

Animals with Shells Classroom Activity

The Classroom Activity introduces students to the context of a performance task, so they are not disadvantaged in demonstrating the skills the task intends to assess. Contextual elements include: an understanding of the setting or situation in which the task is placed, potentially unfamiliar concepts that are associated with the scenario; and **key terms** or vocabulary students will need to understand in order to meaningfully engage with and complete the performance task. The Classroom Activity is also intended to generate student interest in further exploration of the key idea(s). The Classroom Activity should be easy to implement with clear instructions.

Please read through the entire Classroom Activity before beginning the activity with students to ensure any classroom preparation can be completed in advance.

Throughout the activity it is permissible to pause and ask students if they have any questions.

As a part of this activity, the facilitator will lead a discussion that uses a Venn diagram as an organizer. The purpose of the Venn diagram is to assist students in their understanding of the key concepts that are included in the performance task. Students will **not** be tested on the use of the Venn diagram.

Resources Needed:

- Chart paper, whiteboard, or chalkboard
- Markers or chalk
- Some method of displaying ancillary materials¹

Learning Goal:

- Students will understand the context of the key concepts related to the topic:
 - Animals that seem very different can be alike in some ways.
 - Some animals may seem different but they are alike because they have shells.

Students will understand the key term:

- **shell:** a hard outer covering

Note: This definition is provided here for the convenience of the facilitator. Students are expected to understand this key term in the context of the task, not memorize the definition.

Animals with Shells Classroom Activity

[Purpose: The facilitator’s goal is to help students understand what is alike and different about animals. This activity will allow students to be active participants as they explore the concept of alike/different in the context of the performance assessment and its focus on animals with shells.]

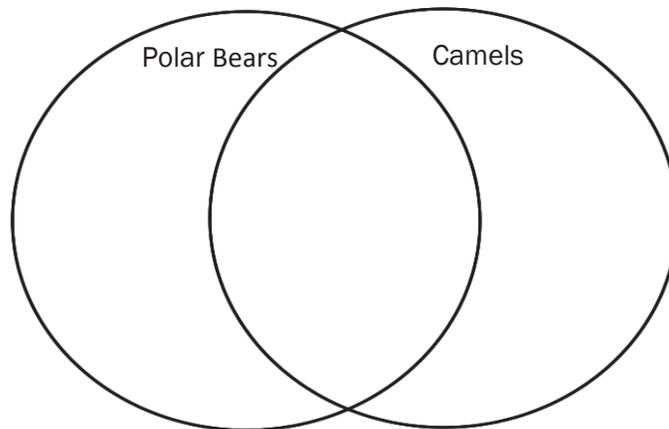
Facilitator says: “Today, we will get ready for the Animal with Shells Performance Task. Animals that seem very different can be alike in some ways. For example, polar bears and camels are alike and different. They are alike because both have fur.”

¹ Facilitators can decide whether they want to display ancillary materials using an overhead projector or computer/Smartboard, or whether they want to produce them as a handout for students.

[Show **Figure 1: Polar Bear and Camel**. Note: For students who are visually impaired, read the description below the photo.]

Facilitator says: “They are different because a polar bear lives in very cold places, like the North Pole and a camel lives in the desert. Let’s think about how polar bears and camels are alike and different in other ways.”

[Draw a Venn diagram with two overlapping circles on the chart paper, whiteboard, or chalkboard. Label the first circle *Polar Bears* and the second circle *Camels*. See the example below.]



Facilitator says: “In the left circle I have written *Polar Bears* and in the right circle I have written *Camels*. Any information that is true about both animals will be put in the middle, where the two circles cross over into one another. I want you to tell me two ways that polar bears and camels are alike.”

[List responses in the overlap of the two circles.]

Facilitator says: “Tell me two ways that camels are different from polar bears.”

[List responses in the right circle.]

Facilitator says: “Now tell me two ways that polar bears are different from camels.”

[List responses in the left circle.]

[Review all answers.]

Note: Make sure students arrive at the common understanding that:

- Animals that seem very different can be alike in some ways.

[Say and write the common understanding on the chart paper, white board, or chalkboard.]

Note: The following section can be modified to accommodate various teacher-student interaction types such as a teacher-led discussion with the entire class, teacher-student discussion for remote locations with a single student, or small groups.

[Divide students into groups of 3–4.]

[Show **Figure 2: Tortoise and Armadillo**. Note: For students who are visually impaired, read the description below the photo.]

Facilitator says: “Next, think about a tortoise and an armadillo. A tortoise is an animal that lives on land. An armadillo is an animal that sleeps during the day and comes out at night. It has four legs, a tail, and tall ears.

Facilitator says: “In your group, discuss what makes these two animals alike and what makes them different.”

[While students are discussing, draw a Venn diagram on the chart paper, whiteboard, or chalkboard. Label the first circle *Tortoises* and the second circle *Armadillos*.]

