Jurassic Mystery
Pre and Post Visit Materials

Kenosha Public Museum
5500 1st Avenue
Kenosha, WI

Kenosha Public Museum

Kenosha Public Museum
Jurassic Mystery

Jurassic Mystery is an hour long museum experience designed for 5th to 8th grade. Through investigations and putting together evidence like footprints, teeth marks and rock depositions, students will solve a 150 million year old mystery.

Program Goals:

- Students will understand how to interpret basic evidence found at a dig site.
- Students will learn about the field of taphonomy.
- Students will work collaboratively to build critical thinking skills.
- Students will engage in workshop generated conversations with teachers, other classmates and the facilitator.

NGSS

DCI:

- 5th grade
  - LS2 Ecosystems: Interactions, Energy, and Dynamics
  - ESS2 Earth's Systems
- Middle School
  - LS4 Biological Evolution: Unity and Diversity
  - ESS2 Earth's Systems

S&E Practices:

- Analyze and Interpret Data
- Engaging in Argument from Evidence
- Obtaining, Evaluating and Communicating Information

CCC:

- Patterns
- Cause and Effect
- Stability and Change

Wisconsin Science Standards by 8th grade:

- C.8.2 Identify data and locate sources of information including their own records to answer the questions being investigated
- C.8.4 Use inferences to help decide possible results of their investigations, use observations to check their inferences
- C.8.6 State what they have learned from investigations, relating their inferences to scientific knowledge and to data they have collected
- C.8.10 Discuss the importance of their results and implications of their work with peers, teachers, and other adults

This packet of information will help prep your students for this program and allow for a debrief back in the classroom. Please go over information with your students, prior to the visit.

Key Vocabulary

Fossil:
Extinction:
Paleontology, Mesozoic, Deposits, pathology, sedimentary rock, trace fossil, body fossil, matrix

Resources:

Brain POP Educators, Fossils
https://educators.brainpop.com/bp-jr-topic/fossils/

Pre Visit Activity

Fossil Limitations

Objective: Students will understand that the fossil record is incomplete and interpreting fossil evidence involves studying and comparing modern animals. Students will also understand that there are limitations as to what we can determine from fossils.

Materials:

- Pencil
- Worksheet
- Smartboard with images of animals or printed versions

Set Up:

- Make copies of worksheet

What you need to know?

The science of Paleontology is still in its infancy compared to more grounded sciences like physics and biology. It has been going through a renaissance since the 1970's and we learn more and more everyday about the life of the past as new evidence is uncovered and new techniques for studying this evidence is developed. However, the basis of paleontology is in observing the natural world around us and making connections to structure and function of those organisms who's only presence on the Earth today can be found fossilized in stone.

Procedure:

1.) Ask your students to think about animals that they are very familiar with, ie- cat, dog, horse, etc. Have them look at the images of these animals' skeletons and make a list of known traits. These can be things like fur or skin texture, color, behavioral traits and so on. Have them do this for at least a few different animals.
2.) When examining fossils, only hard tissues like bone and teeth are generally preserved. Display some images of dinosaur skeletons. Have your students look at the list of traits that they made for familiar animals. Discuss what items on their lists would be known from looking at just the skeleton and which ones wouldn't. Are there any different traits that aren't on the list that could be inferred from looking at just the dinosaur skeleton?
3.) Discuss with students that paleontologists often make determinations about traits and behavior in extinct animals by comparing their skeletal anatomy to that of animals that we can still study and observe.

Name_____

Date_____

Fossil Comparisons

In this activity, we will look at different animals and discuss their traits and behaviors. Look at the pictures of animals and make a list of features that describe them. How many feet to they walk on? What do they eat? What do they look like? How do they behave? Then, take a look at the dinosaur skeletons. Are there any traits that you can give the dinosaur based ONLY on its skeleton? Are there things we see in the dinosaur skeleton that we didn't see in the other animals?

Animal Traits	Dinosaur Traits

Post Visit Activity

Trace Fossils

Objective: Students will demonstrate skills learned in Jurassic Mystery to interpret trace evidence.

Materials:
-Washable paint
-Butcher paper
-Pencils
-Rulers
-Calculators
-Worksheets from Museum

After attending the museum program, have your students think about trace evidence they can see in the world around them today. Split students up into groups and provide each with a sheet of butcher and some washable paint. Have students apply the paint to the bottom of their feet and then perform some sort of motion on the butcher paper (walking, running, etc.). Allow the paint to dry then have the groups swap track ways with each other. Have them answer the following questions:

What was the person who made the prints doing?

If there are multiple tracks on the paper, which ones were made first?

Using the calculations from your worksheets, can you measure each student's hip height and determine who made the tracks in each group?