

Outdoor Science! Week 1: Grades K-2

Day	Topics	Related Standards
1	Investigating Living vs Non-Living	<u>Observe, ask questions, and explain</u> the differences between the characteristics of living and non-living things.
2	Investigating Energy Distribution	<u>Develop a model</u> representing how life on Earth depends on energy from the Sun and energy from other organisms.
3	Investigating Plant and Animal Structures	<u>Observe, ask questions, and explain</u> how specialized structures found on a variety of plants and animals (including humans) help them sense and respond to their environment.
4	Investigating Growth and Survival	<u>Develop and use models</u> about how living things use resources to grow and survive.
5	Investigating Organism Resources	<u>Obtain, analyze, and communicate</u> evidence that organisms need a source of energy, air, water, and certain temperature conditions to survive.

Outdoor Science! Week 1

Day 3: Investigating Plant and Animal Structures

Teacher/Parent Background

Living things have certain *structures*, or body parts that serve a purpose/help accomplish a “job” or *function*. These structures can either be found inside the bodies of living things, called ***internal structures***, or found outside the bodies of living things, called ***external structures***. Students will observe examples of flora (plants) and fauna (animals) in which they share a habitat with! It is easier for young learners to understand how fauna gather resources, they use their arms, legs, and/or wings to move and collect them. Flora are a bit more complicated for young learners, as they do not (noticeably) move and it is easy to think that they “do nothing”.

Overview

In this activity, students will make connections to various internal and external structures of flora and fauna and how these structures aid in carrying out necessary life functions. Through digital resources, students will be able to closely observe crucial structures of the flora and fauna in their very own urban habitat!

Related Standards

- Observe, ask questions, and explain how specialized structures found on a variety of plants and animals (including humans) help them sense and respond to their environment.

Key Terms

- Structure - something that is made up of parts that are connected in a certain way
- Function - a purpose for a specific need/job
- Internal structure - structures found on the inside of living things
- External structure - structures found on the outside of living things

Materials List

- Internet access
- *Urban/Desert Flora & Fauna Pictures & Videos* - included in the *Activity Description* section
- Computer/phone with audio
- Journal
- Pen/pencil
- Colored pencils/crayons

Activity Description

1. Prompt students to review the plant and animal observations in their journals from *Day 1: Living vs. Non-living* and *Day 2: Investigation Energy Distribution*.
 - *What plants and animals did we observe on our tour? What did they look/act like?*
 - *What was their habitat like? How was their habitat supportive of their needs?*
 - *As we have seen, different habitats support the needs of certain types of plants and animals. But, how do these plants and animals survive in their supportive habitats? What about them/what do they do that helps them survive?*
 - *What kind of basic life functions (movement, growth, etc.) need to be carried out by the plants and animals we observed?*
 - *What kinds of internal and external structures do they have that help them carry out these functions?*
 - Prompt students to discuss and share ideas, referencing their recorded observations in journals.
2. To best help us identify the types of structures and functions of our habitat's plants and animals, let's take a closer look!
 - *Show students the Urban/Desert Plant and Animal Pictures & Videos below.*
 - *Prompt students to discuss and record in their journals the structures and functions they can observe in each picture and/or video and by referencing prior experiences.*
 - *Picture and video examples are as follows:*
 - **Dog** - uses legs to move/run, uses strong teeth to chew hard food, uses lungs to breath, etc.



- **Rose** - moves/bends towards sunlight to grow/make food, uses stem to transport water, uses roots to soak up water, etc.



- [Parts of a Plant](#)
 - *BrainPOP jr Resource: Request **free** access during the school closure period using this [link](#).*
- [Plant Time-Lapse Bending Towards Light](#)
- [Bean Roots Time-Lapse Soil Cross Section](#)
- **Pigeon** - uses wings to move/fly, uses beak to pick up small pieces of food, uses lungs to breath, etc.



- **Cactus** - uses long roots that grow close to the surface to soak up water, uses stem to store water and grow/make food using sunlight, uses spines to protect itself from predators, etc.



- [Cactus Stem Structure & Function](#)
- **Grasshopper** - uses legs to move/jump, uses tong-like mouthpart to chew food like leaves, uses wings to move/fly, etc.



Closure

3. Based on our observations and picture/video evidence, it seems as though these plants and animals have internal and external structures that help them carry out basic life functions, like moving, growing, etc.! Let's continue these conversations by considering the following:

- *Do any of the plants and animals have similar structures? If so, what are the structures?*
- *Do these similar structures serve similar functions? If so, what are the functions?*
- *What would happen if these plants and animals did not have the structures they need to carry out basic life functions or if the structures were damaged?*

Extensions

Watch!

- National Geographic Kids - [Pigeon Genius](#)
- National Geographic Kids - [Dog Genius](#)
- National Geographic Kids - [Twisting Trees](#)