

Big Idea: Ecology/Habitats/Adaptations – Grading Period 4

Inquiry Questions

Science:

- What are the basic needs of plants?
- What does it mean to adapt?
- How do the parts of a plants and animals help them survive? How do those parts help humans?
- How does an animal’s habitat relate to its needs?

Technology:

- What is the purpose of plants?
- How are plants reused in our planet?

Engineering:

- How do man made materials and objects affect plants and animals.

Mathematics:

- How do you measure length, weight and height?
- How do you use shapes to compose and object or person?

Social Studies:

- Why do animals live in a specific area.
- What effect do seasons have on plants and animals?

Content Area Grade Level Standards

Science	1.LS.2 Develop a model mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs. Explore how those external parts could solve a human problem. 1.LS.4 Use a model to represent the relationship between the needs of different plants and animals (including humans) and the places they live.
Technology	SLT 10.A Asking questions and making observations helps a person to figure out how things work. SLT 5.A Some materials can be reused and/or recycled.
Engineering	SLT 9.B Expressing ideas to others verbally and through sketches and models is an important part of the design process. SLT 15.B There are many different tools necessary to control and make up the parts of an ecosystem.
Mathematics	1.G.2. Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape. (Students do not need to learn formal names such as “right rectangular prism.”) 1.OA.2. Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

Big Idea: Ecology/Habitats/Adaptations – Grading Period 4

1.MD.2. Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. *Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.*

1.MD.4. Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

1.MD.1. Order three objects by length; compare the lengths of two objects indirectly by using a third object.

1.OA.1. Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (See Table 1.)

1.NBT.1. Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

1.NBT.4. Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.

1.NBT.6. Subtract multiples of 10 in the range 10–90 from multiples of 10 in the range 10–90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

Social Studies

1.3.1 Identify the cardinal directions (north, south, east and west) on maps and globes.

1.3.2 Identify and describe continents, oceans, cities and roads on maps and globes.

1.3.6 Explain the effect of seasonal change on plants, animals, and people.

ELA

Reading: Informational Text

CCSS.ELA-Literacy.RI.1.1 Ask and answer questions about key details in a text.

CCSS.ELA-Literacy.RI.1.2 Identify the main topic and retell key details of a text.

CCSS.ELA-Literacy.RI.1.3 Describe the connection between two individuals, events, ideas, or pieces of information in a text.

CCSS.ELA-Literacy.RI.1.4 Ask and answer questions to help determine or clarify the meaning of words and phrases in a text.

CCSS.ELA-Literacy.RI.1.5 Know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text.

CCSS.ELA-Literacy.RI.1.6 Distinguish between information provided by pictures or other illustrations and information provided by the words in a text.

CCSS.ELA-Literacy.RI.1.7 Use the illustrations and details in a text to describe its key ideas.

CCSS.ELA-Literacy.RI.1.8 Identify the reasons an author gives to support points in a text.

CCSS.ELA-Literacy.RI.1.9 Identify basic similarities in and differences between two texts on the same topic (e.g., in illustrations, descriptions, or procedures).

Big Idea: Ecology/Habitats/Adaptations – Grading Period 4

CCSS.ELA-Literacy.RI.1.10 With prompting and support, read informational texts appropriately complex for grade 1.

Writing

CCSS.ELA-Literacy.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure.

CCSS.ELA-Literacy.W.1.5 With guidance and support from adults, focus on a topic, respond to questions and suggestions from peers, and add details to strengthen writing as needed.

CCSS.ELA-Literacy.W.1.6 With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.

CCSS.ELA-Literacy.W.1.7 Participate in shared research and writing projects (e.g., explore a number of “how-to” books on a given topic and use them to write a sequence of instructions).

CCSS.ELA-Literacy.W.1.8 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.

Speaking and Listening

CCSS.ELA-Literacy.SL.1.1 Participate in collaborative conversations with diverse partners about *grade 1 topics and texts* with peers and adults in small and larger groups.

CCSS.ELA-Literacy.SL.1.1a Follow agreed-upon rules for discussions (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion).

CCSS.ELA-Literacy.SL.1.1b Build on others’ talk in conversations by responding to the comments of others through multiple exchanges.

CCSS.ELA-Literacy.SL.1.1c Ask questions to clear up any confusion about the topics and texts under discussion.

