

You're Like Me!



Topics

Inheritance

Grade

1

Site

Outdoors, Aquarium,
Classroom

Duration

Two 60-minute sessions

Materials

- Storyboards
- Mobile devices or computers and cameras
- Materials for animal representations

Vocabulary

trait, evidence

Next Generation

Practices

Constructing Explanations

Core Ideas

LS3.A Inheritance of Traits

Crosscutting Concepts

Patterns

Performance Expectations

See page 3

Focus Question

How are animals similar to their parents?

Overview

After discussing the similarities between animals and their parents, students will choose one rocky shore animal and create a video demonstrating how it is similar to its parents and dissimilar from unrelated animals.

Objectives

Students will be able to:

- Discuss how animals are similar (but not exactly like) their parents and dissimilar from other types of organisms.
- Create a video demonstrating their understanding of animals' similarity to their parents.

Background

The Next Generation Science Standards include the disciplinary core idea of inheritance of **traits** and variance of traits. In K-2, students are expected to understand that “young organisms are very much, but not exactly, like their parents and also resemble other organisms of the same kind.” As students get older, they begin to build on this understanding. They learn that organisms inherit different information and adaptations, which help them survive in their habitat. In middle and high school, students extend this as they learn about genetics, heredity and DNA.

This lesson is an opportunity for teachers to integrate the Next Generation Science Standards with the Common Core State Standards (CCSS) since both discuss communicating information and the CCSS specifies the use of digital tools for this process across all grade levels.

Teacher Preparation

1. Plan a field trip to the Monterey Bay Aquarium or a tide pool to observe rocky shore animals in order to create the videos. If this isn't possible, adjust the lesson to focus on schoolyard animals rather than those in the rocky shore.



VOCABULARY

trait– an inherited characteristic

evidence– data and information that support a claim



TEACHER TIP

If students are expected to create a stop-motion video, they need to have experience with stop-motion before this lesson. Show them examples, let them make a flipbook, and/or allow them to play with the app they'll be using before starting this project.

2. Decide whether students will create a video, a stop-motion video, or a stop-motion slide show. If they are creating a video, they can use the video camera on a mobile device. If they are making a stop-motion movie on tablets, they can download a free stop-motion movie-maker app of your choice. If they will make their movie with a computer, they will need to take photos and import those photos into a Google Slides presentation, which they can play like a flipbook.
3. Create your own version of the video to test the materials and, if needed, to use as a sample for students.

Procedure

Part One: Are You My Mother?

1. INTRODUCE THE FOCUS QUESTION TO THE CLASS.

Share the question: *How are animals similar to their parents?* You may write it on the whiteboard or have students add it to their science notebook. Give students time to write their initial thoughts down or discuss with a partner.

2. CONNECT TO STUDENTS' PRIOR KNOWLEDGE OF TIDE POOLS.

As a class, talk about students' experiences with tide pools. *Where can we find tide pools in our area?* If possible, visit a local tide pool as a class. If that isn't possible, read a book about tide pools or watch a video about tide pools. Then, as a class, make a list of all the rocky shore animals that students know.

3. READ ALOUD

Read aloud the book "Are You My Mother?" by P.D. Eastman. As you read aloud, discuss how the baby bird might know an animal is or isn't its mother. (*What **evidence** is there? What **traits** do the other animals have that are unlike the birds' traits?*) Explain that students will get to create their own version of "Are You My Mother?" about a rocky shore animal.

4. WRITE A DRAFT

Have each student choose a rocky shore animal to be the main character in their version of "Are You My Mother?" Have students use the **storyboard student sheet** to write and illustrate a draft of their book. This student sheet includes sentence starters and space for illustrations, as scaffolds to support students. On each page, students should identify the body parts that are similar or dissimilar between the two animals, to use as evidence of a relationship.

Part Two: Create the video

5. CREATING THE MAIN CHARACTER

Have students find or create an artistic representation of the animal that is the main character of their book. They will use this in the video.

6. MAKING THE VIDEO

Show students a sample of the type of project you'd like them to create. If students are working in pairs, discuss roles– narrator, recorder, and/or model mover. Once students understand the tech tools they are using and the project

expectations, allow students time at the Monterey Bay Aquarium or field site to create their project based on the storyboards they created in Part One.

