



Grade Two Learning Guide



Danbury Public Schools

2008



- THE ELEMENTARY SCHOOL LEARNING TREE-

CONTENT SPECIFIC ELEMENTARY EXIT STANDARDS

The **Content Specific Elementary Exit Standards** described on the next page detail what students in the Danbury Elementary Schools should know and be able to do at the conclusion of fifth grade. They represent the *leaves* of **THE LEARNING TREE**. It is important to note that students learn at different rates and bring different experiences, strengths, and needs to the learning experience. Therefore some students will exceed the stated learning expectations, others will need additional resources to reach the desired level of performance, and some will require further modifications to achieve the desired outcomes.

K-12 UNIVERSAL/LIFE-LONG LEARNING SKILLS

The Universal/Life-Long Learning Skills indicated below are those skills, which are necessary for an individual to be a life-long learner. These skills are germane to all content areas and grade levels. They represent the *trunk* of **THE LEARNING TREE** and need to be incorporated into each instructional unit, as appropriate. The Universal/Life-Long Learning Skills combined with the Content Specific Exit Standards represent the curriculum. Both components are required to address the learning needs of our students.

- ❖ **READ, WRITE AND LISTEN FOR MANY PURPOSES**
- ❖ **DEVELOP AND APPLY THINKING STRATEGIES**
 - ♦ **Ask questions for clarification and understanding**
 - ♦ **Activate relevant, prior knowledge (schema)**
 - ♦ **Determine the most important ideas or themes from information sources**
 - ♦ **Create sensory images from information sources**
 - ♦ **Analyze data and recognize patterns**
 - ♦ **Draw inferences from information sources**
 - ♦ **Synthesize information**
 - ♦ **Monitor meaning and comprehension**
 - ♦ **Engage in self-reflection to evaluate process and product**
- ❖ **DEVELOP AND APPLY SKILLS IN TECHNOLOGY TO THE LEARNING PROCESS**
- ❖ **COMMUNICATE WITH CLARITY AND PRECISION**



CONTENT SPECIFIC ELEMENTARY EXIT STANDARDS

By the end of Grade 5 students will be able to:

LANGUAGE ARTS

- Develop proficiency in the areas of reading, writing, speaking, listening, and viewing.
- Construct meaning and respond thoughtfully to a variety of material from print, non-print, and electronic materials.
- Use a variety of strategies to create and develop meaning when reading, writing, listening, speaking, and viewing.
- Express questions, thoughts, interpretations, and opinions related to material from print, non-print, and electronic source content and purpose in both oral and written form.
- Develop stories, essays, and poems using the writing process.
- Read to learn and for pleasure.

MATHEMATICS

- Use mathematical skills, techniques, and applications to solve problems.
- Demonstrate an operational sense of the fact families in addition and subtraction through 18, and multiplication and division through the 9's table.
- Demonstrate number sense by counting, comparing, estimating, and using place-value concepts in whole numbers, fractions, and decimals.
- Demonstrate spatial sense by describing, modeling, drawing, and classifying shapes, and relate geometric ideas to numbers and measurement ideas.
- Use mathematical reasoning to solve problems by applying number sense or using spatial relationships.
- Use common units of measure such as length, capacity, weight, area, volume, time, temperature, and angles.
- Select and use computational techniques appropriate to specific whole number problems, and determine whether the results are reasonable.
- Collect, organize, and describe data.
- Explain verbally and in writing all taught mathematical concepts.

SCIENCE

- Make accurate observations involving biology, physical, and chemical characteristics.
- Describe how organisms share basic characteristics, which include life cycles that begin with birth and end with death.
- Describe why water is important for life.
- Diagram the earth and describe how it obtains its energy from the Sun.
- Demonstrate that matter has physical and chemical properties that can be changed.
- Use scientific instruments correctly in gathering data.
- Demonstrate how science, math, and technology are interrelated.



SOCIAL STUDIES

- Demonstrate an understanding of social studies units of study by acquiring, organizing, interpreting, and applying data from various forms of print and non-print material.
- Use historical statements and concepts to assist in decision-making about public issues.
- Recognize and apply distance, direction, scale, map symbols, latitude, and longitude through the use of maps and globes.
- Recognize and understand events, personalities, geographic and economic factors that have shaped the history and culture of Danbury, Connecticut and other regions of the United States.
- Demonstrate an understanding of the historical and economic events that created and transformed the new American Nation to 1800.

INFORMATION LITERACY AND TECHNOLOGY

- State a simple research question, present research findings in a variety of formats, and compile a list of works cited for any presentation.
- Locate and use materials with appropriate guidance from a variety of sources including print, non-print, electronic, and the Internet to answer a research question.
- Select books and articles from the major literacy genres: novels, short stories, poetry, and non-fiction for independent reading.
- Select, access and use software appropriate to a given task and create a multi-media presentation to communicate ideas.
- Follow Acceptable Use Policy Guidelines for safe and appropriate use of the Internet.

