

Fourth Grade Curriculum

By Mrs. Rutherford

LANGUAGE ARTS

The Language Arts curriculum for the fourth grade focuses on literature, writing skills and grammar.

Reading

- In the area of reading, some of the key concepts and standards we are utilizing in 4th grade this year are:
- Language for information and understanding:
- Selects, reads and finishes a wide variety of young adult material.
- Develops increasing knowledge of figurative language.
- Uses reference materials, i.e. dictionary, maps, charts, globes, and encyclopedia independently.
- Uses technology to locate information with assistance.
- Identifies prior knowledge, questions and new learning (KWL strategies) as a means of gathering information.
- Begins to use Skim, Question, Read, Recite, Review (SQ3R) as strategy, with guidance.

Literary response and expression

- Identifies character traits and gives an example from text.
- Participates in guided literary discussions and analyzes e.g. makes predictions, summarizes, interprets, synthesizes text and relates to personal experiences.
- Critical analysis and evaluation:
- Begins to interpret the deeper meaning in young adult literature with frequent guidance.

Literature

Children listen to and read both fiction and non-fiction stories including realistic fiction, historical fiction, Native American folk tales, and biographies. They read and participate in plays, skits and role playing activities. Students read and write poetry.

Fourth graders are taught to identify the main characters in stories and their character traits, describe the main ideas, recall the events, and identify the problem and solution. They make predictions, interpret actions, and write responses to stories in journals

As the students read a story they practice recalling and organizing details, making inferences, analyzing character's motives, and finding the main idea.

Book Projects

Fourth grade students share their independently read books with their classmates. An oral component is usually included as an important part of this presentation.

Writing

In the area of writing, some of the key concepts and standards we are utilizing in 4th grade this year are:

Language for information and understanding through the development of a Narrative, Informative, and/or Persuasive Essay that:

- Organizes each new main idea into paragraphs with minimal assistance.
- Begins to connect paragraphs in logical sequence with bridging words.
- Begins to use direct dialogue with guidance.
- Writes to demonstrate clear understanding of information.
- Begins to record simple notes from non-fiction source.
- Begins to experiment with complex sentence structure.

Literary response and expression:

- Attempts to imitate author style and different genres (poetry, biography).
- Begins to incorporate some literary devices.
- Is aware of and begins to use variety of leads.
- Experiments with voice, person, point of view.

Critical analysis and evaluation:

- Begins to use evidence from story to support opinion or research findings.
- Edits with greater precision (spelling, grammar, capitalization and punctuation).
- Listens to and begins to offer constructive suggestions to peer writing.

Children write simple, compound, declarative and interrogative sentences. They write coherent paragraphs that describe or explain. They write multi-paragraph essays and stories that are sequenced and logically connected with bridging words. Children learn to edit their own work. Fourth graders write to express themselves, to narrate, to explain, and to describe. They learn to take notes on what they have read. They write research reports on topics related to 4th grade curriculum.

Grammar Usage and Mechanics

During writing activities fourth graders continue to develop correct usage of nouns, pronouns, verbs, adjectives, and adverbs. They use appropriate tense forms and concentrate on noun and verb agreement. The use of proper capitalization is stressed. Children use end punctuation marks, commas, and apostrophes for possessives and contractions. They learn to write dialogue with quotation marks. They begin to use figurative language such as metaphor and simile in their writing.

SCIENCE

The fourth grade science program includes units in Earth Science, Life Science and Physical Science.

Earth Science: The geology unit involves exploring the earth's crust and layers, minerals and rocks, and the rock cycle.

Life Science: The Prey/Predators and Plants Unit emphasizes the life cycle of plants and our interdependency on one another for energy and survival. The Amazing Animals unit incorporates studying animal classification, traits of vertebrates, animal adaptations, and causes and effects of animal endangerment and possible solutions to prevent and reverse it.

Physical Science: Matter and Buoyancy are studied. In the matter unit, students learn that all matter is made of molecules, and they experiment with the phases and chemical and physical changes of matter. A logical follow up to the matter unit is the buoyancy property of matter. The study of buoyancy goes beyond simple floating and sinking and delves into the causes.

The students will be engaged in several activities in each unit which incorporate many process skills. Some examples of these process skills are observing, comparing, predicting, recording data, analyzing data, and drawing conclusions. All of these process skills are a part of doing science.

