

Unit 02: Plant & Animal Superpowers

Content Area: **Template**
Course(s):
Time Period: **Full Year**
Length: **12 weeks**
Status: **Published**

Standards Alignment

New Jersey Student Learning Standards

SCI.K-2-ETS1-1	Ask questions, make observations, and gather information about a situation people want to change (e.g., climate change) to define a simple problem that can be solved through the development of a new or improved object or tool.
SCI.K-2-ETS1-2	Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.
SCI.K-2-ETS1-3	Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.
SCI.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.
SCI.1-LS1-2	Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.
SCI.1-LS3-1	Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.
K-ESS2-2	Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.
K-ESS2	Earth's Systems
K-ESS3-3	Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.
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.
K-ESS3	Earth and Human Activity
K-LS1-1	Use observations to describe patterns of what plants and animals (including humans) need to survive.
K-LS1	From Molecules to Organisms: Structures and Processes

Integration of Career Readiness, Life Literacies and Key Skills

CAEP.9.2.4.A	Career Awareness
CAEP.9.2.4.A.1	Identify reasons why people work, different types of work, and how work can help a person achieve personal and professional goals.
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.3	Investigate both traditional and nontraditional careers and relate information to personal likes and dislikes.
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.

Technology / Integration of Computer Science and Design Thinking

CS.K-2.8.1.2.AP.4	Break down a task into a sequence of steps.
CS.K-2.8.2.2.ITH.4	Identify how various tools reduce work and improve daily tasks.

Interdisciplinary Connections: NJSLs for ELA, Social Studies, Science and/or Math Section

LA.RL.1.1	Ask and answer questions about key details in a text.
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LA.RI.1.2	Identify the main topic and retell key details of a text.
LA.RI.1.3	Describe the connection between two individuals, events, ideas, or pieces of information in a text.
LA.RI.1.4	Ask and answer questions to help determine or clarify the meaning of words and phrases in a text.
LA.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.
LA.RI.1.6	Distinguish between information provided by pictures or other illustrations and information provided by the words in a text.

Integration of Diversity, Equity and Inclusion; Climate Change; Informational and Media Literacy

see Crosswalks

21st Century Life and Careers

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Stage I: Desired Results

Transfer/Overview/Rationale

Transfer / Overview / Rationale

Unit Rationale

The purpose of this unit...

This unit helps to develop students' understanding of plants and animals and the important things that they need to survive.

Meaning

Essential Questions

Essential Questions

- Why do woodpeckers peck wood?
- Where do animals live?
- How can you find animals in the woods?
- How do animals make their homes in the forest?
- How do plants and trees grow?
- Why would you want an old log in your backyard?

Enduring Understanding/Indicators of Understanding

Enduring Understanding/Indicators of Understanding

- All animals need to find food in order to live.
- Living things need food, water, and shelter to survive.
- Animals need safety in order to live. They can change their environments in order to seek safety.
- Plants are living things but are very different from animals.
- Humans should make choices that minimally impact other living things' environments.

Acquisition (Student Learning Objectives)

Knowledge

Knowledge

Students will know...

- Animal behavior patterns can be studied to determine their relationship with the environment around them.
- Plants, animals, and surroundings make up a system that works together so living things' needs are met.

- We can study animal behavior to determine what they need for safety/shelter.
- Plants have survival needs that can be studied in different conditions.
- There is a cause/effect relationship between people and other living things through their impact on the environment.

Skills

Skills

Student will be skilled at ...

- Obtaining information by observing animal behaviors
- Acting out animal behaviors
- Explaining why/how different animal behaviors
- Studying/communicating how different animal homes are built
- Identifying animal homes in their own environment
- Investigating plant growth through an experimentation with light
- Analyzing information kept in a plant observation journal

Stage 3: Learning Plan

Resource and Mentor Texts

Resources and Mentor Texts

Mystery Science

Sayre, A.P. Turtle, Turtle Watch Out

Waring, G. Oscar and the Frog: A Book About Growing

Brown, P. The Curious Garden

Formative Assessment Strategies

Formative Assessment Strategies

- Class discussions
- Turn & talk/thumbs up and down
- Mystery Science activities/mysteries
- Plant journal
- Small group work, animal behavior acting, nature walk

Learning Activities/Unit of Study

Learning Activities/Unit of Study

Each Science unit is comprised of different activities, or "mysteries," that include small group activities, investigations/experiments, or read alouds. The learning activities attached below are for the specific mysteries that need detailed instructions for this unit. All mysteries can be found on the Mystery Science website under each specific unit

[Unit 3: Plants & Animal Secrets: Mystery Lesson Plans](#)

Modifications and/or Accommodations

Suggested Modifications (ELL, Sp. Ed, Gifted, At-risk of Failure)

English Language Learners

Native language support: The teacher provides auditory or written content to students in their native language.