MUSIC

- Develop introductory listening, singing, movement, and instrumental skills.
- Read, understand, and apply basic musical notation and vocabulary.
- Discuss appropriate historical, cultural, and interdisciplinary elements of music.

VISUAL ARTS

- Demonstrate a basic knowledge of elements and principles of art and their creative application to two and three-dimensional design.
- Explore a variety of appropriate art methods, media, and subjects.
- Understand appropriate historical, cultural, and interdisciplinary elements of art.

PHYSICAL EDUCATION

- Demonstrate age appropriate form in the fundamental movement skills: locomotor, nonlocomotor, and selected manipulative skills.
- Recognize the personal physiological effects that accompany moderate to vigorous physical activity.
- Recognize the contributions that individual differences add to group activities.

HEALTH EDUCATION

- Explain how childhood injuries and illnesses can be prevented.
- Demonstrate the ability to locate school and community health helpers.
- Compare behaviors that are safe to behaviors that are risky or harmful.
- Explain how media influences thoughts, feelings, and health behaviors.
- Demonstrate the ability to apply a decision-making process to health issues and problems.



GRADE TWO BODY OF KNOWLEDGE

- **Content Exit Standards**
- **Building Blocks**
to Achieve the Application of
Universal/Life-Long Learning Skills
and Content Exit Standards



GRADE TWO CONTENT EXIT STANDARDS

The content standards detailed below are to serve as the foundation for each grade two student's classroom-based instructional experience:

Reading

- Develop graphophonic skills (sounds/symbols)
- Develop sight vocabulary and strategies for using context cues
- Read aloud with expression and fluency, demonstrating the development of rhythm, cadence, an understanding of end punctuation marks, and the development of meaning
- Develop and apply universal thinking and comprehension strategies to a variety of genres (traditional literature, realistic fiction, fantasy, historical fiction, poetry, nonfiction)
- Employ the language arts for lifelong learning, work, and enjoyment

Writing

- Identify and use appropriate modes of writing for a variety of purposes and audiences with or without teacher assistance
- Recognize and begin to use the stages of a writing process [prewriting, drafting, revising, editing, and publishing] with or without teacher assistance
- Develop and apply legible penmanship

Speaking, Listening, Viewing, and Enacting

- Demonstrate grade appropriate use of standard English and delivery strategies
- Respond critically to oral communication, films, videos, presentations, graphics, and written work
- Perform in a manner that guides the listener's understanding of key ideas, using appropriate phrasing, pitch, and modulation

Mathematics

- Use place value to represent alternative forms of expressing whole number less than one hundred
- Use whole numbers and unit fractions to; compare, order, and round
- Develop strategies to add and subtract one and two digit numbers
- Extend patterns and identify or state the rule for a given pattern
- Use data to analyze or create simple tables, charts or graphs
- Use money, tell time, measure length and draw geometric shapes

Social Studies

- Describe the natural and human made features of a geographic area
- Understand how physical systems have an impact on human systems
- Demonstrate ability to correctly use economic terms. For example, exchange, markets, goods and services, supply and demand, consumer
- Identify the roles of producers and consumers in a market system
- Understand that different accounts of past events contribute to our understanding of the past
- Demonstrate an understanding that people in different times and places view the world differently
- Describe ways in which expressions of culture influence behavior
- Demonstrate an understanding of the purposes and functions of law

Science

Weather

- Understand that weather is the condition of the surrounding air
- Develop an understanding of the characteristics of air
- Use scientific instruments to measure air currents, temperature, and wind direction
- Demonstrate that the sun regulates life on earth by influencing weather
- Describe the water cycle as it pertains to the weather patterns

Light and Color

- Describe three sources of light
- Explore characteristics of light

Information Literacy and Technology

- Operate and use computers and other technologies as tools for productivity, problem-solving and learning across the content area
- Define information needs and identify effective courses of action to conduct research and solve problems
- Understand and demonstrate a command of information skills and strategies to locate and effectively use print, non-print and/or digital resources to solve problems and conduct research
- Apply evaluative criteria to the selection, interpretation, analysis, reorganization and synthesis of information from a variety of sources and formats
- Use appropriate technologies to create written, visual, oral and multimedia products to communicate ideas, information or conclusions to others
- Evaluate the effectiveness and efficiency of their own choices and uses of information and technology for problem-solving and communication
- Demonstrate the responsible, legal and ethical use of information resources, computers and other technologies
- Develop life-long reading habits to foster personal enrichment and continuous learning
- Develop a deeper awareness of media literacy as a life skill that is integral to modern citizenship and informed decision-making



BUILDING BLOCKS TO ACHIEVE:

**THE APPLICATION OF THE
UNIVERSAL/LIFE-LONG LEARNING SKILLS**

and

THE CONTENT EXIT STANDARDS

The information provided in this section is offered to support the teacher's planning, delivery, and assessment efforts.



K-12 UNIVERSAL/LIFE-LONG LEARNING SKILLS

GRADE TWO APPLICATION OF UNIVERSAL/LIFE-LONG LEARNING SKILLS

The skills detailed below are to be integrated in all instructional experiences - wherever and whenever possible.

