

Approx. Timeframe: 20 days **Suggested Start Date:** January 6th

PLC Date: February 13th

Driving Question (What are students trying to figure out?)

How do you identify a mysterious fruit? What do dogs and pigeons have in common? How could a lizard's toes help it survive?

Why do dogs wag their tail?

How long can people (and animals) survive in outer space?

Three-Dimensional Performance Expectations

- **3-LS3-1.** Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms.
- **3-LS4-2.** Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.
- **3-LS4-3.** Construct an argument with evidence that in a particular habitat, some organisms can survive well, some survive less well, and some cannot survive at all.
- **3-LS2-1.** Construct an argument that some animals form groups that help members survive.
- **3-LS3-2.** Use evidence to support the explanation that traits can be influenced by the environment.

Disciplinary Core Ideas (DCIs)	Scientific and Engineering Practices (SEPs)	Crosscutting Concepts (CCCs)
LS1.B: Growth and Development of Organisms	Analyzing and Interpreting Data	Patterns
LS3.A: Inheritance of Traits	Constructing Explanations and Designing	Cause and Effect
LS3.B: Variation of Traits	Solutions	System and System Models
LS4.B: Natural Selection	Planning and Carrying Out Investigations	Stability and Change



LS4.C: Adaptation LS2.D: Social Interactions and Group Behavior		Engaging in Argument from Evidence Obtaining, Evaluating, and Communicating Information	
Lesson	Lesson Learning Intentions	Resources	Vocabulary
1- Trait Variation, Inheritance, & Artificial Selection (3-LS3-1) (2) 30-minute class periods	In this lesson, students examine plant traits and use that information as evidence to help them identify an unknown fruit.	Generation Genius - Variation of Traits - Video only as an introduction. Mystery Science Lesson: How do you identify a mysterious fruit?	Vocabulary Slides - leaf - flower - fruit - seed - trait - evidence - inherit - pattern
2- Trait Variation, Inheritance, & Artificial Selection (3-LS3-1) (3) 30-minute class periods	In this lesson, students explore the extreme trait variation of different dog breeds and pet pigeon breeds!	Mystery Science Lesson: What do dogs and pigeons have in common? Formative Assessment (Will need to show writing prompt on screen in color.)	Vocabulary Slides - offspring - siblings - variation - artificial selection - ancestor - breed



3- Trait Variation, Natural Selection, & Survival (3-LS3-1, 3-LS4-2, 3-LS4-3) (3) 30-minute class periods	In this lesson, students explore how variation in the toe scales of green lizards provides some individuals with an advantage when it comes to climbing and surviving.	Generation Genius- Adaptations and the Environment - Introduction Video Mystery Science Lesson: How could a lizard's toes help it survive? Formative Assessment	Vocabulary Slides
4- Animal Groups and Survival (3-LS2-1) (3) 30-minute class periods	In this lesson, students discover why dogs' expressions, like tail wagging, are so useful when living in a pack.	Generation Genius- Animal Group Behavior - Watch the video as an introduction. Mystery Science Lesson: Why do dogs wag their tails? Formative Assessment	Vocabulary Slides - communicate - behavior - social behavior - predator - protection - observe
5- Traits and Environmenta I Variations (3-LS3-2) (2) 30-minute	In this lesson, students examine how physical traits can be influenced by the environment.	Mystery Science Lesson: How long can people (and animals) survive in outer space?	Key Concepts: What happens when ants compete with other ants? Vocabulary Slides - acquired trait



class periods		- force - gravity - measure
DCA 1 Day	Pear Assessment	