

PRAIRIE-HILLS ELEMENTARY SCHOOL DISTRICT 144
STEAM CURRICULUM MAP 4 GRADE
QUARTER 1

GRADE 4 STEAM

ADOPTED AUGUST 2023

PROJECT: Ecosystems: Environments and Organisms

Students will apply learning related to how habitat can impact organisms and their ability to survive and thrive. Students will need to consider ways in which organisms may adapt to the environment to help them survive such as forming groups and/or adapting to environmental changes.

As an interior designer specializing in aquariums, you understand that plant and animal species need certain things to survive and thrive in their environment. You will use your skills to design functional and beautiful aquariums based on customer requests.

PRODUCTS – RESARCH REPORT, AQUARIUM DESIGN, COST ANALYSIS)

STANDARDS

| READING | MATH | SCIENCE | SOCIAL SCIENCE | INSTRUCTIONAL RESOURCES | EXTENSIONS |
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| <p>Common Core Standards: Informational Text</p> <p>4.RI.1-Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.</p> <p>4.RI.2- Determine the main idea of a text and explain how it is supported by key details; summarize the text.</p> <p>Product - Research Report)</p> <p>4.RI.3-Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a characters' thoughts, words, or actions.)</p> <p>4.RI.4-Determine the meaning of words and phrases as they are used in a text, including those that allude to significant characters found in mythology (e.g., Herculean).</p> <p>4.RI.7-Make connections between the text of a story or drama and a visual or oral</p> | <p>Common Core Standards for Mathematics</p> <p>Generalize place value understanding for multi-digit whole numbers.</p> <p>4.NBT.A.1- Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right.</p> <p>4.NBT.A.2-Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.</p> <p>4.NBT.A.3- Use place value understanding to</p> | <p>Next Gen. Science Standards</p> <p>LIFE SCIENCE</p> <p>4-LS1-1-Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.</p> <p>Product - Research Report)</p> <p>4-LS1-2. Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways. Product - Research Report)</p> <p>Engineering Design</p> | <p>Illinois Learning Standards -- Social Studies</p> <p>Human-Environment Interaction: Place, Regions and Culture</p> <p>SS.G.2.4-Analyze how the cultural and environmental characteristics of places in Illinois change over time.</p> <p>Perspectives SS.H.1.4: Explain connections among historical contexts and why individuals and groups differed in their perspectives during the same historical period.</p> <p>Product - Research Report)</p> <p>Historical Sources and Evidence</p> <p>SS.H.2.4-Using artifacts and primary sources, investigate how individuals contributed to and the founding and development of Illinois.</p> | <p style="text-align: center;">Reading</p> <p>Feathers: Not Just for Flying by Melissa Stewart Animal Mimics by Marie Racanelli Minn of the Mississippi by Holling Clancy Bubble Song, Sap Spong, Heavenly, Ultraviolet, The Gray Ones, We are Waiting, The Weird and Wonderful Echidna Out of my mind by Sharon M. Draper Mama's Window Trombone Shorty Weslandia Poetry Collection</p> <p style="text-align: center;">Speaking & Listening</p> <p>Read Aloud: Snowy Owls Read Aloud: Moths in Hiding Read Aloud: Encounter Read Aloud: Chameleon Read Aloud: Primates of Madagascar Read Aloud: Just Lunch Read Aloud: The Race Read Aloud: Garage Girl</p> | <p>CREATE A CLASS AQUARIUM</p> <p>FIELD TRIP IDEA SHEDD AQUARIUM</p> |

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| <p>presentation of the text, identifying where each version reflects specific descriptions and directions in the text. Product - Research Report)</p> <p>4.RI.3-Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a character's thoughts words, or actions.)</p> <p>4.RI.5-Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text. Product - Research Report)</p> <p>4.RI.10-read and comprehend literature, including stories, dramas, and poetry, in the grades 4–5 text complexity band proficiently, with scaffolding as needed at the high end of the range.</p> <p>Literature Skills</p> <p>4.RL.1-Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.</p> <p>4.RL.2- Determine the main idea of a text and explain how it is supported by key details; summarize the text.</p> <p>4.RL.3-Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a characters' thoughts, words, or actions.)</p> <p>4.RL.4-Determine the meaning of words and phrases as they are used in a text, including those that allude to significant characters found in mythology (e.g., Herculean).</p> | <p>round multi-digit whole numbers to any place.</p> <p>USE PLACE VALUE UNDERSTANDING AND PROPERTIES OF OPERATIONS TO PERFORM MULTI-DIGIT ARITHMETIC</p> <p>4.NBT.B.4-Fluently add and subtract multi-digit whole numbers using the standard algorithm.</p> <p>4.NBT.B.5- Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculations by using equations, rectangular arrays and or area models.</p> <p>PRODUCT: (COST ANALYSIS)</p> <p>Use the four operations with whole numbers to solve problems.</p> <p>4.OA.A.1- Interpret a multiplication equation as a comparison, e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.</p> <p>4.OA.A.2-Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative</p> | <p>3.5-ETS1-1 Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. Product-Aquarium Design</p> <p>3.5-ETS1-2 Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.</p> | <p>Causation and Argumentation SS.H.3.4-Explain probable causes and effects of events and developments in Illinois history.</p> <p>Participation and Deliberation: Applying Civic Virtues and Democratic Processes SS.CV.3.4-Identify core civic virtues (such as honesty, mutual respect, cooperation, and attentiveness to multiple perspectives) and democratic principles (such as equality, freedom, liberty, and respect for individual rights) that guide our state and nation.</p> | <p>Read Aloud: To Trying New Things Read Aloud: The Harvest</p> <p>Language & Writing Savvas, https://www.quill.org/</p> <p>Math</p> <p>Ready Math Pg. 3a Lesson 1</p> <p>4.NBT.1 Illustrative Math Task</p> <p>Place Value APP</p> <p>4.NBT.1 Whole Numbers Overview</p> <p>Ready Math pg. 15a Lesson 2</p> <p>Ordering 4-Digit Numbers Task</p> <p>Base Ten Representaion Tasks</p> <p>Base Ten Representation Card Sort</p> <p>Number of the Day Routine</p> <p>Ready Math pg. 31a-b Lesson 3</p> <p>Rounding Numcbers Task</p> <p>Rounding Game</p> <p>Ready Math pg. 107a Lesson 6</p> <p>Illustrative Math Tasks</p> <p>Multiplicative Comparisons Practice</p> <p>Multiplicative Comparisons Card Sort</p> <p>Ready Math lesson 7 pg. 119a-b</p> <p>4.OA Illustrative Math Task</p> <p>Problem Solving Card Sort</p> | |
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4.RL.7-Make connections between the text of a story or drama and a visual or oral presentation of the text, identifying where each version reflects specific descriptions and directions in the text. **Introduce and Support