CCSS.ELA-Literacy.SL.1.2 Ask and answer questions about key details in a text read aloud or information presented orally or through other media.

CCSS.ELA-Literacy.SL.1.3 Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.

CCSS.ELA-Literacy.SL.1.4 Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.

CCSS.ELA-Literacy.SL.1.5 Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.

CCSS.ELA-Literacy.SL.1.6 Produce complete sentences when appropriate to task and situation. (See grade 1 Language standards 1 and 3 [here](#) for specific expectations.)

Science Process Standards

Science Process Standards**The Nature of Science**

- Use a scientific notebook to record predictions, questions and observations about data with pictures, numbers or in words.
- Conduct investigations that may happen over time as a class, in small groups, or independently.
- Generate questions and make observations about natural processes.
- Make predictions based on observations.
- Discuss observations with peers and be able to support your conclusion with evidence.
- Make and use simple equipment and tools to gather data and extend the senses.
- Recognize a fair test.

The Design Process

- Identify a need or problem to be solved.
- Document the design throughout the entire design process.
- Brainstorm potential solutions.
- Select a solution to the need or problem.
- Select the materials to develop a solution.
- Create the solution.
- Evaluate and test how well the solution meets the goal.
- Communicate the solution with drawings or prototypes.
- Communicate how to improve the solution.

Standards for Mathematical Practice

Mathematical Practices

- MP.1. Make sense of problems and persevere in solving them.
- MP.2. Reason abstractly and quantitatively.
- MP. 3 Construct viable arguments and critique the reasoning of others.
- MP.4. Model with mathematics.
- MP.5. Use appropriate tools strategically.
- MP.6. Attend to precision.
- MP.7 Look for and make use of structure.
- MP. 8 Look for and express regularity in repeated reasoning.

Plan of Work

Common Misconceptions

What misconceptions might students have with these ideas?

- Plants and animals don't work together to help each other.
- Plants don't "eat or need" food.
- Animals react or need the same things throughout the year.

Suggested Activities

Have students research how plants and animals utilize each other for survival. Pick a habitat for students to research and an animal in that habitat. Have students figure out the ways the animal uses it's habitat for survival. Students can then create a presentation to share with the class. Students can also participate in a gallery walk to learn about each other's animal

Suggested Vocabulary

HABITATS, STEM, PETAL, LEAF, FLOWER,ROOTS, ADAPTATIONS, PREDATORS, LIFE CYCLE, FOOD CHAIN, SURVIVAL, ENVIRONMENT

Resources

- <https://writer.zoho.com/public/sbgrace/habitats-and-oceans/noband>
- <http://fun-in-first.blogspot.com/2011/09/habitats.html>
- <http://www.discoveryeducation.com/teachers/free-lesson-plans/habitats-of-the-world.cfm>
- <http://www.mybookezz.org/ebook.php?u=aHR0cDovL2thdGhvMy5wZW9wbGUud20uZWR1L3BsYW50dW5pdC5wZGYKUjI2luZyBBcGFydCBQbG>
- <http://crayonbits.blogspot.jp/>

Assessment

Type of Assessment

Example

- | | |
|--|---|
| <input checked="" type="checkbox"/> Observation | Observations are made during research and learning throughout the classroom. |
| <input checked="" type="checkbox"/> Oral Questioning | This can be done during open discussions in a whole group. |
| <input type="checkbox"/> Exit Slip | |
| <input type="checkbox"/> Journal | |
| <input checked="" type="checkbox"/> Graphic Organizers | Create a T-graph that shows what plants and animals need.
Create a graph showing what regions or areas around the globe plants and animals live. |
| <input type="checkbox"/> Self-Assessment | |
| <input type="checkbox"/> Writing Prompt | |

STEM Integrated Concepts: Life Science | 1st Grade

<input checked="" type="checkbox"/> Presentation	Students will present the information from their research that demonstrates and understanding of the animal they researched.
<input type="checkbox"/> Electronic media	
<input checked="" type="checkbox"/> Think Pair Share	Turn and talking to a partner about the similarities and differences between two organisms.
<input type="checkbox"/> Whiteboards	
<input type="checkbox"/> Experiment/projects	
<input type="checkbox"/> Quiz	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	