

# National Geographic Educator Certification Lesson

**Your Name:** Jason Hamzy

**Lesson/Activity Title:** Fossil Scavenger Hunt

**Recommended Age(s)/Grade(s):**

PreK, age 3 to 6

**Time Needed – Preparation:** 1 hour

**Time Needed – Execution:** 1 hour

**Standards (optional):**

PreK-1, Life Science, Interactions Within Habitats, Content Statement: Observe macroscopic characteristics of living things. Including basic survival needs of living things, how living things get resources from the environment and how available resources vary throughout the course of a year. Kindergarten, Physical Science, Topic: Properties of everyday Objects and Materials, Content Statement: Objects and materials can be sorted and described by their properties, such as size, shape and texture.

**Objectives:**

By the end of this lesson, students will be able to:

- *Sort three types of local fossils*
- *Identify at least one type of local fossil*

**Materials and Preparation Needed:**

*What materials will need to be gathered or prepared for this lesson? Note what should be prepared in advance.*

If possible, examples of the fossils should be collected and made available for investigation by the students beforehand.

Three laminated sheets, labeled and with photos: 1. Examples of Brachiopods 2. Examples of Bryozoans 3. Examples of Crinoids (These categories are what I used because I we visit the creek often, and these are very common. There are a wide variety of common types of fossils. Previous visits to the creek to identify common fossils specific to the individual creek is recommended. Customize the lesson to the location you will be visiting with your students, if possible)

**Directions:**

*How does the lesson work, step by step? Note actions taken by educators and learners in enough detail that another educator could replicate this lesson.*

Set up three large, flat stones on the bank of the creek. These will be your “museums”. Discuss the different types of fossils we find in the creeks. “Long before there were dinosaurs, this was once a shallow sea. There were lots of really cool underwater plants. When the sea dried up, the plants got covered with layers and layers of clay and mud, and millions of years went by, forming them into rocks. We call them fossils. Can you find a fossil that looks like any of these?” Show the students the three laminated sheets. Lay a sheet on each of the three rocks. Let the kids search for fossils and see how many, if any they can find. They should place fossils they find that match the cards onto the “museum” that matches their fossil. Teacher assesses by noting observations of individual students working. For older grades, additional data may be documented by students, such as tables with tallies. Scaffolding occurred when students struggled to find fossils to sort. I found examples myself, and allowed the

student to sort and identify the fossils for me. More advanced students may be introduced to the specific names of the fossils, not just the category.

**Vocabulary:**

*What new vocabulary will students need to learn to complete this lesson?*

Fossils, Brachiopods, Bryozoans, Crinoids

**Scales and Perspectives, Human and Natural World Connections:**

*How does this lesson allow students to examine the world from different scales and perspectives? How are themes of the human and natural world, and their intersections, covered in this lesson?*

Students are introduced to the idea that the earth has changed significantly over vast amounts of time. Humans can learn about how what life was like long before humans were here to observe by studying clues in our environment. The rocks and fossils contain data that inform us about life forms that no longer exist. There were no pictures, but there are fossils, which are the hardened remains of ancient undersea plants.

**Learning Framework Connections:**

*How does this lesson connect with one or more of the attitudes, skills, and knowledge areas of the Learning Framework?*

Students express curiosity as they seek out fossils and discover the plethora of different kinds of fossils. Students develop observation skills as they sort fossils according to their different traits. They use the identification cards to distinguish fossils. Students recognize how our planet has made vast changes over time, and how that change has affected the habitat of living things. They begin to develop a framework for the global and human timeline; dinosaurs went extinct long before humans were here, these fossils are from undersea plants that were here long before dinosaurs were here.

**Assessment:**

*How will student learning be assessed for this lesson?*

Students will be observed hunting for and finding fossils, comparing found fossils to photos on the identification cards, and correctly sorting fossils into the designated areas.

**Opportunities for Modifications and Extensions:**

*Suggest ways in which the lesson might be modified or extended for specific student audiences, different abilities, deeper learning, etc.*

The number of fossils to be sorted could be changed to suit the abilities of the individual learner. Older students and advanced learners may use a table and tally how many of each fossil is sorted. Students may choose to sketch or draw their fossils. Students could photograph their findings and research to identify their fossils more specifically. If students are unable to locate fossils in the correct categories, they may sort fossils that have been previously collected.

**Resources:**

*What outside materials did you use to support this lesson? Please include links.*

The Cincinnati Dry Dredgers website, specifically the Fossil Photo Index, found at [http://drydredgers.org/thumb\\_index.htm](http://drydredgers.org/thumb_index.htm)

My co-teacher, Lee Hamzy, deserves credit for sharing this idea with me.