MATHEMATICS

Mathematics in the fourth grade embraces the goals recommended by the National Council of Teachers of Mathematics and aligns with the New York State Common Core Standards. Our aim is for students to become confident by applying mathematics in real-world settings and by solving problems through a variety of strategies. The major units of study are Number and Numeration, Operations with Whole Numbers, Fractions and Decimals, Probability and Statistics, Geometry, and Measurement. There is a major emphasis on Problem Solving which is integrated into every unit of study. In addition to learning various problem solving strategies, students are expected to explain their thinking in written form. We are utilizing the Envisions Math Program which incorporates hands-on activities in everyday situations. This program allows every child

the opportunity to work with manipulatives to introduce and reinforce concepts. Manipulatives such as fraction bars, geoboards, and pattern blocks help to conceptualize abstract ideas for children.

SCOPE AND SEQUENCE

Number and Numeration

- Read and write whole numbers to hundred millions
- Place value to millions and hundredths
- Round/estimate numbers to the nearest whole number: tens, hundreds, thousands
- Predict when the product of two numbers will be odd or even
- Read number line with positive and negative numbers
- Look for patterns in sequences of numbers, write the rules for a sequence
- Examine prime numbers less than 100

Operations with Whole Numbers

Addition and subtraction

- Add and subtract whole numbers, sums less than 1 million
- Regroup in subtraction with zeros
- Continue to estimate sums and differences prior to computation
- Find missing addends in an addition sentence ($23 + ? = 30$)

Multiplication and division

- Multiplication and division; products through 144
- Introduce the concept of a "prime factor"
- Multiplication of three digit numbers by two digit numbers
- Multiplication by multiples of 10
- Find common factors of groups of numbers less than 100
- Find the quotient and remainder when a three digit number is divided by a one digit number
- Use the inverse operations to check division by multiplication
- Finding averages through division
- Develop associative, commutative, identity and zero properties
- Introduce distributive property

Fractions and Decimals

- Study the order of unit fractions ($1/2 > 1/3 > 1/4$)
- Compare simple fractions on a number line
- Correlate the common fraction notation for decimals to the tenth's place
- Add and subtract fractions with like denominators
- Add and subtract decimals to the hundredth's place

- Develop the concept of ratio and percent

Probability and Statistics

- Collect statistical data from newspapers, magazines, polls and activities in other subject areas
- Continue to conduct experiments to predict outcomes
- Make frequency tables from tallied data
- Use models, pictures and tree diagrams to organize data
- When organizing data examine the range (difference between smallest and largest)
- Develop the concept of average (arithmetic mean)

Geometry

- Continue to investigate properties of plane figures
- Continue to study properties of solid figures (vertices, line segments, edges and angles)
- Use rulers, protractors and compasses to construct plane geometric figures
- Use terms such as polygon, chord, radius, diameter, face edge, vertex, point, parallel, intersecting and perpendicular
- Use geometric figures to make designs and patterns (symmetry)
- Use terms such as perimeter, area, volume, line segment, circle
- Develop graphing with ordered pairs of numbers

Measurement

- Find the perimeter, area, temperature and volume of specific figures, using appropriate units
- Use appropriate metric and customary units for measuring area, mass, perimeter, volume of a variety of objects (cup, pint, quart, gallon, centimeter, kilometer, milliliter, liter, ounce, pound, ton, gram, kilogram)
- Explore the use of 3-D shapes such as boxes to "fill" space to formulate the formula for volume

SOCIAL STUDIES

The fourth grade social studies content focus is on the state of New York and its development over time (Native Americans, explorers, northern colonies).

Essential Question to be explored: Why did people locate themselves in New York State in the past and how does this compare with the present?

Skills

- Comparing information

- Problem solving
- Investigation and Research
- Decision making (drawing conclusions)
- Develop strategies for responding to document based questions

Multi-media materials and integrated literature resources will be utilized to carry out the content information in Social Studies.

Major Areas to be Studied

- New York State Geography
- Early Inhabitants (Native Americans) and the European
- American Revolution and Colonization
- Industrial Growth and Expansion in a New Nation in New York State
- New York History and Government and Local History

Assessments

Students will be assessed in a variety of ways throughout the 4th grade Social Studies curriculum.

- For the Native American and Geography unit, students will work in cooperative groups to complete a task based upon specific criteria. The research will be presented in a creative format. (Longhouse Projects)
- For the Colonization/Revolution unit, students will respond through journal writing to a variety of questions related to the content area of the unit. They will use the knowledge they've obtained, through research, to orally present the life of a colonial New Yorker.
- For the Government unit, students will be evaluated by role playing and simulating the passage of a bill to a law.