ir, and ur
- Compound words

See also the eligible content from the most recent PSSA Anchors

Handwriting:

The goal of handwriting instruction is to enable students to produce legible writing in a reasonable amount of time. We believe the best instructional technique is the "motion model" accompanied by guided practice. This model requires the teacher to ***demonstrate*** *the motor tasks involved in correctly producing each letter, and to monitor students' attempts to write.*

- The Zaner-Bloser simplified cursive alphabet will be introduced and taught during the first semester of third grade**.** Beginning in the second semester of the third grade year, consistent use of cursive will be expected for tests, final drafts, and other handwritten published pieces. **Additional instruction of cursive handwriting will be provided to individuals, small groups, and/or the whole class based upon the results of ongoing assessment in the fourth and fifth grades**. Consistent use of cursive will be expected for tests, final drafts, and other handwritten pieces.
- Continued guided practice of the manuscript alphabet for use in appropriate situations, such as graphs, posters, applications, forms, etc., will be given to students in the third, **fourth,** and fifth grades.

Math:

Taken from the Fourth Grade *Everyday Math* goal sheet:

Number and Numeration *(PA Standard 2.1)*

- **Understand the meanings, uses, and representations of numbers.**
  1. Read and write whole numbers up to 1,000,000,000 and decimals through thousandths; identify places in such numbers and the values of the digits in those places; translate between whole numbers and decimals represented in words and in base-10 notation.
  2. Read, write, and model fractions; solve problems involving fractional parts of a region or a collection; describe and explain strategies used; given a fractional part of a region or a collection, identify the unit whole.
  3. Find multiples of whole numbers less than 10; find whole-number factors of numbers.

- **Understand equivalent names for numbers.**
    4. Use numerical expressions involving one or more of the basic four arithmetic operations and grouping symbols to give equivalent names for whole numbers.
    5. Use numerical expressions to find and represent equivalent names for fractions and decimals; use and explain a multiplication rule to find equivalent fractions; rename fourths, fifths, tenths, and hundredths as decimals and percents.
- **Understand common numerical relations.**
    6. Compare and order whole numbers up to 1,000,000,000 and decimals through thousandths; compare and order integers between -100 and 0; use area models, benchmark fractions, and analyses of numerators and denominators to compare and order fractions.

Operations and Computation *(PA Standard 2.2)*

- **Compute accurately.**
    1. Demonstrate automaticity with basic addition and subtraction facts and fact extensions.
    2. Use manipulatives, mental arithmetic, paper-and-pencil algorithms, and calculators to solve problems involving the addition and subtraction of whole numbers and decimals through hundredths; describe the strategies used and explain how they work.
    3. Demonstrate automaticity with multiplication facts through 10 * 10 and proficiency with related division facts; use basic facts to compute fact extensions such as 30 * 60.
    4. Use mental arithmetic, paper-and-pencil algorithms, and calculators to solve problems involving the multiplication of multidigit whole numbers by 2-digit whole numbers and the division of multidigit whole numbers by 1-digit whole numbers; describe the strategies used and explain how they work.
    5. Use manipulatives, mental arithmetic, and calculators to solve problems involving the addition and subtraction of fractions with like and unlike denominators; describe the strategies used.
- **Make reasonable estimates.**
    6. Make reasonable estimates for whole number and decimal addition and subtraction problems and whole number multiplication and division problems; explain how the estimates were obtained.
- **Understand meanings of operations.**
    7. Use repeated addition, skip counting, arrays, area, and scaling to model multiplication and division.

Data and Chance *(PA Standard 2.6)*

- **Select and create appropriate graphical representations of collected or given data.**
    1. Collect and organize data or use given data to create charts, tables, bar graphs, line plots, and line graphs.
- **Analyze and interpret data.**
    2. Use the maximum, minimum, range, median, mode, and graphs to ask and answer questions, draw conclusions, and make predictions.
- **Understand and apply basic concepts of probability**.
    3. Describe events using *certain, very likely, likely, unlikely, very unlikely, impossible,* and other basic probability terms; use *more likely, equally likely, same chance, 50-50, less likely,* and other basic probability terms to compare events; explain the choice of language.
    4. Predict the outcomes of experiments and test the predictions using manipulatives; summarize the results and use them to predict future events; express the probability of an event as a fraction.

