TEACHER GUIDE

# Digging for Dinos: Exploring Fossils

## DESCRIPTION

Does the word “dinosaur” send your students into prehistoric pandemonium? Bring the wonders of Paleontology into your classroom with this investigation of basic natural science concepts related to the job of a Paleontologist. Students will practice paleontological skills with real and cast fossils, animal bones, dig boxes, rubbings, and other age-appropriate hands-on activities.

## OBJECTIVES

- Define the key terms “paleontology” and “fossil.”
- Identify what tools a paleontologist uses to search for fossils.
- Practice the skills a real paleontologist uses in their job
- Describe how fossils form from animal bones or shells.

## OHIO’S LEARNING STANDARDS

**Pre-Kindergarten**: Life Science – Observation of Living Things [EXPLORATIONS OF LIVING THINGS]

- Similarities and differences exist among individuals of the same kinds of plants and animals.

**Pre-Kindergarten**: Science Inquiry and Application – inquiry

**Kindergarten**: Life Science – Physical and Behavioral Traits of Living Things

- Living things have physical traits and behaviors which influence their survival.



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## BEFORE YOUR PROGRAM & HOW TO SET UP YOUR ROOM

- **Set-up requirements:**
    - **This program has 4 stations--please be prepared to separate your class into 4 groups.**
    - **Please provide at least 3 tables and 1 floor space for the stations**
    - **At least 1 school staff person is needed to assist with the stations.**
- In addition to the above room set-up, please provide a separate empty desk or small table for the museum educator to set up display items.
- Please have student desks clear before the program begins.
- Use the vocabulary and additional resources provided in this Teacher Guide to preview or review program content with your class
- If booking multiple programs, transitions will be easier if museum staff sets up in only one location.

# VOCABULARY

**paleontology** – the study of prehistoric plants and animals.

**paleontologist** – a scientist who studies the fossils of plants and animals of prehistoric times.

**fossils** – the remains (or an impression) of a plant or animal that existed in a past geological age and that has been taken from the soil.

**dinosaur** – extinct land-dwelling reptiles from the Mesozoic Era, certain species of which are the largest known land animals. Their bodies had legs directly below them, unlike a crocodile or lizard.

# EXTENSION ACTIVITIES

**MAKE YOUR OWN FOSSIL**

- Prepare a chunk of potter's clay for each student, smoothing the pieces to approximately 2"x2"x1".
- Have children press a leaf, shell, or even a lost tooth into the clay and then remove the object. Explain to the children that this is one way in which fossils are formed, from the impression of a living thing. Another example would be a footprint. These are called **mold fossils.**
- Set the clay in the sun to dry (about 24 hours).
- As a paleontologist would do to study the fossil, pour plaster of Paris into the mold fossil and allow the plaster to dry. Pop out the cast of the fossil. Explain to the children that the cast is not the actual fossil, but a copy of the real thing.
- Some of the examples that the children will view and touch during the program are casts, as real fossils are often too fragile to touch.

**HOW BIG IS A DINOSAUR?**

- Measure 40 feet on the floor of a gym or hallway. Explain to your students that this is how long a *Tyrannosaurus rex* is from the tip of its tail to its snout. Have the children compare their height to a dinosaur!
- Draw a *Tyrannosaurus* footprint 27 inches long and 30 inches wide. Have each child trace one of their feet on a piece of paper and compare it to the *T. rex* footprint.



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# EDUCATOR RESOURCE CENTER (ERC)

Educator Resource Center
CLEVELAND MUSEUM OF NATURAL HISTORY
Celebrating 30 years of supporting science education

The Educator Resource Center is dedicated to providing teachers with the classroom resources and professional development they need to create dynamic, enriching, and inquiry-based experiences for their students.

Contact the ERC at 216-231-2075 for information on individual or school membership.

Visit the Museum's ERC website for more information https://www.cmnh.org/ERC

## MATERIALS FOR LOAN

With close to 100 dioramas and over 130 thematic teaching kits, our lending library has the materials you need to make science come alive for your students.

If you're interested in additional resources be sure to check out the following ERC materials or browse ERC materials online at https://cmnherc.myturn.com/library/

## EDUCATOR PROFESSIONAL DEVELOPMENT

Get connected to trending teaching methods, best practices in science education, and hot topics in current scientific research.

To learn more visit https://www.cmnh.org/learn/educator-resource-center/educator-workshops

Email inquiries to erc@cmnh.org.

THE CLEVELAND MUSEUM OF NATURAL HISTORY

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