- **READ, WRITE AND LISTEN FOR MANY PURPOSES**
 - Identify the purpose of reading and writing particular texts
 - Read a variety of material for sustained lengths of time
 - Read longer texts or multiple shorter texts daily and discuss text(s) with others
 - Reread all or portions of favorite texts to gain deeper comprehension and knowledge of author's craft
 - Read multiple texts by the same author and discuss the similarities/differences among these texts
 - Respond with curiosity and awe
- **DEVELOP AND APPLY THINKING STRATEGIES**
 - **Asking questions for clarification and understanding**
 - Ask and answer literal and inferential questions of themselves and about the information sources they use before, during, and after reading
 - Begin to use information literacy skills to research and answer an essential question with teacher support
 - Understand that some answers to some questions are found in the text, but that others must be inferred based upon background knowledge
 - Question context, content, probability/possibility and format with teacher support and questions
 - **Activating relevant, prior knowledge (schema)**
 - Make multiple feasible predictions
 - Use prior knowledge of author, genre, and/or topic to connect to text (text-to-self, text, & world)
 - Distinguish between meaningful, relevant connections and those connections that are not
 - Confirm/change predictions using supporting evidence
 - **Determining the most important ideas or themes from information sources**
 - Identify and use important words in a text to perform a task, *e.g., math problem solving, following multi-step written directions*
 - Combine information from two different parts of text
 - Use text structure, content, visual and auditory clues to extract basic information
 - Distinguish between important and interesting information
 - Begin to record important information for later use
 - **Creating sensory images from information sources**
 - Develop an awareness of imagery
 - Use sensory imagery to construct meaning through a variety of visual and verbal experiences
 - Revise images based on new information in the text, new interpretations developed by the reader, and/or in response to shared images of other readers
 - Begin to use mental images in writing
 - **Analyze data and recognize patterns**
 - Recognize and begin to independently use sensory data, *e.g., observations*, as sources of information

Recognize and be able to talk about organizing structures in text

Use structures of text to preview and locate information, *e.g., glossaries and dictionaries, table of contents, atlases, directories, indexes, and text formats*

Create a variety of graphs with a computer

- **Drawing inferences from information sources**
 - Make valid inferences using supporting evidence
 - Infer cause-and-effect relationships that are not explicitly stated
 - Draw conclusions and form personal interpretations of text using prior knowledge and text clues
- **Synthesizing information**
 - Retell contents from information sources in a logically sequenced manner.
 - Draw upon prior knowledge and experiences to make critical judgments or create new ideas
 - Apply summarization skills o Read Alouds and instructional level text
 - Present information in written, visual, oral and multimedia products
 - Provide evidence from text for all oral, written, and presented responses about text
 - Develop generalizations with teacher support
- **Monitor meaning and comprehension**
 - Recognize when the meaning of a variety of text structures and/or content is not clear to the reader
 - Search for clarification clues within the text
 - Connect and compare own understandings/observations to information in text
 - Repair comprehension when it breaks down
 - Verbalize and apply a variety of taught strategies
- **Engage in reflection to evaluate process and product**
 - Select own “best” works and verbalize criteria used
- **DEVELOP AND APPLY SKILLS IN TECHNOLOGY TO THE LEARNING PROCESS**
 - Develop introductory skills in word processing, graphics, telecommunications and presentations
- **COMMUNICATE WITH CLARITY AND PRECISION**

Content Specific Curriculum Standards and Building Blocks

-Reading/Language Arts-

Reading

- **Demonstrate phonological awareness (sounds in speech)**

Initial Understanding

Understand that sounds of language contribute to fluency of texts, e.g., rhyme and rhythm of poetry, books by Dr. Seuss

Add, delete and change targeted sounds to modify or change words, e.g., *cat to cot*

- **Develop and apply graphophonic skills (sounds/symbols)**

Initial Understanding

Identify sounds automatically for all long and short vowels

Apply a variety of phonetic analysis skills to decode unknown words, e.g., *common letter/sound relationships, beginning/ending sounds, vowel pairs/diphthongs/r-controlled, blends/digraphs, word patterns*

Apply knowledge of basic syllabication rules when reading, e.g., V/C=su/per, VC/CV=supper

Apply a variety of elements of structural analysis to decode unknown words (e.g., compounds, syllables, basic prefixes/ suffixes/root words, spelling patterns, contractions)

Decode regular multi-syllable words, e.g., *buttermilk, happiness*, out of context using sound/symbol & the alphabetic principle

Read irregularly spelled words, e.g., *ocean, angel*.

