Mysteries of the Mesozoic

Grades 9 - 12
Educational Program Guide

OAS **HS-LS4-1 |** Science Practices 1, 2, 3, 4, 5, 6, 7, 8 | Core Ideas ESS2 | Crosscutting Concepts, Scale Proportion and Quantity, Structure and Function

Program Overview

What can you tell about a prehistoric animal from a single fossil? Students will find out by uncovering clues from the Mesozoic era, the age of dinosaurs. Student teams will participate in an excavation simulation at one of six "sites." They will collect data and then analyze their findings using principles of comparative anatomy.

Objectives

After participating in this program, students will be able to:

- Know that fossils are clues to finding out the characteristics of ancient animals.
- Follow the process of field paleontology from excavation to identification.
- Learn how scientists compare fossils to modern animal remains to discover more about ancient animal behavior.

Background

Paleontologists study ancient life using fossil remains as clues to uncovering the past. Fossils include bones, teeth or shells and trace fossils. All of these provide scientists with clues about an ancient animal's lifestyle, but they don't tell scientists everything. Modern animals can be observed in their natural habitat and in zoos and can give paleontologists added insight into how dinosaurs lived. Paleontologists can better understand extinct animals by comparing their food processing characteristics (teeth, jaws, claws) represented by fossils to those of modern animals.

At the Museum

Hall of Ancient Life

Have students explore the various exhibits of the Mesozoic Era of the Ancient Life Gallery. Lead students in a discussion on the above exhibits using the information acquired in the classroom.

Vocabulary

Fossils	Traces of prehistoric animals and plants. Fossils include both preserved body parts of organisms and traces those organisms have left behind. Many fossils are formed when hard minerals replace the pore spaces or original material in bones, shells, or wood
Paleontology	The study of life in the past
Mesozoic Era	(248 – 65 Ma) The Mesozoic Era is known as the "Age of Dinosaurs." Dinosaurs dominated the Era, while mammals were no bigger than an opossum. What is now known as Oklahoma was nearing its current location with a more seasonal climate. This Era ended with the well-known asteroid impact that killed off the dinosaurs 65 million years ago.
Excavation	The exposure, processing and recording of paleontological remains.

www.snomnh.ou.edu