

Lesson: Be a Scientist



Lesson Overview

This two part lesson will introduce students to the science driven mission of The Peregrine Fund, which is to conserve endangered birds of prey around the world. By discussing the concepts of early elementary (mainly Grade 3) Next Generation Science Standards students will learn how adaptations facilitate different survival strategies among living things and practice the skill of creating a hypothesis based on their observations and determine how to test their idea with further data collection.

Standards

Essential Standard

Idaho Next Gen
LS1-4-1 4-LS1-1

Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.

Supporting Standards

Idaho Next Gen
LS1-K-1

Use classification supported by evidence to differentiate between living and non-living items.

LS1-K-1 K-LS1-1

Use observations to describe patterns of what plants and animals (including humans) need to survive.

LS1-1-3 3-LS1-1

Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.

LS2-3-1 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.

The supporting standards serve as check points to help instructors create the environment needed for students to be proficient in constructing an argument around the concepts of survival and life cycles.

Lesson Model

The lesson will follow the E5 model as best we can in an online format.



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Engage (20 minutes)

Become familiar with The Peregrine Fund's World Center for Birds of Prey and the mission to save endangered species and extinction.

Define adaptations and their relation to survival strategies that define a groups of animals.

Meet a Peregrine Falcon.

Explore (20 Minutes)

Biology is the study of living things - What is a living thing and a non-living thing.

Talk about the life cycles that living things go through that makes them a living thing.

Practice being a scientist by making observations and testing those observations.

Break for the day - Homework Assignment

While outside or watching a video, observe and describe something about a creature in nature that you've never noticed before. Return to the next session with your observation and have a separate explanation for how that thing you noticed can help the species to survive.

Explain (15 minutes)

Return with your observations ready to share.

Using our observations and hypothesis figure out what we can measure to test these ideas

Testing our ideas is how we learn and create the most accurate understanding of the world.

Explain how these adaptations are inherited and how even within a species there are differences that may help individuals survive slightly differently.

Elaborate (20 minutes)

We will discuss the American Kestrel Partnership and how our scientists the skills and concepts of the essential standard, ie. use observations, hypothesis, and data to test our ideas and adjust to have a more accurate understanding of the world around us in order to prevent the further decline of the American Kestrel.

Meet two American Kestrels.

Evaluate (5 Minutes)

The main goal is to evaluate if students have developed the skill of using observations to make a claim that can be tested, or as the standard states "construct an argument". The concept is to explore how features of a living thing (adaptations) help the species to survive (or complete the life cycle).

See the "Be a Scientist Evaluation and the Evaluation Guideline" document.