

First Grade 2020 Science Unit # 4 : Plant and Animal Structures

Content Area: **Science**
Course(s): **Science 1, Generic Course**
Time Period: **Marking Period 3**
Length: **Approximately 6-8 weeks**
Status: **Published**

Established Goals/Standards

SCI.K-2-ETS1-1	Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.
CAEP.9.2.4.A.2	Identify various life roles and civic and work - related activities in the school, home, and community.
CAEP.9.2.4.A.4	Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.
1-LS1-1	Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.
1-LS1-1.6.1	Use materials to design a device that solves a specific problem or a solution to a specific problem.
1-LS1-1.6.1	students observe the shape and stability of structures of natural and designed objects are related to their function(s).
1-LS1-1.LS1.A	Structure and Function
1-LS1-1.LS1.A.1	All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water and air. Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow.
1-LS1-1.LS1.D	Information Processing
1-LS1-1.LS1.D.1	Animals have body parts that capture and convey different kinds of information needed for growth and survival. Animals respond to these inputs with behaviors that help them survive. Plants also respond to some external inputs.

Essential Questions

Please add your Essential Questions by clicking on the Lists tab above.

- How can observing animals teach you how they stay safe?
- How can observing body parts of animals help people stay safe?
- How do plants and animals respond to their environment?
- How do plants give ideas to solutions to a problem?
- How do some animals hide from danger?
- How do we solve problems by mimicking the structure and function of animals in the natural world?
- How does observing plants help people?
- How does the shape of a leaf connect to how it works?

- What adaptations help animals live in the same place all year?
- What are some animal characteristics that help them stay safe?
- What body parts help animals meet their needs?
- What parts of a plant help it survive, grow, and meet their needs?

Enduring Understanding

- Animals have body parts to help meet their needs. Some examples are a giraffe has a long neck and sticky tongue to reach leaves and a tiger has eyes that can see in the dark which helps it hunt at night.
- By observing animal parts, you can learn how there are parts that have specific functions to allow the animals to move away from danger.
- By observing body parts of an animal and how these parts help to keep an animal safe, this can give people ideas of how to solve problems for people.
- Engineers can get ideas for solving problems by observing animals and their structure and function. An example is how they observed a bird with a pointy beak and how they made no noise when diving in water to get food. Then, they designed a train with a pointy front so it wasn't as noisy when it traveled.
- Leaves are flat, which allows them to catch sunlight. If leaves were a different shape, they may not be able to catch sunlight as well.
- Observing plant parts can give people ideas for designs. For example, leaves take in sunlight to make food. Through this observation, people have invented solar panels to take in sunlight and change it to electricity.
- Some animals and plants move to get what they need. Birds migrate. Plants grow over water so the roots can get water more easily.
- Some animals eat a lot of food to survive the winter. Others dig a home under the ground to sleep all winter. Some animals, like a fox, grow thick fur to stay warm in the winter.
- Some animals have parts that have characteristics that help it hide from danger. Some camouflage, or help it blend into the environment to help keep it safe.
- There are many parts that help plants live. Food is made in the leaves, water moves through the stem to other parts of the plant, thorns on some plants protect it from animals, seeds help it grow into a new plant, and roots take in water and hold the plant to the ground.
- Turtles have a hard shell to keep its body safe. A porcupine has sharp quills to keep it safe. An eagle has sharp talons to help protect itself.
- You can design a solution to a human problem by applying knowledge of plant parts.

Content

Student will be able to:

- explore how the internal parts of plants allow them to survive and grow
- explore how people design solutions by mimicking how plant parts function
- build a solution to a human problem
- mimic animal parts to construct a solution to a human problem
- explore how the structure of animal parts is related to their function
- explore how the body parts of animals allow them to meet their needs
- explore how people design solutions to problems by mimicking animal parts
- mimic animal body parts and function to build a solution
- explore how plants and animals respond to their environments

- carry out an investigation about the effects of light on plant growth
- explore how animal senses help them process information

Assessment

End of Unit Assessment given by printed version or online version using the following:

teacher Assessment book

HMHCO.com online assessments

Also, assessments given throughout each unit using self checks, unit reviews at end of each unit in student workbooks, during labs.

Resources

HMC Science Dimensions Teacher's Guide

HMC Non-Fiction leveled readers

Science kits materials for Units 1-6

HMC Science Dimensions Student workbooks

HMC online component for students and teachers (ED) (HMHCO.com) which includes online version of units, videos, assessments, downloadable worksheets, projects, and hands-on activities.

Teacher Assessment Book (also on HMHCO.com)

Evidence Notebooks

You Tube

Mystery Science

Science Spin

Non-Fiction Books from school library

Scholastic News First Grade Level

Mailbox Magazine activities

Teacher's Helper activities

weekly STEM activities

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