Apply decoding strategies “on the run” while reading

- **Develop sight vocabulary and strategies for using context cues**

Initial Understanding

Explain common antonyms and synonyms, e.g., *big/little, day/night, little/small*

Recognize and demonstrate automaticity and understanding of grade level high frequency words (minimum 300 words)

Explain new word meanings, e.g., *fly (travel, insect), duck (animal, quick downward movement)*

Use prefixes, suffixes, inflectional endings, and abbreviated words to determine meaning of unknown words

Apply a variety of strategies (read, read on) for making sense of how a word is used in a text

Discuss new word meanings after reading a text

Talk about nouns in terms of function, features, and category, e.g., *apples are to eat, are red, are a kind of fruit*

Recognize when they do not know a word

- **Read aloud with expression and fluency, demonstrating the development of rhythm, cadence, an understanding of end punctuation marks and the development of meaning**

Initial Understanding

Independently read aloud from unfamiliar Level M books (fiction and nonfiction) with 95% accuracy or better

Independently read aloud from unfamiliar Level M books (fiction and nonfiction) at a rate of 75-105 correct words per minute

Developing an Interpretation

Use punctuation cues (including commas, periods, exclamation points, question and quotation marks) to guide fluency and comprehension

Use intonation, pauses and emphasis to signal meaning of text

- **Develop and apply universal thinking and comprehension strategies to a variety of genres (fiction & nonfiction)**

Initial Understanding

Identify elements of genre to aid comprehension, e.g., *biography, personal narrative, expository, folktales, fables*

Recognize rhythm, rhyme, alliteration and assonance in poetry

Identify the speaker in a poem and the narrator in a story

Retell including details about characters, setting, problem, and main events, and solutions

Retell major contents of an information source in a logically sequenced manner

Identify and discuss author’s purpose or point of view

Developing an Interpretation

Recognize genre features of both fiction & nonfiction text

Recognize figurative language as a characteristic of poetry and its use in other texts
Discuss recurring themes across texts (e.g., big ideas about growing up, courage, hope/disappointment, selfishness)
State fact vs. opinion, e.g., *I am a boy; everyone likes ice cream*
Make simple inferences regarding the order of events and possible outcomes

Making Connections

Compare and contrast their own lives with the lives of the characters
Compare and contrast characters, settings, problems, and events from one text to another
Begin to compare and contrast genre features between texts by different authors
Use knowledge of what is important and relevant in text to answer questions and synthesize text

Critical Stance

Discuss authors' craft: why an author might have chosen particular format of a piece, use of rhyme, rhythm and repetition, words and word formats, e.g. *YUCK* or *tiny*, illustrations, beginnings and endings, character development, and formats of nonfiction text
Identify what is important to an author based on content of the text
Analyze and evaluate illustrations that correspond to text
Evaluate or rate a story (beginning, middle, end) or character using prior knowledge and support from the text
Explain how the character(s) change as a result of their experiences

Writing

- **Identify and use appropriate modes of writing for a variety of purposes/audiences with or without teacher assistance**

Initial Understanding

Identify the topic

Write in a variety of forms and genres

Descriptive: use topic sentences and supporting details; sensory words

Narrative: personal and fictional; transition words, *e.g., first, then, next, last*

Expository: personal texts; explain a process, information about data, *e.g., observations of nature, how many students like...*

Persuasive: on a topic of interest

Poetic: eight or more lines of patterned rhymed poetry

Critical Stance

Establish the context/purpose for the piece

- **Recognize and begin to use the stages of a writing process (prewriting, drafting, revising, editing and publishing) with or without teacher assistance**

Prewriting

Initial Understanding

Generates questions about topics of personal interest

Uses a variety of sources to gather information (informational books, pictures, charts, indexes, videos, television, guest speakers, Internet, own observations)

Developing an Interpretation

Use a variety of strategies to plan written work (e.g., discusses, draws, lists, rehearses ideas, records reactions and observations)

Drafting

Initial Understanding

Use specific details about the characters and settings

Use content specific vocabulary

Write in first and third person

Use singular, plural, common, proper, and possessive nouns

Use past/present tense, linking, and common irregular verbs

Use descriptive, comparative, superlative adjectives

Use correct pronoun choice

Begins to use dialogue effectively

Use appropriate technology to compose work

Developing an Interpretation

Begin to develop snapshots (sharp physical detail) and thoughtshots (what a character thinks, remembers or feels)

Elaborate or illustrate big ideas through facts, details, quotes and information

Incorporate transition words and phrases

Use sentence patterns typical of spoken language

Use strategies to organize work (beginning/middle/end, sequence of events)

Use mental images to enhance writing

Making Connections

Begin to imitate literary structures

Embed literary language where appropriate

Critical Stance

Communicate big ideas

Revising

Developing an Interpretation

Reread and add, delete, rearrange words, phrases, and sentences to improve or clarify meaning

Clearly use an organizational structure (may be patterned after a read text)

Include a concluding sentence or section

Make word choices demonstrating vocabulary options and begin to demonstrate accuracy of conveyed meaning (e.g., sad or miserable)

Combine simple sentences into compound sentences using and/or/but

Making Connections

Use punctuation and capital letters for emphasis
Incorporates suggestions from peers and teachers

Critical Stance

Make reasonable judgments about what to include in written products
Evaluate own and others' writing, *e.g., ask questions and make comments*

