1st Grade Unit 1 - Characteristics of Living Things

Content Area: **Science**
Course(s): **Science Grade 1**
Time Period: **MP1**
Length: **22 days**
Status: **Published**

NJSLS - Science

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.

Science and Engineering Practices

Obtaining, Evaluating, and Communicating Information

Read grade-appropriate texts and use media to obtain scientific information to determine patterns in the natural world. (1-LS1-2)

Constructing Explanations and Designing Solutions

Make observations (firsthand or from media) to construct an evidence-based account for natural phenomena. (1-LS3-1)

Disciplinary Core Ideas

LS1.B: Growth and Development of Organisms

Adult plants and animals can have young. In many kinds of animals, parents and the offspring themselves engage in behaviors that help the offspring to survive. (1-LS1-2)

LS3.A: Inheritance of Traits

Young animals are very much, but not exactly like, their parents. Plants also are very much, but not exactly, like their parents. (1-LS3-1)

LS3.B: Variation of Traits

Individuals of the same kind of plant or animal are recognizable as similar but can also vary in many ways. (1-

LS3-1)

Crosscutting Concepts

Patterns

Patterns in the natural and human designed world can be observed, used to describe phenomena, and used as evidence. (1-LS1-2, 1-LS3-1)

Scientific Knowledge is Based on Empirical Evidence

Scientists look for patterns and order when making observations about the world. (1-LS1-2)

Rationale and Transfer Goals

In this unit of study, students develop an understanding of how plants and animals use their parts to help them survive, grow, and meet their needs, as well as how the behaviors of parents and offspring help offspring survive. The understanding that young plants and animals are like, but not exactly the same as their parents is developed. The crosscutting concept of patterns is called out as an organizing concept for the disciplinary core ideas. Students are expected to demonstrate grade-appropriate proficiency in obtaining, evaluating, and communicating information and constructing explanations. Students are also expected to use these practices to demonstrate understanding of the core ideas.

Enduring Understandings

All living things share certain characteristics and needs.

Adults and their offspring have similar and different characteristics and behaviors.

Essential Questions

How are young plants and animals alike and different from their parents?

Why and how do young plants and animals vary in how they look, function, and behave?

What types (patterns) of behavior can be observed among parents that help offspring survive?

Content - What will students know?

- Patterns in the natural world can be observed, used to describe phenomena, and used as evidence.
- Individuals of the same kind of plant or animal are recognizable as similar but can also vary in many ways.
- Young animals are very much, but not exactly, like their parents. Plants also are very much, but not exactly, like their parents.
- Scientists look for patterns and order when making observations about the world.
- Patterns in the natural world can be observed, used to describe phenomena, and used as evidence.
- Adult plants and animals can have young.
- In many kinds of animals, parents and the offspring themselves engage in behaviors that help the offspring survive.

Skills - What will students be able to do?

- Observe and use patterns in the natural world as evidence and to describe phenomena.
- Make observations to construct an evidence based account for natural phenomena.
- Make observations to construct an evidence based account that young plants and animals are like, but not exactly like, their parents.
- Read grade-appropriate texts and use media to obtain scientific information to determine patterns in the natural world.
- Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive. Examples of patterns of behaviors could include: The signals that offspring make, such as

crying, cheeping, and other vocalizations or the responses of the parents, such as feeding, comforting, and protecting the offspring.

- Observe how organisms use their external parts to help them survive, grow, and meet their needs, and how the behaviors of parents and offspring help offspring survive
- Look for patterns; obtain, evaluate, and communicate information; and construct explanations.

Activities - How will we teach the content and skills?

