



Energy from the Environment

Kindergarten

Duration

30-45 minutes

Location

La Brea Tar Pits Museum

Supplies

- Worksheet
- Pencil
- Colored Pencils*
- Clipboard*

**Optional*

Standards

NGSS

K-LS1-1, K-ESS2-2, K-ESS3-1, K-2-ETS1-2

S+E Practices

1, 2, 3, 4

CCSS

CCSS ELA.W.2.7
CCSS ELA.W.2.8

Vocabulary

Resource •
Environment •
Ecosystem • Carnivore •
Herbivore

Concepts

- Ice Age Los Angeles was a complex ecosystem where many kinds of plants and animals found the resources they needed to survive.
- Animals need different resources to survive, and their fossils can give us clues about how they obtained these resources.

Objectives

- Students will understand what kinds of resources the animals of Pleistocene Rancho La Brea needed to survive.
- Students will compare two different animals to determine what they ate, and how the structure and shape of their teeth helped them eat their food.

Outline

1. Students will examine the Mark Hallett Mural inside the La Brea Tar Pits Museum and record as many resources as they can in 2-3 minutes.
2. Students will categorize the resources as either used by plants, or animals, or both.
3. Students will sketch the teeth of the dire wolf and the Columbian mammoth.
4. Using evidence from their sketches and from the skeletons in the Museum, students will make a claim about how the external features of each animal's teeth would help them eat their food.

Museum Visit

Create a La Brea Resource List

Students will use the Mark Hallett Mural located between the Columbian mammoth and the Dire Wolf Skull wall to get an idea of the kinds of resources available for the various plants and animals that lived in Los Angeles during the Ice Age. Using the first page of their lesson plan, students should take 2-3 minutes to make close observations of the mural, recording all of the natural resources they can see.

Students should think about resources like sunlight, air, water, plants, other animals, shelter etc.

When students have finished recording as many resources as they can find, they can use the second page of their lesson plan to sort the resources into “Needed by Plants,” “Needed by Animals,” or “Needed by Both Plants and Animals.” For example, a plant does not rely on plants or animals as a food resource, but both plants and animals need water and air.

Then, they can answer the question “Do different animals require different resources? Can you give an example?”

Tooth Observations*

Once students have an idea of the kinds of resources that different living things need to survive, they can look closely at two animals from Ice Age Rancho La Brea: the dire wolf and the Columbian mammoth. First, students should use their worksheet and sketch the teeth of both of these animals.

Remind students that scientific drawings do not need to be beautiful or perfect representations, but are sketches that communicate what we notice about something we’re observing. Students should note the shape, size, and texture of the teeth of both animals. If they want to, they can also label the different parts of their drawings.

Students can then use the next page to synthesize their observations:

- You looked at the teeth of two different animals today. Teeth are crucial to an animal’s survival because they help the animal bite and chew their food.
- Describe the differences in the two kinds of teeth you saw.
- How would the shape of a dire wolf’s teeth help it shear meat and crush bone?
- How would the shape of a Columbian mammoth’s teeth help it grind up grass?

*Variations and Extensions

The second portion of the lesson, “Tooth Observations” is optional, and does not have to be completed as a conclusion to the first part.

Energy from the Environment

My La Brea Resource List

Locate the Mark Hallett mural between the Dire Wolf Skull Wall and the Columbian mammoth skeleton.

