Unit 3: Living and Non-Living

Content Area: **Science**
Course(s):
Time Period: **Trimester 3**
Length: **10-12 Weeks**
Status: **Published**

Summary

Students differentiate between living and nonliving things. Students explore the characteristics of living things. Students determine how to tell if something is living or nonliving. Students study phenomena by observing and describing the structures of fish, birds, snails, earthworms, and isopods. Appropriate classroom habitats are established for some organisms and students find out what the animals need to live and grow. Students observe and care for an animal over time, and then they are introduced to another animal similar to the first but with differences in structure and behavior. Students compare and contrast the similarities and differences between animals.

This unit follows a design that includes active investigation including; outdoor experiences, recording in science notebooks to answer focus questions, reading science resources through read alouds and shared reading and assessment to monitor progress and motivate student reflection on learning.

Revision Date: July 2020

Standards

9.1.2.CAP	Career Awareness and Planning
	Different types of jobs require different knowledge and skills.
LA.RI.K.1	With prompting and support, ask and answer questions about key details in a text.
LA.RI.K.2	With prompting and support, identify the main topic and retell key details of a text.
LA.RI.K.3	With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text.
LA.RI.K.7	With prompting and support, describe the relationship between illustrations and the text in which they appear (e.g., what person, place, thing, or idea in the text an illustration depicts).
LA.RI.K.8	With prompting and support, identify the reasons an author gives to support points in a text.
LA.RI.K.9	With prompting and support, identify basic similarities in and differences between two texts on the same topic (e.g., in illustrations, descriptions, or procedures).
LA.RI.K.10	Actively engage in group reading activities with purpose and understanding.

K-LS1	From Molecules to Organisms: Structures and Processes
K-LS1-1	Use observations to describe patterns of what plants and animals (including humans) need to survive.
LS1.C	Organization for Matter and Energy Flow in Organisms
K-ESS2	Earth Systems
K-ESS2-2	Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.
ESS2.E	Biogeology
ESS3.C	Human Impacts on Earth Systems
K-ESS3	Earth and Human Activity
K-ESS3-1	Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.
ESS3.A	Natural Resources
K-ESS3-3	Communicate solutions that will reduce the impact of climate change and humans on the land, water, air, and/or other living things in the local environment.
ESS3.C	Human Impacts on Earth Systems
CRP.K-12.CRP1.1	Career-ready individuals understand the obligations and responsibilities of being a member of a community, and they demonstrate this understanding every day through their interactions with others. They are conscientious of the impacts of their decisions on others and the environment around them. They think about the near-term and long-term consequences of their actions and seek to act in ways that contribute to the betterment of their teams, families, community and workplace. They are reliable and consistent in going beyond the minimum expectation and in participating in activities that serve the greater good.
CRP.K-12.CRP2.1	Career-ready individuals readily access and use the knowledge and skills acquired through experience and education to be more productive. They make connections between abstract concepts with real-world applications, and they make correct insights about when it is appropriate to apply the use of an academic skill in a workplace situation.
CRP.K-12.CRP3.1	Career-ready individuals understand the relationship between personal health, workplace performance and personal well-being; they act on that understanding to regularly practice healthy diet, exercise and mental health activities. Career-ready individuals also take regular action to contribute to their personal financial well-being, understanding that personal financial security provides the peace of mind required to contribute more fully to their own career success.
CRP.K-12.CRP4.1	Career-ready individuals communicate thoughts, ideas, and action plans with clarity, whether using written, verbal, and/or visual methods. They communicate in the workplace with clarity and purpose to make maximum use of their own and others' time. They are excellent writers; they master conventions, word choice, and organization, and use effective tone and presentation skills to articulate ideas. They are skilled at interacting with others; they are active listeners and speak clearly and with purpose. Career-ready individuals think about the audience for their communication and prepare accordingly to ensure the desired outcome.
CRP.K-12.CRP7.1	Career-ready individuals are discerning in accepting and using new information to make decisions, change practices or inform strategies. They use reliable research process to search for new information. They evaluate the validity of sources when considering the use and adoption of external information or practices in their workplace situation.
CRP.K-12.CRP8.1	Career-ready individuals readily recognize problems in the workplace, understand the nature of the problem, and devise effective plans to solve the problem. They are aware of problems when they occur and take action quickly to address the problem; they thoughtfully investigate the root cause of the problem prior to introducing solutions. They

	carefully consider the options to solve the problem. Once a solution is agreed upon, they follow through to ensure the problem is solved, whether through their own actions or the actions of others.
CRP.K-12.CRP9.1	Career-ready individuals consistently act in ways that align personal and community-held ideals and principles while employing strategies to positively influence others in the workplace. They have a clear understanding of integrity and act on this understanding in every decision. They use a variety of means to positively impact the directions and actions of a team or organization, and they apply insights into human behavior to change others' action, attitudes and/or beliefs. They recognize the near-term and long-term effects that management's actions and attitudes can have on productivity, morals and organizational culture.