4.RL.3-Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a character's thoughts words, or actions.)

4.RL.5-Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text.

4.RL.10-read and comprehend literature, including stories, dramas, and poetry, in the grades 4-5 text complexity band proficiently, with scaffolding as needed at the high end of the range.

(PRODUCT – RESEARCH REPORT, Aquarium Design)

Foundational Skills

4.RF.3- Know and apply grade-level phonics and word analysis skills in decoding words. a. Use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.

4.RF.4-Read with sufficient accuracy and fluency to support comprehension. a. Read on-level text with purpose and understanding. b. Read on-level prose and poetry orally with accuracy, appropriate rate, and expression on successive

comparison from additive comparison.1

4.OA.A.3-Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

Gain Familiarity with factors and multiples

4.OA.B.4-Find all factor pairs for a whole number in the range 1-100.

Recognize that a whole number is a multiple of each of its factors.

Determine whether a given whole number in the range 1-100 is a multiple of a given one-digit number.

Determine whether a given whole number in the range 1-100 is prime or composite.

Generate and analyze patterns

4.OA.C.5-Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself.

[Ready Math Lesson 8 pg. 141a](#)

[The Locker Game 4.OA.4 Task](#)

[Factor Practice](#)

[Prime Number Patterns](#)

[iReady lesson 9 pg. 169a](#)

[The Locker Game](#)

[Math Talks Visual Patterns](#)

[iReady Lesson 10 pg.191](#)

[Multi Step Gallery Walk Task](#)

[iReady Lesson 11 pg. 229](#)

[iReady Lesson 12 pg.251](#)

[Thousands and Millions 4th Graders 4.NBT.5 Task](#)

[Math Studio Talk](#)

[4.NBT.5 Multiplication and Division Overview](#)

SOCIAL SCIENCE

STUDIES WEEKLY, LESSONS 1-7

readings. c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

Writing

(PRODUCT- RESEARCH REPORT)

4.W.2- Write

informative/explanatory texts to examine a topic and convey ideas and information clearly. a.

Introduce a topic clearly and group related information in paragraphs and sections; include formatting (e.g., headings), illustrations, and multimedia when useful to aiding comprehension. b.

Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic. c.

Link ideas within categories of information using words and phrases (e.g., another, for example, also, because). d. Use precise language and domain-specific vocabulary to inform about or explain the topic. e.

Provide a concluding statement or section related to the information or explanation presented.

4.W.3-Write narratives to develop

real or imagined experiences or events using effective technique, descriptive details, and clear event sequences. a.

Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally. b.

Use dialogue and description to develop experiences and events or show the responses of characters to situations. c.

Use a variety of transitional words and phrases to manage the sequence of events. d. Use concrete words and phrases and sensory details to convey experiences and events

precisely. Provide a conclusion that follows from the narrated experiences or events.

Speaking and Listening

SL.4.4-Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.

SL.4.5-Add audio recordings and visual displays to presentations when appropriate to enhance the development of main ideas or themes.

Language

CC.4.L.1- Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. a. Use relative pronouns (who, whose, whom, which, that) and relative adverbs (where, when, why). b. Form and use the progressive (e.g., I was walking; I am walking; I will be walking) verb tenses. c. Use modal auxiliaries (e.g., can, may, must) to convey various conditions. d. Order adjectives within sentences according to conventional patterns (e.g., a small red bag rather than a red small bag). e. Form and use prepositional phrases. f. Produce complete sentences, recognizing and correcting inappropriate fragments and run-ons.*

CC.4.L.2-Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. a. Use correct capitalization. b. Use commas and quotation marks to mark direct speech and quotations from a text. c. Use a comma

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before a coordinating conjunction in a compound sentence. d. Spell grade-appropriate words correctly, consulting references as needed.

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