[After three minutes, have students meet as a class to share their ideas.]

Facilitator says: “When I call on your group, choose someone from your group to tell the class what your group thought about how these two animals are alike and different. First, how are tortoises and armadillos alike?”

[List student responses in the appropriate space in the Venn diagram.]

Facilitator says: “How are tortoises and armadillos different?”

[List student responses in the appropriate space in the Venn diagram.]

Possible class discussion questions (*unscripted*):

- Do both animals have the same body type?
- How are their bodies alike on the outside?
- Are they hard or soft on the outside?

Note: Make sure students arrive at the common understanding that:

- Some animals have shells, like armadillos and tortoises.

[Say and write the common understanding on the chart paper, white board, or chalkboard.]

Facilitator says: “You are right! Both of these animals have a shell. Why do you think they need shells?”

[List responses on the chart paper, whiteboard, or chalkboard.]

Possible student responses (*unscripted*):

- They use their shell as protection from other animals.
- They can use their shell to hide because it looks like the area around them.
- Their shell protects their bodies.

Facilitator says: “In your performance task, you will be learning about other animals that have shells. The work you did today should help prepare you for the research and writing you will be doing in the performance task.”

Ancillary Material

Figure 1

Polar Bear



Picture Description: This is a picture of a polar bear walking on all four legs on a chunk of ice. The polar bear has fur and big paws. He has short legs and is not very tall.

Photo of polar bear walking on ice (Image 1848R-811866-R-X999), copyright by SuperStock. Used by permission.

Camel



Picture Description: This is a picture of a camel walking on four legs in the desert. She has fur and a hump on her back. Her legs are long and she has hooves. She is very tall and has a long neck.

Photo of camel in desert (Image 1896R-7271-R-X999), copyright by SuperStock. Used by permission.

Ancillary Material

Figure 2

Tortoise



Picture Description: This is a picture of a tortoise. The tortoise has a hard shell on his body with the legs and head sticking out. He can pull his legs and head into the shell. He has a short tail.

Photograph of Indian star tortoise-Houston Zoo by Jacob.jose. See source citation 1.
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Armadillo

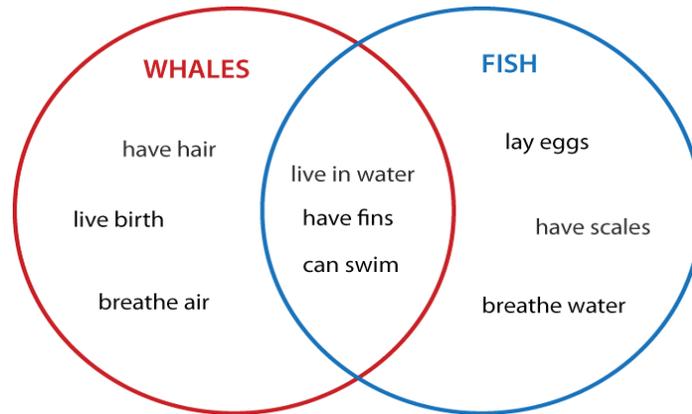


Picture Description: This is a picture of an armadillo. The armadillo has a hard shell on his long back. The shell does not cover his head. He has two ears on top of his head. He walks on four legs and has a very long tail.

See source citation 2 regarding photograph of Nine-banded Armadillo.
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Teacher Resource for Venn Diagrams

Using the knowledge of the scope and sequence of instruction in the district/school, and the personal experience working with the students who participate in this activity, it may be necessary for the facilitator to provide a brief example of how a Venn diagram works. Below you will find an example of a Venn diagram and a description of how it should be used.



1. Two circles are to be drawn so that the circles intersect in the middle.
2. Each circle is labeled with the topics that are being compared (e.g., *Whales* is the title in the circle on the left and *Fish* is the title in the circle on the right).
3. Any information that is true only of the topic in the circle on the left (e.g. *Whales*) is placed in the portion of the circle that does not intersect with the circle on the right.
4. Any information that is true only of the topic in the circle on the right (e.g. *Fish*) is placed in the portion of the circle that does not intersect with the circle on the left.
5. Any information that is true of both topics is placed in the intersection of the circles.
6. Viewing the Venn diagram, students see the differences (the responses included in the nonintersecting portions of the circles) and the similarities (the responses included in the intersecting portion of the circles) between what is being compared.

Note about Source Citations

The websites listed serve only as documentation of sources used to develop the classroom activity. They are not intended or recommended to be used as part of classroom activity administration.

Source 1: http://commons.wikimedia.org/wiki/File:Indian_star_tortoise_-_Houston_Zoo.jpg

Source 2: <http://www.birdphotos.com>.

Source 3: http://commons.wikimedia.org/wiki/File:Nine-banded_Armadillo.jpg