- Mystery Science Animal Super Powers Anchor Phenomenon
- Mystery Science Animal Superpowers Lesson 1
- Mystery Science Animal Superpowers Lesson 2
- Mystery Science Animal Superpowers Lesson 3
- Mystery Science Animal Superpowers Lesson 4
- Mystery Science Animal Superpowers Lesson 5
- Read Alouds
- BrainPop Jr. (Animals)
- Function Investigation Lab
- Animals Unit
- Eat Like a Bird!
- Multi Media Study Jams
- Build a Monster Activity

Formative Assessments

- Mystery Science Animal Superpowers Lesson 1 Assessment
- Mystery Science Animal Superpowers Lesson 2 Assessment
- Mystery Science Animal Powers Lesson 3 Assessment
- Mystery Science Animal Powers Lesson 4 Assessment

- Mystery Science Animal Powers Lesson 5 Assessment
- Teacher Observation
- Student projects/models
- Individual and Group Participation
- Exit Tickets

Summative Assessments

- Mystery Science Animal Superpowers Performance Task
- Tests/Quizzes
- Animal Performance Based Assessment
- Grade 1 Science Unit 1 Benchmark

Spiraling for Mastery

Content or Skill for this Unit	Spiral Focus from Previous Unit	Instructional Activity
Conduct hands-on labs to investigate how 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. Discover how plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow. Observe different plant structures. Identify how organisms stay warm outside during the winter and protect against any unsafe people or things. Use charts and create a	This is the first opportunity for students to encounter these ideas. Asking questions, making observations, and gathering information are helpful in thinking about problems.	Read-Alouds Modeling/Think Alouds Mystery Science Experiments BrainPop Jr. (Animals) Function Investigation Lab Animals Unit

monster with characteristics to protect itself. Use magazines and books of animals to brainstorm and identify ways animals solve problems for themselves. Observe how plants respond to sunlight.		Eat Like a Bird! Multi Media Study Jams Build a Monster Activity

Career Readiness, Life Literacies, & Key Skills

TECH.9.4.2.CI.1	Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2).
TECH.9.4.2.CI.2	Demonstrate originality and inventiveness in work (e.g., 1.3A.2CR1a).
TECH.9.4.2.CT.1	Gather information about an issue, such as climate change, and collaboratively brainstorm ways to solve the problem (e.g., K-2-ETS1-1, 6.3.2.GeoGI.2).
TECH.9.4.2.CT.2	Identify possible approaches and resources to execute a plan (e.g., 1.2.2.CR1b, 8.2.2.ED.3).
TECH.9.4.2.CT.3	Use a variety of types of thinking to solve problems (e.g., inductive, deductive).
TECH.9.4.2.IML.3	Use a variety of sources including multimedia sources to find information about topics such as climate change, with guidance and support from adults (e.g., 6.3.2.GeoGI.2, 6.1.2.HistorySE.3, W.2.6, 1-LSI-2).

Interdisciplinary Connections

NJSLS ELA

RL.CR.1.1. Ask and answer questions about key details in a literary text (e.g., who, what, where, when, why, how). (1-LS1-2)

RL.CI.1.2. Determine the central message and retell a sequence of events in literary texts (e.g., who, what, where, when, why, how). (1-LS1-2)

RI.CR.1.1. Ask and answer questions about key details in an informational text (e.g., who, what, where, when, why, how). (1-LS3-1)

W.WR.1.5. With prompting and support, generate questions through shared research about a topic and

determine possible sources to obtain information on that topic. (1-LS3-1)

W.SE.1.6. With guidance and support from adults, gather and select information from multiple sources to answer a question or write about a topic. (1-LS3-1)

NJSLS Math

MP.2 Reason abstractly and quantitatively. (1-LS3-1)

MP.5 Use appropriate tools strategically. (1-LS3-1)

1.NBT.B.3 Compare two two-digit numbers based on the meanings of the tens and one digits, recording the results of comparisons with the symbols >, =, and <. (1-LS1-2)

1.NBT.C.4 Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning uses. Understand that in adding two-digit numbers, one

adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten. (1-LS1-2)

1.NBT.C.5 Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used. (1-LS1-2)

1.NBT.C.6 Subtract multiples of 10 in the range 10–90 from multiples of 10 in the range 10–90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. (1-LS1-2)

1.M.A.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object. (1-LS3-1)