

# CSI: THE PALEOZOIC

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Grades: K-5.

Objectives:

- To learn about textures in sedimentary rocks as an aid to recognizing clastic sedimentary rocks.
- To help students to learn to observe deeply and intelligently, and to be able to articulate their observations.
- To give students an opportunity to measure something and record measurements.
- To use students' interest in fossils as a creative topic for a writing assignment.

Materials:

- Sedimentary rock with fossils.
- Magnifying glasses (if possible).
- Ruler.
- Paper.
- Pencil.
- Colored pencils.

Time: About 45 minutes.

Procedure:

- Distribute samples of rocks, each with a visible fossil.
- Distribute paper and pencils.
- Distribute magnifying glasses.
- Distribute colored pencils.

Preliminary Lessons:

- Discuss the different types of rocks.
- Discuss how fossils are formed.
- Discuss how some rocks and some fossils are very old.
- Discuss the difference between animals with shells and animals with internal skeletons like human beings, dogs, birds, and dinosaurs.

Teachers' script:

- You are a crime scene investigator, just like on television. Your job is to describe the scene of the crime and to try to identify the victim.
- Write a short report about what you can observe in the crime scene. Where was the victim found? What color is the crime scene? What color is the victim? Can you see anything else in the crime scene, like the size of particles around the victim, or the shape of the particles around the victim? Describe the victim. How wide is the victim? How long is the victim? How wide are the particles in the crime scene around the victim?
- What happened to the victim? How was the victim found?
- Draw a picture of the crime scene. Be sure to label the victim and anything else important in the crime scene.
- Congratulations! You are a crime scene investigator.

Teachers Notes:

- Readily available rocks with fossils typically are invertebrates: clam-like animals, crab-like animals, or corals, rather than animals with internal skeletons like mammals, reptiles, fish, or birds.
- If you cannot obtain rocks with fossils, you could do a similar project by using small seashells available in craft stores embedded in clay. Or you could embed gummy bears in rice crispy treats!
- Dinosaurs lived in the Mesozoic Era, not the Paleozoic Era. The Paleozoic Era extended from about 540 million years ago to about 251 million years ago. The Mesozoic Era included the famous period, the Jurassic, and extended from about 251 million years ago to 65 million years ago. We are living in the Cenozoic Era, from 65 million years ago to the present. All time before the Paleozoic (meaning “old life) can be lumped into a general term, the Precambrian Eon, from the formation of Planet Earth, 4.6 billion years ago, until the beginning of the Paleozoic Era.

Additional resources:

- Fossils lesson plans: [http://www.fossils-facts-and-finds.com/fossil\\_lesson\\_plans.html](http://www.fossils-facts-and-finds.com/fossil_lesson_plans.html)
- What is a fossil?: <http://school.discoveryeducation.com/lessonplans/programs/prehistoricearth/>
- Rock, mineral and fossil lesson plans: <http://geology.com/teacher/rocks.shtml>
- Fossilized: [http://www.teachingsk-8.com/archives/todays\\_classroom\\_activities/fossilized.html](http://www.teachingsk-8.com/archives/todays_classroom_activities/fossilized.html)
- Learning about fossils through hands-on science and literacy: <http://beyondpenguins.nsd.org/issue/column.php?date=April2008&departmentid=literacy&columnid=literacy!lessons>
- How do scientists find dinosaur fossils?: [http://www.elementarylessonplans.net/category.php?column\\_name=17](http://www.elementarylessonplans.net/category.php?column_name=17)
- Animal classification: <http://school.discoveryeducation.com/lessonplans/programs/animaladaptations/>
- Websites on dinosaurs and fossils: <http://www.cumbavac.org/Dinosaurs.htm>
- U.S. Geological Survey Science Resources for Primary Grades: <http://education.usgs.gov/common/primary.htm>