



SURVIVAL STRUCTURES

Classroom
30 -45 minutes

Learning Target(s):

Students will be able to identify how plants and animals use their external structures to survive.

Measurable Objective(s):

By end of lesson, 80% of students will identify at least one external plant or animal structure and how it helps the organism to survive.

Interpretive Thought(s):

External plant and animal structures are like superpowers.

Materials:

Story, Parts Posters,
Worksheet, Crayons

Supports NGSS:

1-LS1-A

INTRODUCTION

1. Introduce the upcoming field trip to Ballona Discovery Park
 - a. Going to see plants and animals and discover their superpowers
 - b. *Answer questions if any arise, especially if there are fears*
2. What does the word “survive” mean?
 - a. To remain alive
 - b. Review what is needed to survive: food, water, air, shelter
3. Today we are going to discover how plants and animals use all of their “superpower” body parts to survive.

BODY

Read the *Who Wanders through Wetlands* story¹ about the Great Blue Heron, Willow and Coyote. While reading, highlight the various body parts each organism is using and utilize the following discussion points.

1. Great Blue Heron
 - a. Beak - Can you describe the Great Blue Herons beak? How does it use it to survive?
 - i. Long and sharp, use it to grab fish and small animals to eat
 - b. Legs - Can you describe the Great Blue Heron’s legs? How does it use them to survive?
 - i. Long and skinny legs help it to wade in the water while hunting for food
 - c. Wings - Birds are special because they have wings. How can a Great Blue Heron use them to survive?
 - i. Wings can be used to move to new places to find food, escape predators and seek shelter to roost overnight.
2. Willow
 - a. Leaves - Can you describe the Willow leaves? How are they used to survive?
 - i. Narrow and green; they catch sunlight to make food for the plant
 - b. Seeds - What do the seeds look like? How do they help the plant to survive?
 - i. Fluffy to catch the wind to move elsewhere and white; they help make more willow plants
 - c. Roots - How do the roots help a plant survive?
 - i. They use roots to gather up water and nutrients from the soil; hold plant in place
3. Coyote
 - a. Eyes, ears and nose - How does a coyote use its eyes, ears, and nose? Is it like how you use your eyes, ears or nose to find food?
 - i. To find food and escape danger, etc.
 - b. Fur - What color is a coyote’s fur? How does the color of its fur help it survive?
 - i. Brown; it can blend in to its surroundings (*introduce the term camouflage if the group is advanced*) to catch its food; to stay warm
4. In our story we’ve seen some plants and animals and how they use their special body parts to survive. They use their special body parts to find and catch food, to find water, and to build their shelter. Let’s review some of the body parts plants and animals use that are special.
 - a. *Use the Parts Poster to review each of the terms below*
 - b. Plant Parts
 - i. Roots - gather water and nutrients from the soil; hold plant in place
 - ii. Bark - thick bark protect the plant from damage (fire, pests, etc.) but all stems help the plant grow towards sunlight and allow for transportation of materials
 - iii. Leaves - gather sunlight and air to make food for the plant
 - iv. Flowers - provide nectar and pollen to animals which helps the plant to make seeds

- v. Seeds/Fruit - Carry the seeds of a plant far away and provide food to animals
- c. Animal Parts
 - i. Eyes, Ears and Nose - help an animal see, hear and smell danger, food and water
 - ii. Mouth/Beak - help an animal catch food, build shelters and defend themselves
 - iii. Paws/Claws - help an animal catch food, build shelters and defend themselves
 - iv. Fur/Feathers - help keep an animal warm and may help it blend in for safety or hunting

CONCLUSION

1. Let's do a worksheet to help us remember how plants and animals use their superpower body parts to survive.
 - a. *Hand out Pre-Visit Worksheet² and have students draw an example of an animal or plant body part and write how it helps it to survive.*
 - b. *Be sure to give students enough time and walk around to encourage and help students as needed.*
2. *Collect at the end of the lesson for Friends of Ballona Wetlands assessment. They can be scanned and shared before being returned to the students.*
3. You all did a great job showing how plants and animals use their superpower body parts to survive by using them to find food, water, and make shelter. When we go out to explore Ballona Discovery Park we are going to search for plants and animals and see how they are specially designed to survive in nature.

VOCABULARY

Bark: the tough protective covering of woody stems of plants

Beak: the hard covering on the jaws of a bird

Camouflage: coloring that makes it possible for an animal to blend with its surroundings, making it harder to see

Predator: an animal that hunts, kills, and eats other animals to survive

Prey: an animal that is hunted by another animal for food

Root: the plant part which is usually underground and helps hold a plant in place and take water and "food" from the soil

Seed: the object that many plants make to reproduce

Survive: to remain alive

Talon: the hooked, sharp claw on a bird

References

¹ Story inspired by California's Education and the Environment Initiative. (2013). California Environmental Protection Agency (2nd Ed.), Unit 1.2.a *Surviving and Thriving Reader: Beavers and Where They Live*.

² Worksheet inspired by California's Education and the Environment Initiative. (2013). California Environmental Protection Agency (2nd Ed.), Unit 1.2.a *Surviving and Thriving: Lesson 1*.

WORKSHEET RUBRIC

Supporting Disciplinary Core Idea 1-LS1-A associated with NGSS 1-LS1-1:

All organisms have external parts. 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. Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow.

	Improvement 1	Approaching 2	Meets 3	Exceeds 4
Objective 1	Did not identify a part of a plant/animal provided	Partially identified part of a plant/animal provided	Identified a part of a plant/animal provided	Mastered identification of the parts of the plants/animals provided
<i>Example(s)</i>	<i>No drawn or written reference to a part of a coyote, heron or willow</i>	<i>Incompletely drawn or written reference to a part of a coyote, heron or willow</i>	<i>Clear drawing with label or a written identification of a part of a coyote, heron or willow</i>	<i>Draws or describes more than one part of a plant/animal</i>
Objective 2	Did not describe how the part helps the plant/animal survive	Partially described how the part helps the plant/animal survive	Demonstrates basic understanding of how the part helps with plant/animal survival	Mastered understanding of how the part(s) help plants/animals survive
<i>Example(s)</i>	<i>No drawn or written reference to why the part helps the plant/animal survive</i>	<i>References a part that helps with survival but does not explain why</i>	<i>Written or drawn reference to how that adaptation helps the plant/animal survive</i>	<i>Utilizes scientific terms (ex: adaptation, predator, etc.)</i>