

Argentina: Searching for Dinosaur Fossils

Lesson Plan

Grade Level: 6-8

Curriculum Focus: Fossils

Lesson Duration: Two or three class periods

Student Objectives

- Understand why Argentina is a good place to search for dinosaur fossils.
- Learn basic information about recent dinosaur excavations in Argentina.

Materials

- Discovery School video on *unitedstreaming: When Dinosaurs Ruled: South America*
Search for this video by using the video title (or a portion of it) as the keyword.

Selected clips that support this lesson plan:

- Mammoth Dinosaurs: Size Matters in the Cretaceous Period
 - Patagonia: Home to Skilled and Vicious Carnivores of the Cretaceous Period
- Mammoth Dinosaurs: Size Matters in the Cretaceous Period
 - Search for Argentinasaurus, Largest Plant Eater in the World
 - Argentinasaurus: Entire Skeleton Found, Skull Intact
- Pens and paper
- Wall map of South America or Argentina (optional)
- Computers with Internet access (optional but very helpful)

Procedures

1. Discuss with students why Argentina, particularly Patagonia, is a good site for dinosaur research. A land bridge connected North and South America in the beginning of the Cretaceous period about 144 million years ago. When it disappeared later in the Cretaceous period, dinosaurs evolved in unique ways on two separate continents. The terrain in Patagonia is ideal for fossil hunting. It has many layers of shale and sandstone and other sedimentary rocks. This is where paleontologists tend to find most fossil remains, which provide clues about dinosaurs and their environment.
2. Divide the class into three groups. Assign each group one of the following South American dinosaur discoveries; visit the Web sites below to begin research.

Dinosaur eggs

- <http://more.abcnews.go.com/sections/science/dailynews/dinoeggs981117.html>
- <http://www.enchantedlearning.com/subjects/dinosaurs/news/Eggswithskin.shtml>
- <http://www.amnh.org/exhibitions/expeditions/dinosaur/patagonia/discovery.html>

Plant-eating dinosaur

- <http://www.enchantedlearning.com/subjects/dinosaurs/news/Biggestargentina.shtml>
- <http://www.enchantedlearning.com/subjects/dinosaurs/glossary/Sauropod.shtml>

Meat-eating dinosaur

- <http://www.enchantedlearning.com/subjects/dinosaurs/news/Giganotonews.shtml>

3. Distribute copies of the following questions. Students may want to divide the tasks so that small subgroups work on each question. Have students record their answers.

Fossil Hunting in Argentina

Answer the questions below as your group conducts research about a dinosaur discovery.

- (1.) What is the discovery?
 - (2.) Who made the discovery?
 - (3.) When was the discovery made?
 - (4.) Where was the discovery made? Try to locate the site on a map.
 - (5.) When did the dinosaur or dinosaurs live?
4. After students have completed their research, have each group pretend to work for *Time*, *Newsweek*, or another news magazine. Tell students that they must create a two-page spread featuring their dinosaur discovery. The spreads should include a short story about their research, as well as maps, pictures, and other visuals. Students can create their spreads on the computer, or they can cut out the story and visuals and paste them on a poster board.
 5. Have each group present its spread to the class. Make sure students understand the significance of each discovery. Then discuss what all the findings combined teach us about dinosaurs and their environment.
 6. Assign the following activity as homework. Based on what they learned during the lesson, each student will write a persuasive paragraph about the benefits of sponsoring additional fossil-hunting expeditions to Argentina. If time permits, have students share their writing during the next class period.

Why Paleontology Is Important

Pretend you're a paleontologist who is planning a dig in Argentina. You're hoping that a museum will sponsor you and help pay your way, so you must persuade the museum's board of directors that your work is important. Write a paragraph explaining why you think it is critical to look for dinosaur fossils in Argentina. Include descriptions of the types of dinosaur fossils that have already been found there, the fossils you hope to uncover, and

how you plan to add to the current knowledge about dinosaurs. Make your paragraph as persuasive as possible.

Assessment

Use the following three-point rubric to evaluate students' work during this lesson.

- **3 points:** Students showed exemplary effort in their research and completion of the classroom assignment; actively participated in classroom discussion; worked cooperatively with group members; wrote a clear and thoughtful paragraph.
- **2 points:** Students showed average effort in their research and completion of the classroom assignment; participated somewhat in classroom discussion; worked cooperatively with group members; wrote a paragraph with few details.
- **1 point:** Students showed minimal effort in their research and completion of the classroom assignment; did not participate in classroom discussion or work cooperatively with group members; did not write a clear and thoughtful paragraph.

Vocabulary

carnivore

Definition: An animal that eats only meat

Context: Giganotosaurus was a carnivore that may have lived in packs, posing an even greater threat to other dinosaurs than if it had lived alone.

embryo

Definition: A vertebrate at any stage of development prior to birth or hatching

Context: Paleontologists in Argentina have discovered thousands of eggs containing sauropod embryos.

herbivore

Definition: An animal that eats only plants

Context: The sauropod that paleontologists recently discovered in Argentina may be the largest dinosaur ever found, but it was an herbivore so it would not have been a danger to other dinosaurs.

paleontology

Definition: The study of the forms of life existing in prehistoric or geologic times, as represented by the fossils of plants, animals, and other organisms

Context: If you're interested in paleontology, you might want to consider signing up for a dig in Argentina, where you can help excavate the fossils of dinosaurs and other prehistoric creatures.

sauropod

Definition: A suborder of herbivorous dinosaurs characterized by long necks, small heads with blunt teeth, small brains, and long tails