Editing

Initial Understanding

Proofreads using a dictionary and other resources
Edit for high-frequency words including two –syllable words, basic long/short vowel/vowel pairs and consonant blend and digraph patterns
Spell many common irregular words correctly and represent all sounds in a word when spelling independently
Uses commas in a series, greetings/closing of letters, dates, between city and state
Use quotation marks in dialogue
Capitalize names, “I”, proper nouns, greeting/closing of a letter
Use apostrophes for contractions
Correct subject-verb agreement, pronoun choice, logical word order

Critical Stance

Use logic to apply discernible spelling patterns
Distinguish between complete and incomplete thoughts
Recognize when words may be misspelled

Publishing

Initial Understanding

Identify works ready for publication
Use diagrams, illustrations, and charts where appropriate
Use appropriate technology publish work

Making Connections

Share finished product

- **Develop and apply legible penmanship**

Developing an Interpretation

Create readable documents with legible handwriting

Speaking, Listening, Viewing and Enacting

- **Demonstrate grade appropriate use of standard English and delivery strategies**

Initial Understanding

Recites, responds to, and discusses similarities and differences of familiar stories, tales of a variety of cultures, poems, and rhymes with patterns
Make contributions in class and group discussions
Follows the rules of conversations
Determine the purpose for listening, *e.g., obtain information, solve problems, enjoy*

Developing an Interpretation

Use level-appropriate and content specific vocabulary in speech
Sequences ideas appropriately with use of transition words
Paraphrase or summarize what another speaker has said
Gives and responds to oral directions

- **Respond critically to oral communication, films, videos, presentations, graphics and written work**

Initial Understanding

Knows the various types of media, *e.g., newspapers, radio, television, billboards, Internet*
Knows that there are different types of media categories, *e.g., news programs, sports programs, commercials*
Follow characters and plots across multiple episodes even when text is listened to over several successive days
Check with original speaker that the paraphrase/summary is accurate
Begin to notice and challenge a speaker when cited facts are not accurate or speaker's inference or logic is not clear
Understands main idea or message in visual media
Uses a variety of strategies to predict content and meaning in visual media

Developing an Interpretation

Discuss or write about what the message of the text might be
Relate later parts of text to earlier parts in terms of themes, patterns, etc.
Provides and asks others to provide supporting evidence or details
Knows how different elements help to establish plot, setting and character in visual narratives, *e.g., action, dialogue, music, clothing, and facial expression*
Understands that there are common conventions in media, *e.g., layout of a newspaper headlines, photographs, sections, how theme music, sound effects, titles, and graphics represent the beginning and ending of a program*

Critical Stance

Politely correct someone who paraphrases or interprets their ideas inaccurately
Knows different features, *e.g., facial expressions, body language, gesture, clothing, actions, relationships, dialogue*, that affect a viewer's perceptions of characters in visual media, *e.g., qualities that identify heroes vs. those of a villain*
Understand that media messages and products are created by people and represent real and imaginary experience
Understands the similarities and differences between real life and life depicted in visual media, *e.g., connections to own life, recognizes difference between the actor and the role he plays*
Verbalize how different elements from films, videos, television, and other visual media appeal to him/her, *e.g., scary parts, actions, particular characters, color, sound effects, animation, music*

- **Perform in a manner that guides the listener's understanding of key ideas, using appropriate phrasing, pitch and modulation**

Initial Understanding

Uses different voice level, phrasing, and intonation for different situations, *e.g., small group settings, informal discussions, reports to class*
Knows the difference between language used at home and language used in school

-Mathematics-

- **Use place value to represent alternative forms of expressing whole number less than one hundred.**

Initial Understanding

Identify numbers (<100) from pictures of bean sticks or base ten materials and vice versa

Developing an Interpretation

Use place value concepts to interpret the meaning of numbers.

Making Connections

Identify alternative forms of expressing whole numbers (< 100) using expanded notation

Identify alternative forms of expressing whole numbers (<100) by regrouping using pictures of bean sticks or base ten materials

- **Use whole numbers and unit fractions to compare, order, and round.**

Initial Understanding

Identify points representing whole numbers on a number line and vice versa

Match unit fractions with pictorial representations of unit fractions (1/2, 1/3, 1/4, 1/6)

Developing an Interpretation

Identify a number larger or smaller than a given set of numbers less than 100

Order whole numbers less than 100

Making Connections

Solve problems involving 1 or 2 more/ less than a given number.