Part Three: Sharing videos and making content connections

7. CONCENTRIC CIRCLE SHARING

After the students have completed their videos and are back in the classroom, have them stand with their partners and their video. Create two concentric circles, each with the same number of partners so one circle is inside the other. Ask student partners in the inside circle to face the partners in the outside circle, so each group is partnered with another group. Have the partnered groups share their videos. Next, have the inside circle move clockwise one group and share again. Continue this until the inside circle has made a complete rotation or you run out of time.

8. CLASS DISCUSSION

As a class, discuss what students have learned about parents and their offspring. *When we see an animal like a hermit crab, how do we know its parents were hermit crabs? Do animals look exactly like their parents? Can we tell the difference between a hermit crab's parents and just some other hermit crab? Why not?*

9. RETURN TO THE FOCUS QUESTION.

Have students revisit the question: *How are animals similar to their parents?* Students may think on their own or discuss with a partner. Then, in their science notebooks, have students draw a line of learning and under it, add to their original thoughts about the question.

Resources

Books

Are You My Mother? Eastman, P.D. Beginner Books, 1960.

Is Your Mama a Llama Guarino, Deborah. Scholastic, 1997.

Standards

Next Generation Science Standards www.nextgenscience.org

Performance Expectation

Supports 1-LS3-1. Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.

Common Core State Standards www.corestandards.org

Language Arts, W.1.6

With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.



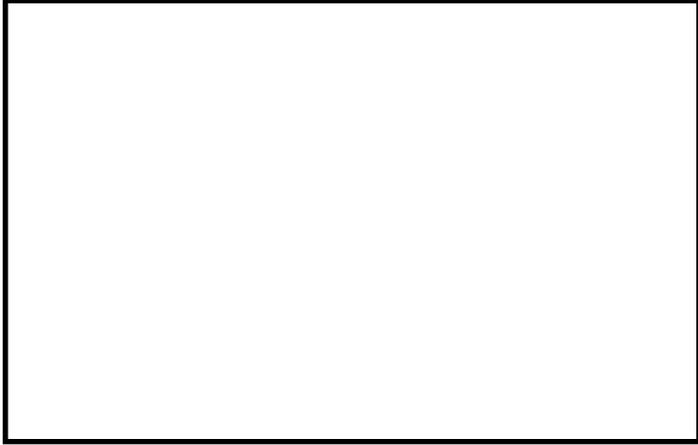
TEACHER TIP

You could enhance to this exploration of traits by sharing pictures of your parents and you as a child. Students could bring in photos of their family members and talk about the traits they inherited from their parents. If needed, consider how an activity like this would work with adopted students.

**THE MISSION OF THE
MONTEREY BAY
AQUARIUM
IS TO INSPIRE
CONSERVATION OF THE
OCEANS.**

Are You My Mother Storyboard

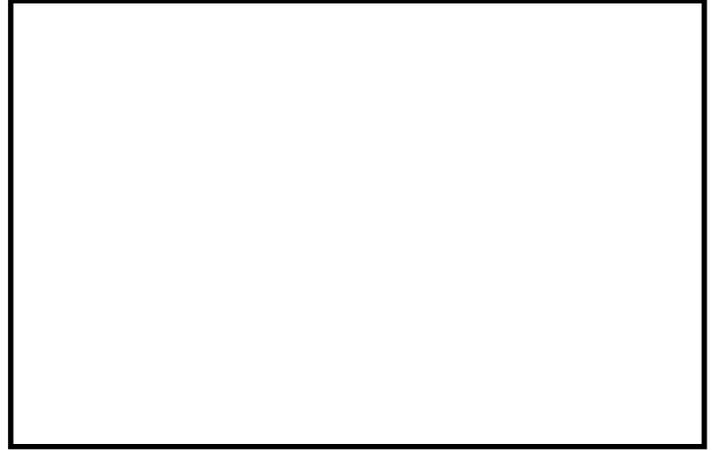
_____, are you my mother?



You have _____!
You are not my mother.

1

_____, are you my mother?



You have _____!
You are not my mother.

2

_____, are you my mother?



You have _____!
You are not my mother.

3

_____, are you my mother?



You have _____ and
_____ just like me!

You might be my mother!

4