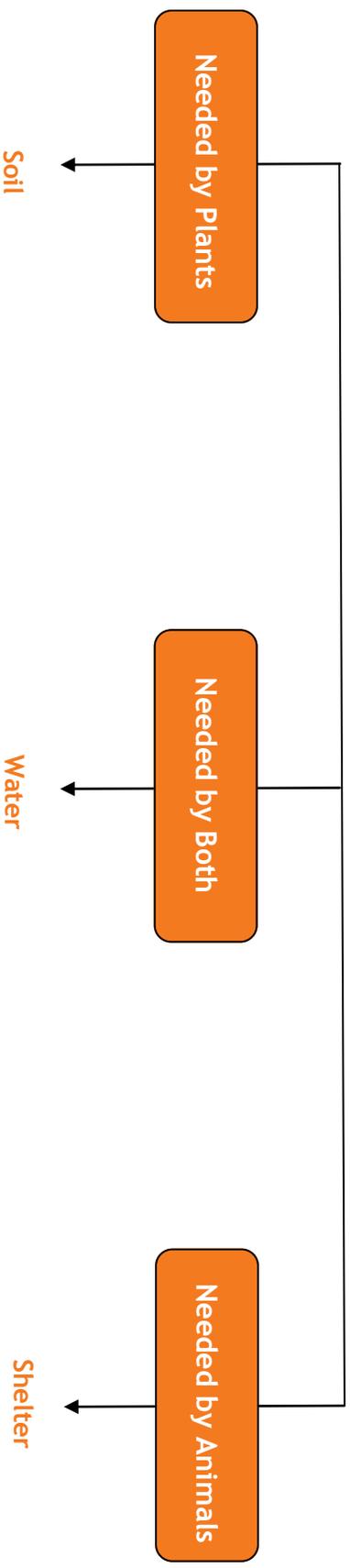
Take 2 -3 minutes and record all of the natural resources that you can find in the mural!

Sunlight, air, water, plants, other animals, and shelter are all examples of natural resources.

Energy from the Environment

Who Needs What?

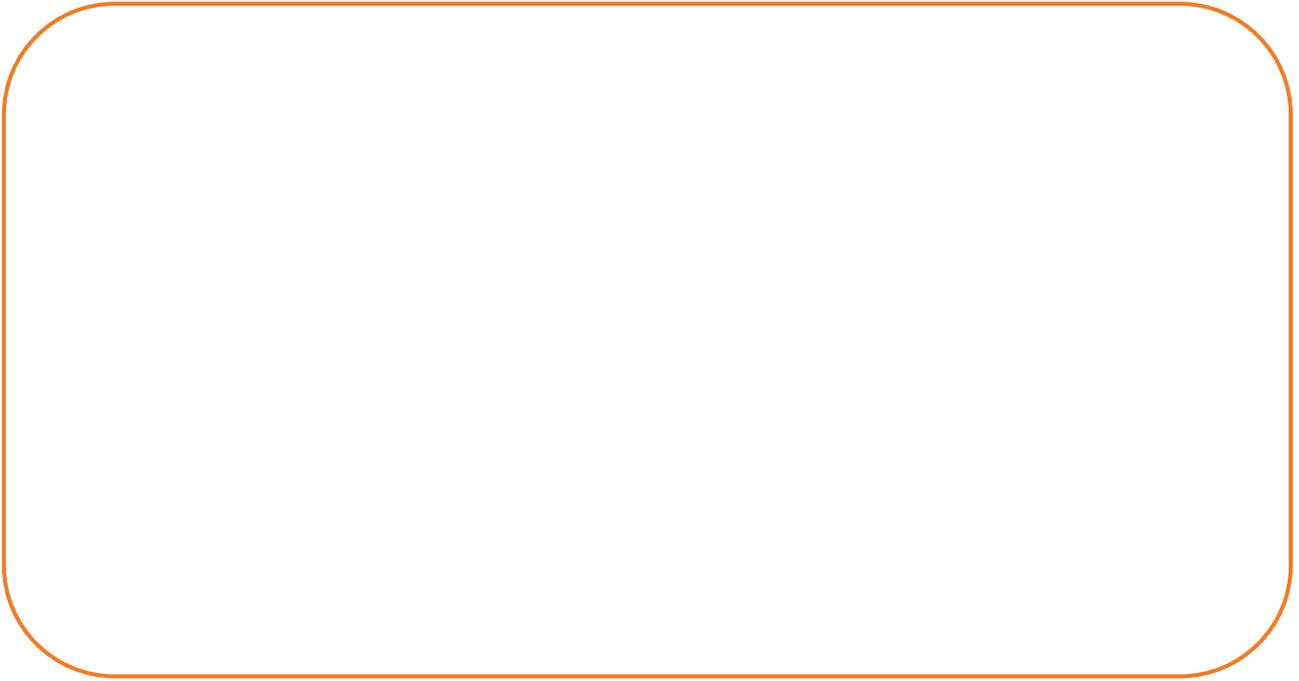
Using your Resource List, record which kinds of living things (plants or animals) needs each kind of resource you found. If you find a resource that is helpful for both plants and animals, record it in the middle column. We have provided you with some examples.