- **Develop strategies to add and subtract one and two digit numbers.**

Initial Understanding

Use objects to find addition facts to 18

Use objects to find subtraction facts to 18

Developing an Interpretation

Use bean sticks or other base ten materials to add 1 and 2 digit numbers with and without regrouping

Identify or write the appropriate operation or number sentence to solve a story problem

Write a story problem that matches a given addition or subtraction number sentence

Making Connections

Match addition or subtraction number facts sentences with pictures

Solve simple story problems involving addition and subtraction facts using counters or other objects

Solve extended numerical problems

- **Extend patterns and identify or state the rule for a given pattern.**

Developing an Interpretation

Extend or complete patterns involving whole numbers and attributes and identify or state rules for given patterns

Making Connections

Identify objects that are the same or different by one attribute

Sort objects into two groups by a common attribute

Critical Stance

Identify or state rules for given patterns

- **Use data to analyze or create simple tables, charts or graphs**

Developing an Interpretation

Identify correct information from tables, graphs, and charts

Create simple bar graphs and pictographs from data in tables and charts

Making Connections

Solve extended statistical problems

- **Use money, tell time, measure length, and draw geometric shapes.**

Initial Understanding

Tell time to the nearest hour and half hour analog and digital clocks

Determine the value of a set of coins less than \$1.00 (pennies, nickels, and dimes)

Measure lengths using nonstandard units

Identify and draw simple geometric figures (circle, square, triangle, and rectangle)

Developing an Interpretation

Estimate a reasonable answer to a problem

Estimate lengths using nonstandard units

Making Connections

Identify an appropriate customary or metric unit (inch, ft., m, cm.) for a given situation

Critical Stance

In Mathematics justifying, proving, or explaining a conjecture or answer is connected to the learning environment. Students are encouraged and expected to question each others' ideas, and to explain and support their own ideas against challenges. Each objective in mathematics can be framed to have students defend support, explain, or prove their answer. Educational research offers compelling evidence that student learn mathematics well only when they construct their own mathematical understandings. To understand what they learn, students must enact for themselves verbs that permeate the mathematics curriculum: "examine," "represent," "transform," "solve," "apply," and "prove."

-Science-

2nd Grade

Physical Science

Properties of Matter

How does the structure of matter affect the properties and uses of materials?

- **Materials can be classified as solid, liquid or gas based on their observable properties.**

Initial Understanding

Define chemical change and physical change

Observe the characteristics of matter; i.e. color, shape, texture of materials such as rocks, sand, soil

Identify matter according to characteristics of solid, liquid, or gas

Describe the characteristics of a solid, a liquid, and a gas

Developing an Interpretation

Observe that solids float, dissolve or sink when mixed with a liquid

Observe that liquids mix, separate or are suspended when combined

Observe that gases take up space inside a liquid

Observe that when certain substances combine they form entirely new substances (chemical changes)

Observe that some matter changes form under pressure

Making Connections

Demonstrate that solids can become liquids and that liquids can become solids and that matter changes state by adding or taking away heat energy

Illustrate differences in the physical properties of solids and liquids

Critical Stance

Demonstrate that solids tend to maintain their own shapes, while liquids tend to assume the shapes of their containers, and gases fill their containers fully

Life Science

Structure and Function

How are organisms structured to ensure efficiency and survival?

- **Plants change their forms as part of their life cycles**

Initial Understanding

Observe the characteristics of green plants

Observe the various stages of plant development i.e. seeds, seedling development, plant growth

Determine the survival needs of plants in a given environment

Developing an Interpretation

Explore and describe the effects of light and water on seed germination and plant growth

Describe the life cycles of flowering plants as they grow from seeds, proceed through maturation and produce new seeds

Describe and record the shapes and parts of a flowering plant

Making Connections

Illustrate that in order to meet the nutritional needs of plants carbon dioxide and water in the presence of sunlight in the green parts of the plants combine to produce sugar with oxygen being given off as a by-product

Recognize that plants are the foundation of the world's food chain

Critical Stance

Demonstrate that the life cycles of flowering plants include seed germination, growth, flowering, pollination and seed dispersal

Explain: $\text{CO}_2 + \text{H}_2\text{O}$ in the presence of sunlight produce $\text{CH}_2\text{O} + \text{O}_2$

Describe how the cultivation of certain plants has enabled humans to move from hunter gatherers to agricultural societies

Earth Science

The Changing Earth

How do materials cycle through the Earth's systems?

- **Earth materials have varied physical properties which make them useful in different ways**

Initial Understanding

Investigate how weathering and erosion form soil

Observe that wind shapes a desert landscape and infer the formation of sand dunes

Identify different soils by their properties, such as particle size, color, and composition

Developing an Interpretation

Relate the properties of different soils to their capacity to retain water and support the growth of certain plants

Recognize that wind, ice, and glaciers can carve the land

Making Connections

Understand that soils can be described by their color, texture and capacity to retain water

Illustrate the relationship between rain and soil

Compare and contrast methods of soil conservation and its affect on agriculture

Critical Stance

Illustrate that soils support the growth of many kinds of plants, including those in our food supply

Demonstrate the relationship between fertile soils and agriculture (plant production) with the development of human living areas

Science and Technology in Society

How do science and technology affect the quality of our lives?

