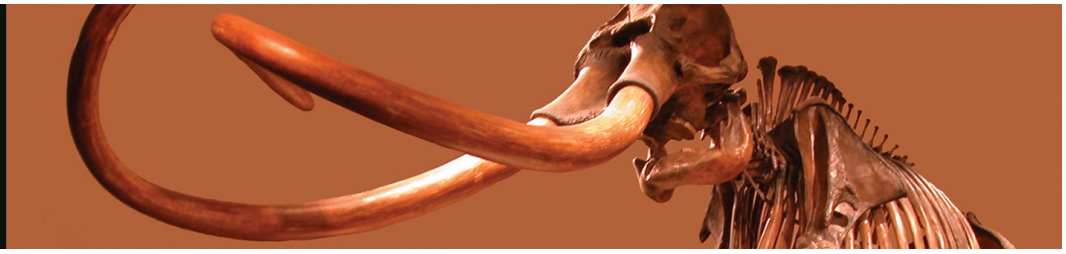
LA BREA TAR PITS & MUSEUM



La Brea's Oil

4th Grade

Duration
20-30 minutes

Location
La Brea Tar Pits Museum

Supplies
- Worksheet
- Pencil
- Clipboard (optional)

Standards
NGSS
ESS3.A
S + E Practices
3, 4, 7, 8
CCSS ELA
W.4.7, W.4.8, W.4.9

Vocabulary
Asphalt • Chumash • Tongva • Excavation • Resource • Renewable

Concepts

- The natural resources and wealth of scientific data from Rancho La Brea make it a significant site in human history.
- Humans use resources from their environment to improve their lives.
- Some resources are renewable, and others are not.

Objectives

- Students will examine how humans have used La Brea's oil in a multitude of ways over the past 9,000 years.
- Students will construct a timeline of human activity at this site.

Outline

1. Students will explore the Museum to discover how humans have used the La Brea Tar Pits.
2. Students will use their research to explain the benefits of preserving land for scientific research, and to determine whether or not asphalt is a renewable resource.

Background

In addition to its significance as a site for Ice Age fossils, Rancho La Brea played an important role in human history as well. Native people from this area used the asphalt from the tar pits to improve tools, waterproof canoes and baskets, and make decorative items.

This site operated as a commercial oil and asphalt mine from the 1870's until 1924, when the Hancock family donated the land to the City of Los Angeles. The asphalt from the Tar Pits was sold and shipped throughout California, most notably used as a roofing material and to pave roads.

Since 1913, the Los Angeles County Natural History Museum has had exclusive rights to excavate on this land. Our first series of excavations took place between 1913 - 1915, followed by ongoing seasonal excavations in Pit 91 starting in 1969. Our focus since 2008 has been Project 23, but excavation continues in Pit 91 every summer.

Pre-Visit

Introduce the idea that asphalt from Rancho La Brea was a significant resource for the native people who once lived in this area. While the Tongva lived in what is now Los Angeles, the Chumash lived along the coast, and used asphalt to waterproof their canoes. Asphalt was also treated as a commodity and traded across California. Starting in the 19th century humans used asphalt from this site as a roofing material and to pave roads.

Asphalt is also an excellent preservative for fossils, and since the early 1900s, geologists and paleontologists have worked to recover bones from this site. Now, Rancho La Brea is best known for the Ice Age fossils discovered here.

Museum Visit

Students will use various exhibits located inside the Museum to understand how asphalt is a significant natural resource. They will note how people have used this site over 9,000 years of human history, and then construct a timeline of important events at La Brea.

Then, students will answer two questions:

- What are the benefits of preserving this land for scientific research?
- Is asphalt a renewable resource? Why or why not?

La Brea's Oil

Use information you collect at the Museum to fill out the Timeline below. (Note: Timeline not to scale)

Hint: Make sure to check out the Asphalt and People exhibit, and the large Oil Derrick photo near the 3D Theater.

9,000 years ago

Name 3 Artifacts made or repaired with asphalt. (1,000 years old or older)

1.

2.

3.

1870s

Name 2 primary uses of the asphalt mined from here.

1.

2.

Can you find an artifact from this time? What is it?

_____

1913

What scientifically significant event happened in 1913?

_____
_____
_____
_____
_____
_____
_____
_____
_____

1924

Why do you think the Hancock family donated this land to the city?

_____
_____
_____
_____
_____
_____
_____
_____
_____

Today

Check out the Fossil Lab. Name 3 fossils you see inside. We excavate 7 days a week, and make new discoveries every day!

1.

2.

3.

Follow-Up

1. What are the benefits of preserving this land for scientific research?

2. Is asphalt a renewable resource? Why or why not?