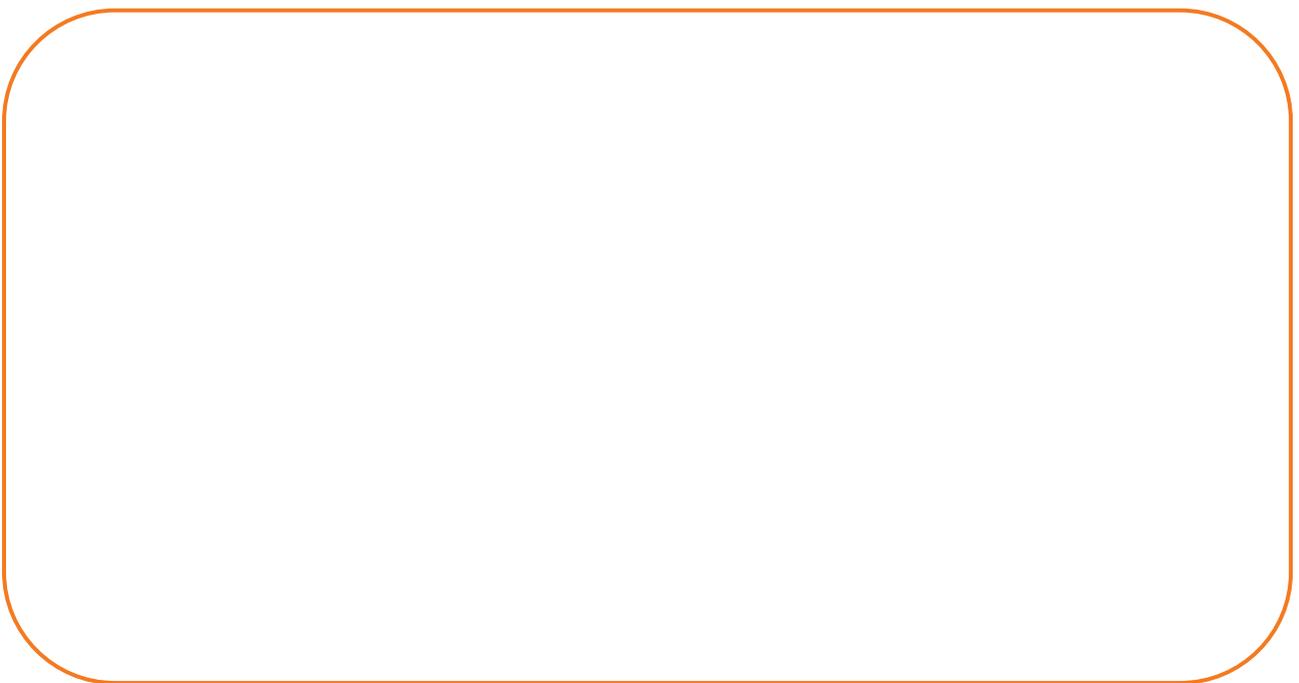
Energy from the Environment

Observe and Sketch...

Find the Dire Wolf Skull Wall. Take 5 minutes to look closely at one skull and sketch the dire wolf's teeth.



Now find the Columbian mammoth. Take 5 minutes to closely observe and sketch its teeth.



The Right Tool for the Job

You observed the teeth of two very different animals today. Teeth are crucial to survival because they allow animals to bite and chew their food. The dire wolf, a carnivore, needs to use its teeth to eat meat, while the Columbian mammoth, an herbivore, needs to grind up *a lot* of grass to survive. Use the evidence from your observations to respond to the following prompts:

1. How are the teeth you saw different from one another?

2. How do you think a dire wolf's teeth help it shear meat and crush bone?

3. How do you think a Columbian mammoth's teeth help it grind up grass?