Measurement and Reference Frames *(PA Standard 2.3)*

- **Understand the systems and processes of measurement; use appropriate techniques, tools, units and formulas in making measurements.**
  1. Estimate length with and without tools; measure length to the nearest ¼ inch and ½ centimeter; estimate the size of angles without tools.
  2. Describe and use strategies to measure the perimeter and area of polygons, to estimate the area of irregular shapes, and to find the volume of rectangular prisms.
  3. Describe relationships among U.S. customary units of length and among metric units of length.
- **Use and understand reference frames.**
  4. Use ordered pairs of numbers to name, locate, and plot points in the first quadrant of a coordinate grid.

Geometry *(PA Standard 2.9)*

- **Investigate characteristics and properties of 2- and 3-dimensional geometric shapes.**
  1. Identify, draw, and describe points, intersecting and parallel line segments and lines, rays, and right, acute, and obtuse angles.
  2. Describe, compare, and classify plane and solid figures, including polygons, circles, spheres, cylinders, rectangular prisms, cones, cubes, and pyramids, using appropriate geometric terms including *vertex, base, face, edge,* and *congruent.*
- **Apply transformations and symmetry in geometric situations.**
  3. Identify, describe, and sketch examples of reflections; identify and describe examples of translations and rotations.

Patterns, Functions, and Algebra *(PA Standard 2.8)*

- **Understand patterns and functions.**
  1. Extend, describe, and create numeric patterns; describe rules for patterns and use them to solve problems; use words and symbols to describe and write rules for functions that involve the four basic arithmetic operations and use those rules to solve problems.
- **Use algebraic notation to represent and analyze situations and structures.**
  2. Use conventional notation to write expressions and number sentences using the four basic arithmetic operations; determine whether number sentences are true or false; solve open sentences and explain the solutions; write expressions and number sentences to model number stories.
  3. Evaluate numeric expressions containing grouping symbols; insert grouping symbols to make number sentences true.
  4. Apply the Distributive Property of Multiplication over Addition to the partial-products multiplication algorithm.

Science:

Water: *This unit consists of four investigations in which students explore properties of water, changes in water, interactions between water and other earth materials, and how humans use water. Students will:*

- observe and explore properties of water in liquid, solid, and gaseous states.
- observe the expansion and contraction of water as it warms and cools.
- investigate factors that influence evaporation and condensation of water.
- consider components of the water cycle.
- observe and compare how water moves through different types of earth materials, including soil and gravel.
- consider the water quality of local water sources.

- investigate how water can be used to do work.
- acquire vocabulary associated with water.
- record observations in writing and pictures.
- exercise language, social studies, and math skills in the context of science.
- become aware of the importance of water in their lives.
- use scientific thinking processes to conduct investigations and build explanations: observing, communicating, comparing, and organizing.

Human Body: *consists of four sequential investigations that engage students in thoughtful activities about the form and function of a most remarkable machine, their own body. Students will:*

- observe and investigate the human skeletal and muscle systems.
- become aware of the versatility of movement provided by an articulated skeleton.
- gain experience with the use of photographs, diagrams, and model bones to gather information.
- build mechanical models to demonstrate how muscles are responsible for human movement.
- compare the bones and muscles in their own bodies to photographs and models.
- investigate response time of hands and feet.
- develop an awareness of human bone and muscle structure and function and an appreciation for the versatility of the human body.
- acquire the vocabulary associated with the human skeletal and muscle systems.
- use scientific thinking processes to conduct investigations and build explanations: observing, communicating, comparing, and organizing.