- **Human beings, like all other living things, have special nutritional needs for survival**

Initial Understanding

Identify plant parts that are used as nutrient sources by animals including human

Identify the sources of common foods and classify them by their basic food groups

Developing an Interpretation

Describe how people in different cultures use different food sources to meet their nutritional needs

Describe how the cultivation of certain plants has enabled humans to move from hunter gatherers to agricultural societies

Making Connections

Understand that the essential components of balanced nutrition can be obtained from plant and animal sources

Recognize that advanced agricultural techniques has increased food production

Critical Stance

People eat different foods in order to satisfy nutritional needs for carbohydrates, proteins and fats which enable the people to survive in their environment

Understand that continual governmental food safety inspections assure safe food

Social Studies

- **Describe The Natural And Human Made Features of a Geographic Area**

Initial Understanding

- Locate and identify varying landforms and geographic features, such as mountains, plateaus, islands, and oceans
- Identify a map by its title
- Use colors and symbols to read a physical map
- Define globe, continent, and equator
- Identify and locate the oceans and continents on a globe
- Find the equator and poles on a globe
- Identify the parts of a table and practice reading a table
- Identify neighbors of the United States in the Western Hemisphere, using a map or a globe

Developing an Interpretation

- Use cardinal directions to describe locations on a map
- Compare a map and a globe
- Use a grid to locate places on a map
- Identify the purpose and parts of a bar graph

Making Connections

- Distinguish between human made and natural features of the land

Critical Stance

- Interpret, use, and distinguish various representations of the earth

- **Understand How Physical Systems Have An Impact On Human Systems**

Initial Understanding

- Define the terms: natural resource, conservation, and boundary
- Identify precious resources
- Identify and describe various kinds of shelters
- Recognize how seasonal changes can affect the land and land use
- Identify how land and climate affect people's work and the recreation they enjoy
- Describe how people depend on the land and on the water
- Give examples of how people live in different locations

Developing An Interpretation

- Compare physical features of the land
- Explain how environment is a factor in choosing or constructing a shelter
- Identify ways people adapt to and change their environment to meet their needs
- Recognize that there are many ways we can protect resources
- Distinguish among urban, suburban, and rural (or farm) settings
- Identify ways people can conserve water

Making Connections

- Understand that reducing, reusing, and recycling are ways to conserve resources
- Explain how diagrams help us understand information
- Describe ways people can protect the quality of life in their communities

Critical Stance

- Draw logical conclusions about resources and goods from a table
- Draw logical conclusions about the importance of protecting our land and resources
- Explore ways to maintain or improve the quality of life

- **Demonstrate Ability to Use Economic Terms Correctly.**

Initial Understanding

- Define producer and consumer, goods and services, income, exchange, and markets
- Identify transportation links that bring goods to a community
- Describe manufacturing jobs
- Recognize that countries trade goods with one another
- Recognize that more goods and choices are available today

Developing An Interpretation

- Describe how technologies have changed and have changed our lives
- Give examples of various institutions that make up economic systems (families, workers, banks, small businesses)
- Describe how people trade money for goods
- Recognize that people have unlimited wants but limited resources to satisfy their wants

Making Connections

- Explain the value of saving money
- Explain how we depend on people who make goods
- Link choice of job to special interest, talent, or family legacy
- Describe how consumers influence the availability of goods and services

Critical Stance

- Understand how community services meet people's needs

- **Understand That Different Accounts of Past Events Contribute to our Understanding of the Past**

Initial Understanding

- Recognize that people and events shape history
- Name important national leaders
- Identify ways Americans honor their country
- Identify symbols of America
- Recognize and recite the Pledge of Allegiance, the national motto, and the national anthem

Developing an Interpretation

- Sequence a series of events
- Use a time line to relate a story
- Identify the steps in making a prediction
- Distinguish fact from opinion

Making Connections

- Identify the causes of certain events
- Recognize the effects of certain actions
- Realize that one cause may have more than one effect
- Recognize that some results can be predicted
- Compare daily life for a group of early Americans to that of present day
- Describe an aspect of the early history of our country by telling about a Native American culture
- Explain the significance of flags used as symbols

Critical Stance

- Predict a likely outcome

- **Describe Ways in Which Expressions of Culture Influence Behavior**

Initial Understanding

- Identify roles in group situations
- Identify special days celebrated in the community
- Recognize that many Americans' ancestors came from other places

Developing An Interpretation

- Identify the diversity of the American people
- Describe family, ethnic, and religious customs
- Explain the importance of knowing about other people
- Discuss the origins of various holidays and celebrations
- Describe the contributions of famous artists, scientists, educators, and other achievers

Making Connections

- Identify consequences of disagreements
- Explore different cultures through their celebrations
- Recognize that people do not always accept new ideas easily

Critical Stance

- Draw conclusions about another culture through its art, music, language, belief systems, and/or cultural activities
- Suggest ways to settle differences
- Appreciate the diversity of a community's population

- **Demonstrate an Understanding of the Purposes and Functions of Law**

Initial Understanding

- Identify examples of acting independently
- Explore appropriate classroom behavior
- Identify rules in group situations
- Recognize common safety symbols
- Define themselves as citizens of the United States
- Identify a post office as a government agency
- Recognize that voting is one way to choose leaders
- Identify freedoms that United States citizens enjoy
- Identify the traits of a good citizen

