

Unit 3-Animal Adventures

Content Area: **Science**
Course(s): **Science 2**
Time Period: **Marking Period 4**
Length: **MP 4**
Status: **Published**

Big Ideas

- A range of different organisms live in different places.

CRLLKS- 21st Century

9.1.2.CAP.1: Make a list of different types of jobs and describe the skills associated with each job.

Connection: The different parts of a plant have different jobs and roles within the plant life cycle.

Cross-Curricular Integration

Integration Area: Language Arts

W.IW.2.2 Write informative/explanatory texts to examine and convey complex ideas and information

NJSLSA.W6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

NJSLSA.W7. Conduct short as well as more sustained research projects, utilizing an inquiry-based research process, based on focused questions, demonstrating understanding of the subject under investigation.

Activity

Students will research and write about animals. They will research their habitat, diet, and important facts about the animal.

Science and Engineering Practices

Asking Questions and Defining Problems:

- Ask and/or identify questions that can be answered by an investigation.

Developing and Using Models:

- Compare models to identify common features and differences.

Planning and Carrying Out Investigations:

- Evaluate different ways of observing and/or measuring a phenomenon to determine which way can answer a question.
- Make observations (firsthand or from media) and/or measurements of a proposed object or tool or solution to determine if it solves a problem or meets a goal.

Analyzing and Interpreting Data:

- Record information (observations, thoughts, and ideas).
- Use observations (firsthand or from media) to describe patterns and/or relationships in the natural and designed world(s) in order to answer scientific questions and solve problems.
- Compare predictions (based on prior experiences) to what occurred (observable events).

Constructing Explanations and Designing Solutions:

- Use information from observations (firsthand and from media) to construct an evidence-based account for natural phenomena.

Engaging in Argument from Evidence:

- Identify arguments that are supported by evidence.
- Distinguish between explanations that account for all gathered evidence and those that do not.
- Analyze why some evidence is relevant to a scientific question and some is not.
- Construct an argument with evidence to support a claim.

Obtaining, Evaluating, and Communicating Information:

- Obtain information using various texts, text features (e.g., headings, tables of contents, glossaries, electronic menus, icons), and other media that will be useful in answering a scientific question and/or supporting a scientific claim.
- Communicate information or design ideas and/or solutions with others in oral and/or written forms using models, drawings, writing, or numbers that provide detail about scientific ideas, practices, and/or design ideas.

Science and Society

Alejandro Purgue

Scientist who studies sounds animals make. Discovered that bullfrogs make most of their sound through their ears.

CSDT Technology Integration

8.1.2.DA.1: Collect and present data, including climate change data, in various visual formats.

8.1.2.DA.3: Identify and describe patterns in data visualizations.

Activity:

Mystery Science lesson How Many Different Kind of Animals Are There? This is a lab. The students will complete a lab using the guided video process to explore the mystery.

Enduring Understandings

Next Generation Standards

Biodiversity and Humans

2-LS4.D There are many different kinds of living things in any area, and they exist in different places on land and in water.

Student Learning Standards

Mathematics

MD.D.10. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put- together, take-apart, and compare problems¹⁰ using information presented in a bar graph. Science example: Make a picture graph with single- unit scale showing the number of plant, vertebrate-animal, and invertebrate-animal species observed during a field trip or in a nature photograph; how many more plant species were observed than animal species?

Focus Areas

Knowledge

- The meaning of biodiversity.
- That biodiversity is key to the planet's health as a system.
- The roles of producers, consumers and decomposers on land and in water.
- Characteristics of several ecosystems.
- Organisms and their environments are directly related.
- How humans affect biodiversity.

Skills

- Identify traits of organisms which help them survive in their environment.
- Sort organisms into producers, consumers and decomposers.
- Sort animals into herbivores, carnivores and omnivores.

Understandings

- Make observations of plants and animals to compare the diversity of life in different habitats.

Climate Change

Physical Education: Cross-Curricular

2.1.2.CHSS.4: Describe how climate change affects the health of individuals, plants and animals.

- Activity: In this unit, students will analyze the effects climate change has on individuals.

Social Studies: Cross-Curricular

6.3.2.CivicsPD.1: With adult guidance and support, bring awareness of a local issue to school and/or community members and make recommendations for change.

- Activity: In this lesson, students investigate which kinds of birds are likely to visit a bird feeder based on what they eat. In the activity, Design a Bird Feeder, students first draw their own bird feeder design to attract a specific type of bird. Then they build a prototype of their bird feeder using available materials.

Resources

Primary Resources

- Mystery Science

Supplemental Resources

Scott Foresman Science, Pearson, 2008

- Chapter 2, All About Animals
- Chapter 3, How Plants and Animals Live Together
- Chapter 4, How Living Things Grow and Change

Leveled Readers

- *Plants*
- *Animals*
- *Plants and Animals*
- *Growing and Changes*

Scientific Inquiry

Core

- How many different kinds of animals are there? Lab
- Why do frogs say “ribbit”? Lab
- Ecosystems Activity

Supplemental

- BrainPop Jr. Animal Adaptations video, Food Chain Video
- Scholastic Science Spin Magazine and Activity
- Animal Research Writing
- Habitat Activity