



Tennessee Aquarium Science Streams

Presented by



Animals and Their Needs

Video Focus Question: What do animals need to live and grow?	Length of video: 12 minutes 19 seconds
Science Standards	
TN K.ESS3.1 Use a model to represent the relationship between the basic needs (shelter, food, water) of different plants and animals (including humans) and the places they live.	
TN K.ETS1.2 Describe objects accurately by drawing and/or labeling pictures.	
NGSS K-LS1-1 Use observations to describe patterns of what plants and animals (including humans) need to survive.	
Main Learning Goal: Develop an understanding of what all animals, including humans, need to live and grow.	
Science Content Storyline Animals have basic needs for survival: food, water, and shelter. Those needs are met by where the animal lives. Observing a habitat can offer information about the animals that live there.	
Ideal Student Response to Focus Question: Animals, including humans, need food, water, and shelter to live and grow.	

Preparation

In Advance <ul style="list-style-type: none">• Preview the video.• Decide whether you would like students to brainstorm what they think animals need individually, in small groups, or as a class (timestamp 0:45).• Determine whether you would like students to write or draw their ideas during the observations of different habitats.	Materials Teacher <ul style="list-style-type: none">• Butcher paper or board for brainstorming• Marker or dry erase marker for brainstorming Student <ul style="list-style-type: none">• Paper, 2 pieces per student, more if they will write or draw observations• Crayons or markers
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Key Activities and Reflection

Timestamp	Science Content Outline	Guidance to Support Students
0:19	Introduction	Play the introduction for students. Pause the video and ask students what they think the video will be about. For each answer, ask students if they can share what they heard that makes them think the video will include that idea. Accept all answers at this point. Once students have shared their ideas, resume the video.
0:45	Brainstorming about animal needs	Continue the video so students can learn about the brainstorming activity. Ask students to think about what they think animals need to live. You might encourage them to think about a pet and what humans do to care for that pet. You may wish to have students draw a picture and then share their ideas. Alternately, you can have students call out their ideas while you make a list on the board or on butcher paper. Ask probing questions to find out more about why students think their idea is a need that animals have. Accept all ideas at this point.
1:10	Observations of a Barred Owl habitat	<p>Write “Barred Owl” on the board so students can associate the name with the animal.</p> <p>Tell students they are going to have a chance to observe where the Barred Owl lives at the Tennessee Aquarium. As they view the different views of the habitat, have them look for items that might meet the owl’s needs. Keep the brainstorming chart visible so students can use it to remind them of items they might look for. If it would be helpful for your students, consider reading the items on the list aloud just before restarting the video to help them keep their ideas in mind.</p> <p>In the next section, students will have a chance to hear how the habitat meets the needs of the owl, so you do not need to point out particular items at this point. Play the video to allow them to make observations. You may wish to encourage them to draw or write down what they see in the habitat.</p>
2:30	How the Barred Owl’s needs are met	Play the video for students to hear how the Barred Owl’s habitat has food, water, and shelter. Tell students that it sounds as though the owl’s needs are being met with its habitat.
2:53	Observations of the lemur habitat	Continue playing the video to give students a chance to observe the lemur habitat. You may wish to have them write or draw any ways that the lemurs’ needs are met in the habitat.
4:25	How the lemurs’ needs are met	As the video continues, students will have a chance to hear about the lemurs’ food, water, and shelter. The Educator points out that she is seeing a <i>pattern</i> that both the Barred Owl and the lemurs have food, water, and shelter in their habitats. Emphasize this statement to students.

4:59	Observations of the turtle habitat	Students are going to have a chance to observe a turtle habitat. Before you play the video, you may wish to have them divide a piece of paper into 3 parts and write “food,” “water,” and “shelter” at the top of each section. As you play the video, ask students to watch to see if the pattern of animals having food, water, and shelter in their habitats still holds. If you did have them make a paper with sections, ask them to draw or write what they see in the turtle habitat that fits with each need.
6:01	How the turtles’ needs are met	Play the video so students can hear how the turtle habitat provides food, water, and shelter.
6:22	There are different habitats in nature	Ensure that each student has 2 pieces of paper and access to crayons or markers before playing the video. You may choose to pause the video and discuss how students think animals in the wild get their needs met. Have students complete the directed drawing for the two habitats.
10:07	Reasoning about where animals live	Ask students to pay attention to the description of the animals as you play the video. Consider pausing the video at timestamp 10:45 to hold a discussion about which habitat students think the sea turtle would live in and which habitat they think the lizard would live in. For each idea, ask the students for their evidence and reasoning about why they matched the animal with the habitat. Continue playing the video to allow students to hear which animal matches with each habitat. Have them pay attention to how the habitat meets the animal’s needs with food, water, and shelter.
11:39	Conclusion	Play the conclusion of the video to challenge students to watch for animals in nature and consider how the habitat meets the animal’s needs.

Extension Activities

- Each of the videos in the Science Streams series has an introduction by people in different departments at the Aquarium. This offers an opportunity to talk about the many different types of jobs it takes to run an aquarium.
- Using the challenge in the conclusion as a starting point, show students pictures of different habitats. Share an animal that lives in the habitat and ask students to describe how the habitat meets the animal’s needs.
- Because the video shows a Barred Owl and talks about food being one of its needs, consider purchasing owl pellets and helping students dissect them. Owl pellets are the parts of its food that the owl cannot digest and later regurgitates. In owl pellet dissection activities, students can sometimes find small bones, fur, or insect exoskeletons to show what the owl ate.
- The Plant Needs Science Streams video discusses what plants need to live and grow. You can use that video in conjunction with this one to meet the NGSS standard K-ESS3-1: *Use a model to represent the relationship between the needs of different plants and animals (including humans) and the places they live.* Have students watch both videos then create a Venn diagram or other representation. They can then use the representation to compare and contrast the needs of plants and animals. They can also use the representation to reason about a “mystery organism” to decide if it is a plant or an animal.