

Grade 3 - Unit 2 - Roles of Living Things

Content Area: **Science**
Course(s): **Science 5, Generic Course**
Time Period: **Marking Period 2**
Length: **6 - 8 weeks**
Status: **Published**

Established Goals/Standards

SCI.3-4.5.1.4.A.1	Demonstrate understanding of the interrelationships among fundamental concepts in the physical, life, and Earth systems sciences.
SCI.3-4.5.1.4.A.2	Use outcomes of investigations to build and refine questions, models, and explanations.
SCI.3-4.5.1.4.A.3	Use scientific facts, measurements, observations, and patterns in nature to build and critique scientific arguments.
SCI.3-4.5.1.4.A.c	Outcomes of investigations are used to build and refine questions, models, and explanations.
SCI.3-4.5.1.4.B.1	Design and follow simple plans using systematic observations to explore questions and predictions.
SCI.3-4.5.1.4.B.2	Measure, gather, evaluate, and share evidence using tools and technologies.
SCI.3-4.5.1.4.B.3	Formulate explanations from evidence.
SCI.3-4.5.1.4.B.4	Communicate and justify explanations with reasonable and logical arguments.
SCI.3-4.5.1.4.C.a	Scientific understanding changes over time as new evidence and updated arguments emerge.
SCI.3-4.5.3.4.A.2	Compare and contrast structures that have similar functions in various organisms, and explain how those functions may be carried out by structures that have different physical appearances.
SCI.3-4.5.3.4.A.3	Describe the interactions of systems involved in carrying out everyday life activities.
SCI.3-4.5.3.4.A.a	Living organisms: Interact with and cause changes in their environment. Exchange materials (such as gases, nutrients, water, and waste) with the environment. Reproduce. Grow and develop in a predictable manner.
SCI.3-4.5.3.4.A.b	Essential functions required for the well-being of an organism are carried out by specialized structures in plants and animals.
SCI.3-4.5.3.4.B.1	Identify sources of energy (food) in a variety of settings (farm, zoo, ocean, forest).
SCI.3-4.5.3.4.B.a	Almost all energy (food) and matter can be traced to the Sun.
SCI.3-4.5.3.4.C.1	Predict the biotic and abiotic characteristics of an unfamiliar organism's habitat.
SCI.3-4.5.3.4.C.2	Explain the consequences of rapid ecosystem change (e.g., flooding, wind storms, snowfall, volcanic eruptions), and compare them to consequences of gradual ecosystem change (e.g., gradual increase or decrease in daily temperatures, change in yearly rainfall).
SCI.3-4.5.3.4.C.a	Organisms can only survive in environments in which their needs are met. Within ecosystems, organisms interact with and are dependent on their physical and living environment.
SCI.3-4.5.3.4.C.b	Some changes in ecosystems occur slowly, while others occur rapidly. Changes can affect life forms, including humans.
SCI.3-4.5.3.4.E.1	Model an adaptation to a species that would increase its chances of survival, should the environment become wetter, dryer, warmer, or colder over time.
SCI.3-4.5.3.4.E.2	Evaluate similar populations in an ecosystem with regard to their ability to thrive and grow.

SCI.3-4.5.3.4.E.a

Individuals of the same species may differ in their characteristics, and sometimes these differences give individuals an advantage in surviving and reproducing in different environments.

SCI.3-4.5.3.4.E.b

In any ecosystem, some populations of organisms thrive and grow, some decline, and others do not survive at all.

Essential Questions

- How are living things adapted for getting food?
- How are living things adapted for protection?
- How are living things adapted to their environment?
- How can living things change the environment?
- How do living things get the food they need?
- What are food chains and food webs?
- What do living things need to survive?

Enduring Understanding

- Living things are part of food chains, which are part of food webs. A food chain is the path energy takes as one living thing eats another. Food chains overlap and link to form food webs.
- Living things can alter their environment, and the changes can affect other living things.
- Living things get their energy in various ways
- Living things have adaptations that enable them to cope with changes in their environment, such as temperature fluctuations and seasonal changes.
- Living things need other living things and certain nonliving things in order to survive.
- Living things vary in their adaptations for protection, including repellent body parts, or chemicals, mimicking dangerous creatures, defensive behaviors, and camouflage.
- Living things vary in their adaptation for getting food, including use of specialized body parts and behaviors, poisonous chemicals, and camouflage.

Content

The students will be able to:

- define environment
- describe different types of environments
- explain the difference between a producer and a consumer
- define carnivore, herbivore, and omnivore and give examples of each
- explain the role of decomposers
- define and illustrate food chains and food webs

- explain how the environment of Australia was changed by the introduction of Hawaiian cane toads
- describe the effects of insecticides on plants and animals as the insecticides work their way up the food chain
- define adaptations
- define behaviors
- list and describe animal adaptations for getting food
- list and describe animal adaptations for defense and staying alive
- describe how beavers make dams and lodges and how these structures affect other living things in the area
- explain how humans can cause environmental changes such as the increasing disappearance of wetlands
- list and describe animal and plant adaptations for protecting themselves from the heat
- define migrate
- define hibernation
- explain the adaptations that animals and plants make to survive cyclical changes in the environment

Assessment

Resources

- Discovery Works textbook
- ActivBoard flipcharts
- Labs:
 - Making a food chain
 - Linking Food chains into webs
 - The Right Beak for the Job
- Powerpoint
- Internet access
- Unitedstreaming video clips