

Science Tech Trek: Needs of Animals and Plants

Teacher Post Trip Guide



Post Trip Overview

After completing their Science Tech Trek, students will have the opportunity to reinforce and extend their understanding of the needs of animals and plants with post-field trip learning activities in the classroom. Teachers will guide their learners through a review of the difference between wants and needs and what animals need to survive. Then, learners will get to begin exploring what plants need survive and how humans can help care for plants and animals.

Supported [Amplify Science](#) Lessons

Kindergarten Amplify Unit: Needs of Plants and Animals

Lessons:

- 1.4 Exploring Animal Needs
- 1.5 Investigating Animal Habitats
- 4.3 Reflecting on Needs of Living Things

Supported NGSS Standards

K-LS1-1: Use observations to describe patterns of what plants and animals (including humans) need to survive.

K-ESS3-1: Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.

Science and Engineering Processes	Disciplinary Core Ideas	Crosscutting Concepts
Analyzing and Interpreting Data <ul style="list-style-type: none"> • Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. (K-LS1-1) 	LS1.C: Organization for Matter and Energy Flow in Organisms <ul style="list-style-type: none"> • All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow. (K-LS1-1) ESS3.A: Natural Resources <ul style="list-style-type: none"> • Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do. (L-ESS3-1) 	Systems and System Models <ul style="list-style-type: none"> • Systems in the natural and designed world have parts that work together. (K-ESS3-1)

Supported Common Core Standards

CCSS.ELA-LITERACY.W.K.8: With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.

CCSS.ELA-LITERACY.SL.K.5: Add drawings or other visual displays to descriptions as desired to provide additional detail.

CCSS.ELA-LITERACY.L.K.5a: Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent.

STT Central Phenomenon Questions	Science Tech Trek Learning Objectives
How do animals survive in a place that is not their natural habitat, like an aquarium?	Students will be able to... <ul style="list-style-type: none"> • Identify that animals need food, water, and shelter to survive • Distinguish that different animals have different needs • Explore how humans care for animals and meet animals' needs • Observe animals, investigate scientific questions, and use tablets to document their explorations

Post-Trip Guide

Logistics	
Facilitated by classroom teacher at school Time: 25-30 minutes	
Learning Objectives	Materials
Students will be able to... <ul style="list-style-type: none"> • Differentiate between wants and needs • Identify that animals need food, water, and shelter to survive • Recognize that animals find what they need to survive in their habitats • Explain how humans care for animals and meet animals' needs 	<ul style="list-style-type: none"> • Printed Science Tech Trek summaries (examples on last page) • Pencils • Crayons/colored pencils/markers • Computer/projector/speakers • Picture of Amazon Rising • Picture of a desert • Sea Curious video link: https://www.youtube.com/watch?v=T_xzclEI-IY
Prep	
<ul style="list-style-type: none"> • Print two copies of each Science Tech Trek summaries (one for each partner) • Pull up picture of Amazon Rising on computer • Find a picture of a desert online • Pull up Sea Curious video online 	
Facilitation Outline	
Quick Outline <ol style="list-style-type: none"> 1. Reviewing learning objectives and Science Tech Trek concepts 2. Expanding students' thinking on needs of plants 3. Creative connection 1. Reviewing Learning Objectives and Science Tech Trek Concepts <i>10 minutes</i> <ul style="list-style-type: none"> • Review the learning objectives for students' exploration of animal needs. • Remind students of what they did during their Science Tech Trek: <ul style="list-style-type: none"> ○ Explored what a red-footed tortoise needs to survive and how it can find what it needs in its habitat ○ Explored what a Caiman lizard, tambaqui, giant river turtle, or suckermouth catfish need to survive ○ Learned how aquarists and horticulturalists care for animals (provide food, water, shelter) at Shedd using tools like buckets, hive frames, tongs, and lettuce clips 	

- Have students share with a partner about what they think the difference is between a want and a need.
- Explain that a “need” is something that a living thing MUST have to survive. A “want” is something that might be nice to have but doesn’t help the living thing to survive. Facilitate a whole group discussion to brainstorm wants versus needs. Emphasize that animals need food, water, and shelter to survive:

Guiding Questions:

- What do you have to have to survive? (*focus on items related to food, water, shelter*)
 - What do animals need to survive? (*focus on items related to food, water, shelter*)
 - Do different animals need different things to survive?
 - What are things you want, but don’t need to survive?
 - What are things that animals might want, but don’t need to survive?
- Make sure students have their Science Tech Trek summaries and a writing utensil.
 - Have students draw something they want and something they need in the boxes on the front page of their summaries.
 - Have students circle the animal they explored in their Science Tech Trek on the bottom of the front page of their summaries.
 - Support students’ understanding of what animals need to survive by having the whole group review the models they made of animals’ habitats on the back page of the summary:

Guiding Questions:

- Point to the food you put in the habitat for your animal. Now circle it.
- Point to the water you put in the habitat for your animal. Now draw a square around it.
- Point to the shelter you put in the habitat for your animal. Now draw a triangle around it.
- Did you forget to put any food, water, or shelter in your habitat? (Tell students to draw this in if they forgot to add it.)

