SUM OF THE PARTS

Fourth Grade: Animal Body Parts

OVERVIEW

For this activity, **head to the Ecosystems Gallery**. On the Lower Level, you will find the **Kelp Forest**. Lead your group into the Kelp Forest to explore how animals use their *external body parts* to survive. The Kelp Forest features a large aquatic habitat and a number of smaller tanks with individual animals.

Next Generation Science Standards

This lesson supports the following performance expectation:

4-LS1-1 Students who demonstrate understanding can construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.

Focus Question
How do different animals use different body parts for the same types of functions?

Body Structures

All plants and animals have body parts that help them survive and thrive. Some structures are internal and found on the inside of the plant or animal. Other structures are external, or on the outside of the plant or animal. This exploration focuses on how external structures help an animal survive, and how different animals have different body parts that perform the same functions.

In the Kelp Forest, you will see a variety of organisms that live right off the coast of California. Although all of the animals look different, they are all connected because they need to find and eat food, protect themselves, and respond to their environment through movement. External body parts are essential in all of these functions, although the body parts that are involved may look very different. For example, a fish and a sea star both need to move around, but a fish uses fins and a sea star uses arms and suckers on their arms. Students should be challenged to consider how different types of body parts serve the same function.

SMALL GROUP CHALLENGE

Help your group explore how animal body parts are related to the basic functions of finding and eating food, moving or responding to the environment, and protecting themselves. Students should work together to complete the graphic organizers for the Kelp Forest.

1. Introduce your group to the Kelp Forest. Inside the Kelp Forest they will find a number of animals that live right off the coast of California.
2. Have students look around the Kelp Forest on their own. They should pick two interesting animals that they want to investigate.
3. As a group, decide on which two animals you will focus on. Encourage students to pick two different types of animals, such as a fish and a crab. The two animals should not be two types of fish, or a fish and a shark.
4. Assign students to answer different questions about the first animal, drawing their responses on the graphic organizer:
    - Have one student draw a picture of the complete animal.
    - Which body part helps the animal move? Draw and label this body part.
    - Which body part helps the animal eat? Draw and label this body part.
    - Which body part helps the animal protect itself? Draw and label this body part.
    - Find one more interesting thing this animal does. Draw and label the body part that helps it do that interesting thing.
5. Repeat Step 4 for the second animal.
6. As a group, discuss the different functions and body parts that helped the animal eat, move, or protect itself. How were the body parts different between the animals? How were they the same?

VISIT DEBRIEF

As you wind up your visit to the Ecosystems Gallery, ask students to reflect on what they found in the Kelp Forest. Have students record a response to the focus question in their notebook: *How do different animals use different body parts for the same types of functions?*

IN THE CLASSROOM: GOING FURTHER

You will need:

- Writing tools
- News article (Newsela article attached, or find a related article about an animal using external body parts)
- Science Center graphic organizer
- Student Notebooks

Close Read and Comparison

Connect to what students observed at the California Science Center with a close read of a news article that discusses an animal using external body parts to survive or change its environment. The following structure uses the attached article downloaded from Newsela, an online resource for teachers where you can access grade-level appropriate and Common Core-aligned articles about current events.

Tell students that they will be doing a close read about an octopus that escaped from its aquarium one night.

1. Have the students read the text. Once they are done, they should share the main idea of the article with a neighbor.
2. Tell students to read the article a second time, with the instruction to underline the actions that the octopus took the night of the escape.
3. Discuss what students have underlined and have them number these events in the order that they happened.
4. Have students read the story a third time, this time circling the octopus's body parts that are mentioned and writing in body parts that are not mentioned, but that the octopus might have used in the escape.
5. Discuss how the body parts that the students circled or wrote (or lack of certain body parts, such as bones) played a role in this story.
6. Have students work in small groups to consider the animal they observed at the Science Center in this same situation. What body parts might this animal use to escape from the Science Center?
7. *Optional:* Students may create posters or short stories explaining how their animal could use its body parts to escape.

KELP FOREST ANIMAL 1: _____

Draw Your Animal

Draw or label a body part that helps this animal move.

Draw or label a body part that helps this animal eat.

Draw or label a body part that helps this animal protect itself.

Draw another body part and explain how it helps this animal survive.

KELP FOREST ANIMAL 2: _____

Draw Your Animal

Draw or label a body part that helps this animal move.

Draw or label a body part that helps this animal eat.

Draw or label a body part that helps this animal protect itself.

Draw another body part and explain how it helps this animal survive.