Essential Questions/Enduring Understandings

- How are animal structures similar and different?
- How are living things different from nonliving things?
- How does location and climate an animal lives affect its survival?
- What do plants and animals need to live and grow?

Objectives

Students will know…..

- What different living things need in order to survive
- Living things change and grow
- All living things have a life cycle
- How to take care of a living thing in its environment
- Different habitats suite different living things
- A living thing gets what it needs to survive from its habitat
- How to compare and contrast similar living things

Students will be skilled at…..

- Asking questions and defining problems
- Developing and using models
- Planning and carrying out investigations
- Analyzing and interpreting data
- Using mathematics and computational thinking
- Constructing explanations and designing solutions
- Engaging in argument from evidence
- Obtaining, evaluating and communicating information

Learning Plan

- Preview the essential questions and connect learning throughout the unit.
- Gain students understanding and prior knowledge of living and nonliving things

- Read literature on different types of living things
- Introduce vocabulary throughout the unit: living, non-living, animal, plant, compare
- Sort living and nonliving pictures
- Recognize and list patterns in the needs of different plants and animals
- Read literature on animal habitats
- Utilize FOSS kit with materials: Animals Two by Two
- Introduce students to animals in twos
- Observe living things daily and record observations
- Illustrate and label what living things need to survive
- Draw, design a poster, or create a diorama that depicts a plant or animal in its environment with everything it needs to survive
- Students care for and compare/contrast living things (fish, caterpillars, plants, birds, earthworms, etc)
- Maintain observational journals with student note taking and drawings of experiments and activities
- Create a chart of habitats and animals that live there and what they need to survive
- Incorporate literature on living and nonliving things through shared reading, big books, and nonfiction books from classroom libraries

Assessment

Students will be assessed through a variety of methods. Teacher will use various types of assessments to gauge student understanding. Students will be required to have understanding and mastery of the following key concepts:

Science courses are designed to promote skill attainment. Student progression and pace through which they proceed through the performance tasks is based on their affinity for and ability to reach skill attainment. The teacher will determine formative and summative skill attainment; alternative assessments will be incorporated for each student based on their strengths and challenges.

Formative Assessments: Teacher observation, student responses during lessons,

Summative Assessments: Foss investigation checklists, science notebook

Benchmark Assessments: Investigation IChecks, science notebook

- FQ: Investigation 1.1: What are the parts of a goldfish?
- FQ: Investigation 1.2: What do goldfish need to live?
- FQ: Investigation 1.3: What do goldfish do?
- FQ: Investigation 1.4: How are guppies and goldfish the same? How are they different?

Alternative Assessments: Oral presentations, student produced projects

Materials

Core Book List

FOSS Kit: Animals Two By Two

Classroom plant (optional)

Classroom animals (fish, worms, caterpillars, etc)

Nonliving classroom items for exploration (chair, ball, pencil, etc)

BrainPop Junior

Discovery Education

Mystery Doug

Science notebook for assessment and journaling

Science spin, weekly reader magazine if applicable

Sid the Science Kid:

Season 1 Episode 27: Home Tweet Home

Season 1 Episode 36: How did my Dog do That

Season 2 Episode 25: Seed the Science Kid

The Magic School Bus:

Season 1 Episode 5: Hop's Home

Season 1 Episode 11: Goes to Seed

Season 2 Episode 5: Butterflies, Caterpillars and Moths

Available Shared Reading F&P Classroom: Counting on the Farm (NF), Morning on the Farm (F), My Little Rooster (F), The Log (NF), A Bear and His Honey (F), A Big Bear in the Little Woods (F), Look Out (NF), Fly Away(NF), Alligator Hide and Seek (NF), Fuzzy and Buzzy (NF), In the Forest (H), In the Arctic (H), In the Outback (H)

Available Interactive ReadAloud F&P Classroom: The Eensy-Weensy Spider (F), Noticing the Way the World Looks (NF), What Color is Nature (NF), Flower Garden (F), Does a Kangaroo have a

Mother Too? (F), Slowly, Slowly, Slowly said the Sloth (F), The Mixed Up Chameleon (F), Chickens aren't the only ones (NF), Elephants Swim (NF), Every Autumn Comes the Bear (F), The Pig in the Pond (F), Fruit is a Suitcase for Seeds (NF), Over on the Farm (F)

F=Fiction, NF=Nonfiction, H=Hybrid