2. Expanding Students’ Thinking on Needs of Plants

8 minutes

- Show students the picture of Amazon Rising.
- Facilitate a discussion exploring plants’ need for sunlight, using a combination of partner sharing and whole group response:

Guiding Questions:

- When we explored Amazon Rising, did you see lots of plants or very few plants? (*lots of plants*)
 - How do you think plants get energy? Do they eat other things like animals do? (*no, most plants do not eat other things*)
 - Look at the plants in the habitats in Amazon Rising. Are they in spaces that are dark, or are they in spaces with lots of light? (*the plants are in spaces with lots of light*)
 - When we go outside, what shines lots of light on Earth? (*the sun*)
 - Do you have a new idea about how plants might get energy? (*plants get their energy from sunlight*)
- Confirm students’ thinking that plants get energy from sunlight and that they need it to survive.
 - Show students the picture of a desert.
 - Facilitate a discussion exploring plants’ need for water, using a combination of partner sharing and whole group response:

Guiding Questions:

- Compare the picture of the desert to the picture of Amazon Rising. What do you notice? (*guide students in comparing the amount of plants in each picture*)
- Amazon Rising is modeled after the Amazon rainforest. Is a rainforest somewhere that is very wet? Why is it wet? (*the rainforest is very wet, because of all the rain*)

- A rainforest gets lots of water from rain and has lots of plants. A desert is very dry and gets very little water and has very few plants. Do you have an idea about what else plants need to survive? (*plants need water to survive*)
- What is something that both plants AND animals need to survive? (*water*)
- Confirm students' thinking that plants need water to survive.

3. Creative Connection

5-12 minutes

- Remind students that there are ways that humans can help care for animals and meet their needs.
- Watch the Sea Curious video to see how people at the aquarium provide food for animals.
- Have students complete question 2 by drawing a picture of humans caring for the animal they circled on the front page of their summary. Another option is to have students draw an animal they saw in the Sea Curious video.
- Have students explain their drawing to another student, pointing out how a human is helping meet the needs of the animal.
- Share photos of your students' post-trip learning with #SheddLearning via Twitter, Instagram, or Facebook! Or email the photo with your school name to learning@sheddaquarium.org and for Shedd to tweet from @SheddLearning.





Student A.

Draw a picture of something you WANT:	Draw a picture of something you NEED:

Draw a ○ around the animal you learned about in your Science Tech Trek:



Caiman lizard



Tambaqui

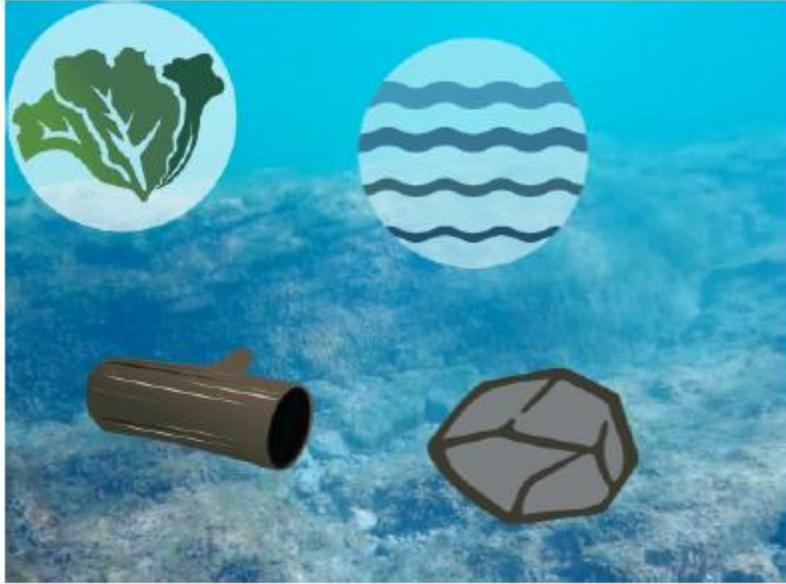


Giant river turtle



Suckermouth catfish

Science Tech Trek Summary Example



Draw a ○ around the food an animal can find in your habitat.

Draw a □ around the water an animal can find in your habitat.

Draw a △ around the shelter an animal can find in your habitat.

1. If you're missing any food, water, or shelter that an animal needs, draw it in your habitat!
2. In the space below, draw a picture of the animal and how humans can help care for it.