Developing an Interpretation

- Recognize that all citizens are capable of making contributions to society
- Understand the usefulness of rules and order
- Recognize that all Americans have rights and responsibilities as citizens
- Describe family roles and shared responsibilities
- Describe what determines a winning vote

Making Connections

- Recognize the rights of people to hold different opinions
- Recognize and respect the authority of school workers
- Explain the need for people to follow rules and obey laws
- Recognize that breaking laws has consequences
- Compare and contrast the meaning of safety and information symbols

Critical Stance

- Argue the point why community laws are made
- Describe the need for good government and the role citizens play in achieving it

Information Literacy And Technology

- **Operate and use computers and other technologies as tools for productivity, problem-solving and learning across the content area**

Initial Understanding

- Use basic operational features of a computer and other available technology
- Use basic features of software (entering information, editing, and saving)
- Use established procedures to obtain assistance with hardware or software problems

Developing an Interpretation

- Create word processing documents, drawing and paint documents, slide shows, and simple graphs using age-appropriate software
- Understand and expect that technology tools are constantly changing
- Distinguish between different technologies and their uses

Making Connections

- Describe ways computers are used to help people, work, learn, and play
- Work collaboratively and cooperatively with peers and others when using computers
- Use content-specific software
- Begin to use proper keyboarding techniques

- **Define information needs and identify effective courses of action to conduct research and solve problems**

Initial Understanding

- Understand concept of keywords for searching for information

Developing an Interpretation

- Identify existing knowledge and list areas where more information is needed (with assistance)
- Develop an awareness of print, non-print, and / or electronic resources available through library media center

Making Connections

- Restate the scope and criteria of a task (such as timeline, length, audience and presentation mode) with prompting
- Describe a course of action for addressing an essential question (with assistance)

Critical Stance

- Frame an essential question that is related to a topic of interest or a given assignment (with assistance)

- **Understand and demonstrate a command of information skills and strategies to locate and effectively use print, non-print and / or digital resources to solve problems and conduct research**

Initial Understanding

- Understand that information is stored and accessed in different ways - print, non-print and / or electronic resources (atlases, encyclopedias, dictionaries)
- Understand that keywords are used in searches
- Use Internet resources to locate information, with supervision

Developing Interpretation

- Use basic print, non-print, and electronic reference sources (atlases, encyclopedias, dictionaries) to locate information (with assistance)
- Take notes in own words from a single source of information (with assistance)

Making Connections

- Apply principles of organized information systems to learning endeavors
 - Alphabetize by first and second letter to find information in resources
 - Understand the purpose of online catalog to locate materials
 - Understand that information in the media center is organized in a standard way
 - Use organizing features of print, non-print and electronic materials (parts of a book and simple menus) to locate and use information
 - Navigate appropriate Internet web sites (with assistance)
- Interpret simple charts, graphs and tables in information sources

- **Apply evaluative criteria to the selection, interpretation, analysis, reorganization and synthesis of information from a variety of sources and formats**

Initial Understanding

Identify appropriate sources of information for a specific purpose

Developing Interpretation

Use technology to organize information

Demonstrate attentive and purposeful listening and viewing skills

Making Connections

Develop criteria to judge the relevance and completeness of information

Organize information into related categories (with assistance)

- **Use appropriate technologies to create written, visual, oral and multimedia products to communicate ideas, information or conclusions to others**

Initial Understanding

Develop awareness of the use of multimedia tools for communication

Making Connections

Construct slide shows and multimedia presentations to communicate ideas and present conclusions

Critical Stance

Create and share clear and meaningful presentations that communicate information and new knowledge appropriate for a specific audience

- **Evaluate the effectiveness and efficiency of their own choices and uses of information and technology for problem solving and communication**

Making Connections

Describe a process for searching for information (with assistance)

Critical Stance

Assess the retrieved information for relevancy and completeness (with assistance)

- **Demonstrate the responsible, legal and ethical use of information resources, computers and other technologies**

Initial Understanding

Understand that the right to copy original works is owned by the author or artist

Developing an Interpretation

Practice responsible use of print and non-print materials, computers and other technologies and networks

Making Connections

Give citation credit to original sources when using information

- **Develop life-long reading habits to foster personal enrichment and continuous learning**

Initial Understanding

Locate and access various genres of literature in the media center

Developing an Interpretation

Choose various genres for pleasure reading and/or listening

Choose a variety of reading material for information

Making Connections

Explain the role that reading plays as a valid activity outside of school

Analyze personal reading habits for the purpose of expanding reading choices

Critical Stance

Evaluate and choose reading materials based on interest, readability, and relevance

- **Develop a deeper awareness of media literacy as a life skill that is integral to modern citizenship and informed decision-making**

Initial Understanding

Recognize that information comes to us from a variety of media sources - print, television, radio, Internet

Developing an Interpretation

Understand the difference between reality and fantasy in the media

Making Connections

Understand that the purpose of advertising is to sell a product

Critical Stance

Question the credibility of information read, heard or seen