MOAB MUSEUM
SMALL MUSEUM. BIG STORIES.

Moab Museum School Programs: First Grade Lesson Plan

Designed to complement the Museum's field trip programs, these core curriculum-aligned activities are intended for classroom use by teachers to help students learn about dinosaurs.

Paleontologists, scientists who study dinosaurs, love to come to Moab! Why? The Moab area has some of the most abundant and diverse dinosaur fossils in the world! Paleontologists have found over *50 different dinosaur species near Moab*, 28 of which are only found in Grand County and nowhere else in the world!

When did the dinosaurs live in Moab? The dinosaurs lived during the Mesozoic Era, from 252 million years ago until 66 million years ago. The Mesozoic Era is divided into three Periods: The Triassic, Jurassic and Cretaceous.

There was a unique group of dinosaurs discovered near Moab at Dalton Wells. Over 60 individual dinosaurs of 9 different types of dinosaurs had been found in Dalton Wells in over 30 years. In 1991 Utah's state paleontologist unearthed the very first *Utahraptor* at Dalton Wells, which is now the state dinosaur. The *Utahraptor* was 20 feet long with feathers and it stood 5 feet tall at the hip. Its back feet had 3 toes with 9 inch claws on each one. It was a meat-eating theropod that ran up to 20 miles per hour. Meat-eating therapods made footprints like the one shown at right (draw sketch on board.) Why do you think they had such big claws? To catch big prey to eat!

Activities:

Discuss the following questions aloud with kids.

Are all fossils dinosaurs? No: there are fossils of plants and other animals, including from time periods both before and after when dinosaurs were alive. Sometimes, fossils aren't even a plant or animal: footprints left behind by dinosaurs are fossils.
Did all the dinosaurs live together at the same time? No! The dinosaurs lived during a long span of time called the Mesozoic Era: comprising the Triassic, Jurassic and Cretaceous Periods (252 million years to 66 million years ago). Not all species were alive at once.
What did the dinosaurs eat? Meat eating dinosaurs theropods (like the *Utahraptor*) ate other dinosaurs and plant eating dinosaurs sauropods (like the *Camarasaurus*) ate plants. *Oviraptor* is a dinosaur that ate both plants and animals.
How are dinosaurs named? Often, they are named after a characteristic of their body, after the person who discovered the dinosaur, or after the place they found them. How do you think *Utahraptor* got its name? By being found in Utah!
What are the biggest dinosaur and the smallest dinosaur? Sauropods are the largest type of dinosaurs: some species were 75 ft. long (2 school buses). The smallest dinosaur was smaller than a chicken!

Foot Fossil Craft Project:
The word *fossil* comes from the Latin word meaning "dug up". Paleontologists dig up fossils out of sedimentary rocks. Fossils are formed when a plant or animal dies and is buried in mud or sand. Eventually, this mud or sand hardens into rock, and then millions of years later this sedimentary rock containing the remains of the plant or animal erodes at the surface of the earth and is exposed as a fossil. Fossils don't have to be the actual body of an animal or plant that died, a common fossil around the Moab area are fossilized footprints! That is what we'll make today...

Materials:

- Fine sand, small pebbles, seashells and beads
- Foil, pie tins
- Plaster of Paris
- Small pebbles, seashells and beads
- Soft toothbrushes

Directions:

1. Put damp sand in a pie tin 2 inches thick or more.
2. Kids choose shells and pebbles to imprint in the sand before making a foot print.
3. Kids press foot and shells and pebbles into the sand
4. Pour Plaster of Paris (mix to the consistency of sour cream) over the imprint and let dry overnight
5. Turn over the pie plate and brush the sand away using toothbrushes (optional: paint any color)

T-Rex Dino Ditty Song (sung to the tune of Do Wah Ditty)

Here comes T-Rex just a-stomping with her feet
Singing dino ditty ditty, dum ditty doo'
Searching all around for something good to eat,
Singing dino ditty ditty, dum ditty doo'
She's huge (echo) She's strong (echo)
She's huge, she's strong, won't be hungry very long
Singing dino ditty ditty, dum ditty doo'
(repeat)

Mill Canyon Field Trip Preparation:

Our class will be visiting Mill Canyon, a wonderful place to see dinosaur tracks and fossilized bones! This video provides a great overview of the site: https://www.youtube.com/watch?v=OR9FfBOacB4

When we visit Mill Canyon, we will be respectful visitors by staying on the trail, staying with the group, and keeping our hands to ourselves.

Utah State Science Core Curriculum Standards:

Standard Four: Students will gain an understanding of life science through the study of changes in organisms over time and the nature of living things.
Objective Two: Living things change and depend upon their environment to satisfy their basic needs.
a. Make observations about living things and their environment using the 5 senses.
b. Identify how natural earth materials help to sustain plant and animal life (fossils).
c. Describe and model life cycles of living things.