Adjusted Speech: The teacher changes speech patterns to increase student comprehension. This could include facing the students, paraphrasing, clearly indicating the most important ideas, and speaking more slowly.

Visuals: The teacher uses graphics, pictures, visuals, and manipulatives. This helps ELL students better understand and comprehend the subjects at hand.

Front-Loading Vocabulary: The teacher front loads vocabulary. This means providing students with a list of important vocabulary words they will need to know for a book, lesson, etc. prior to the lesson being taught. Including pictures to go with the vocabulary words is also very beneficial for the students.

Special Education Students

Chunking: The teacher presents information in a way that makes it easy for students to understand and remember. Chunking is based on the presumption that our working memory is easily overloaded by excessive detail. The best way to deliver information is to organize it into meaningful units. Because students with special needs get overloaded easily, chunking is an effective strategy to use with them.

Checking for Understanding: It is important to constantly check for understanding, especially for students who have accommodations. Teachers want to make sure students understand the

concepts being covered in a way that makes sense to them.

Extra time: The teacher provides students with special needs extra time to complete work or answer questions. It is important to give students enough time to process their thoughts.

Oral Reading: The teacher will read work orally to students. Class work such as tests and literature circles may need to be read aloud to the student.

Timers: The teacher will use timers as an instructional tool. The use of timers is beneficial for students who have trouble completing tasks. Timers can be helpful so the student is aware of how much time they have to complete an assignment.

Students with 504 Plans

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Gifted & Talented Strategies

Extensions/Enrichments: Teachers will provide gifted and talented students with extension/enrichment projects. Students will be challenged to further their understanding, to apply acquired knowledge, and/or to produce something in reference to acquired knowledge.

Modify/Change Activities: Teachers will monitor and modify activities to accommodate those students who need to be challenged further. Additional reading, problem-solving, writing, or project work is necessary for those students who are ready to move on at a rate more accelerated than their peers. In this way, G & T students are provided the same opportunity for support as special needs students.

Students at Risk of School Failure

Directions or Instructions: Make sure directions and/or instructions are given in limited numbers. Give directions/instructions verbally and in simple written format. Ask students to repeat the instructions or directions to ensure understanding occurs. Check back with the student to ensure

he/she hasn't forgotten.

Peer Support: Peers can help build confidence in other students by assisting in peer learning. Many teachers use the 'ask 3 before me' approach. This is fine, however, a student at risk may have to have a specific student or two to ask. Set this up for the student so he/she knows who to ask for clarification before going to you.

Alternate or Modified Assignments: Always ask yourself, "How can I modify this assignment to ensure the students at risk are able to complete it?" Sometimes you'll simplify the task, reduce the length of the assignment or allow for a different mode of delivery. For instance, many students may hand something in, the at-risk student may jot notes and give you the information verbally. Or, it just may be that you will need to assign an alternate assignment.

Increase One to One Time: When other students are working, always touch base with your students at risk and find out if they're on track or needing some additional support. A few minutes here and there will go a long way to intervene as the need presents itself.

Contracts: It helps to have a working contract between you and your students at risk. This helps prioritize the tasks that need to be done and ensure completion happens. Each day write down what needs to be completed, as the tasks are done, provide a checkmark or happy face. The goal of using contracts is to eventually have the student come to you for completion sign-offs.

Hands On: As much as possible, think in concrete terms and provide hands-on tasks. This means a child doing math may require a calculator or counters. The child may need to tape record comprehension activities instead of writing them. A child may have to listen to a story being read instead of reading it him/herself.

Tests/Assessments: Tests can be done orally if need be. Break tests down in smaller increments by having a portion of the test in the morning, another portion after lunch and the final part the next day.

Seating: Seat students near a helping peer or with quick access to the teacher. Those with hearing or sight issues need to be close to the instruction which often means near the front.