Magnetism & Electricity: *consists of five sequential investigations, each designed to introduce or reinforce concepts in physical science. The investigations provide opportunities for students to explore the natural and human-made worlds by observing and manipulating materials in focused settings using simple tools.*

- Observe the interaction of permanent magnets with a variety of common materials.
- Discover that magnets display forces of attraction and repulsion.
- Measure the change in force between two magnets as the distance between them changes.
- Identify materials that are conductors and insulators.
- Understand and construct simple open, closed, parallel, and series circuits.
- Learn how to make an electromagnet.
- Experience the relationship between the number of turns of wire around an electromagnet core and the strength of the magnetism.
- Use their knowledge of electromagnets to make a telegraph.
- Acquire vocabulary associated with magnetism and electricity.
- Exercise language, math, and social studies skills in the context of magnetism and electricity investigations.
- Develop and refine the manipulative skills required for making investigations in magnetism and electricity.
- Use scientific thinking processes to conduct investigations and build explanations: observing, communicating, comparing, and organizing.

Environment & Ecology: *(a required unit for all fourth graders)*

Energy

- Producers include green plants that transfer energy from the sun into food energy, which is then transferred to consumers.
- The flow of energy in a system can be traced in a food chain/web.
- Wetlands are unique places where a variety of food webs exist. Humans can cause changes that impact the wetland environment.

  Skills include:
  - Students describe the process of photosynthesis.
  - Students explain how green plants trap energy from the sun, and this energy is passed on to animals as they eat plants and other animals.
  - Students classify animals as herbivores, carnivores, omnivores, and decomposers.
  - Students create food chain flow charts.
  - Students define and describe a wetland.
  - Students discuss changes and their effects on wetland habitats.

Key PSSA vocabulary for Science and Environment & Ecology: Organism, wetland, watershed, habitat, interdependence, ecosystem (lentic or lotic), oxygen, CO2, pollution, conductivity, electrical, energy, energy flow, circuits, renewable/nonrenewable resources, natural resources, fresh water/salt water, water cycle.

Social Studies:

Assessments: (first two required; select third assessment from final two marked with an *)

- Maps about PA's Regions, etc.
- PA's **or** the Northeast's Natural Resources
- *PaleoNative Americans
- *Biography of Someone Who Contributed to PA

Essential Question: What is Pennsylvania's (the Northeast Region's) Landscape?

Geography:

What are the features of Pennsylvania's/Northeast Region's land?

- Analyze and interpret maps; utilize and apply map skills.
- Recognize and apply physical features (mountains, plains, plateaus, lakes, islands, rivers).
- Compare and contrast physical features.
- Understand that PA/NE Regions are determined by the common physical features that they contain.
- Investigate how water changes PA/NE Region's physical features.
- Define "climate" and "weather."
- Understand the relationship between PA/NE Region's landscape and its climate (i.e.: colder in mountains, etc.)
- Define "survival needs" (shelter, food, and water).

Economics:

What are Pennsylvania's/Northeast Region's natural resources and how do they affect industry and impact the environment?

- Analyze and interpret maps; utilize and apply map skills.
- Recognize and identify the natural resources of PA /NE Region (minerals, water, forest, and soil).
- Understand how the natural resources of P/NE Region are turned into actual products.
- Recognize how the natural resources of PA/NE Region meet the needs of people.
- Examine the role of transportation in moving natural resources.
- Recognize that all natural resources are limited.

- Define “renewable” and “non-renewable” resources.
- Investigate environmental changes and current conservation practices.

Culture:

How has Pennsylvania/Northeast Region been shaped by its people?

- Analyze and interpret maps; utilize and apply map skills.
- Trace the route of Paleo Native Americans to Pennsylvania.
- Investigate the discovery of maize and its effect on Pennsylvania’s development.
- Compare/contrast the two Indian groups (shelter and families).
- Understand the variety of reasons why immigrants came to PA/NE Region (religious, political, and economical).
- Identify contributions of immigrants.
- Research famous Pennsylvanians and their contributions to the state.

Character Education:

- SASD Character Education Curriculum: *Respect, Citizenship, Responsibility, Fairness, Caring (Gratitude), Trustworthiness(Honesty), Perseverance, Wisdom & Humility*