

Dinosaur Timeline

Activity for Grades K–4

Introduction

Geologists at the American Museum of Natural History study rock layers and the plant and animal fossils found in them. They use radiometric dating to help establish the age of rocks. In doing so, they also establish the age of the fossils found in the rocks. From the evidence they gather, geologists can piece together the physical history of the Earth. Students may be able to tell you how long ago dinosaurs lived, but it is difficult for them to conceptualize that enormous amount of time.

Objective

This activity will help students gain an understanding of geological time.

Materials

- Roll of adding machine tape (about 100 inches long)
- Ruler or tape measure
- Index cards
- Drawing materials

Preparation

Measure and mark the dates on the adding machine tape as indicated in the chart. Then write the dates and events on separate index cards. (mya: million years ago)

Procedure

1. Have students discuss important events in their lives, such as when they were born, when they got their first tooth, when they first talked, etc. Write their responses on the chalkboard. Distribute six index cards to each student and tell them to choose six important events in their lives. Instruct them to draw one event on each card and write the year that the event occurred.
2. Have students stack the cards with the first event on the bottom and the most recent on top. (This introduces the idea of layered rocks, or strata.) As students dig down through the layers, (turn over the cards) they can see events that occurred in the past. Explain that the cards can be used to create a timeline. Place a set of cards in order on the chalkboard ledge. Have students identify the events in order.

3. Tell students they are going to make a timeline that goes all the way back to the time of the dinosaurs. Display the adding machine tape, unroll portions of it and read off the dates. Tell students they will complete the timeline by writing in or drawing events that happened on those dates listed.
4. Clear an area of the classroom and place the timeline on the floor. Give each pair one event to add to the timeline. Have them find the date on the timeline and write or draw the event. When students are done, display the timeline. Review the dates and have each pair tell the event that occurred on their date.

2"	= 480 mya	= first animal with a backbone
18"	= 400 mya	= first sharks and fishes
28"	= 350 mya	= first ferns
38"	= 300 mya	= first egg-laying reptiles
52"	= 228 mya	= first dinosaurs
56"	= 210 mya	= first turtles and first mammals
70"	= 140 mya	= first <i>Allosaurus</i> , <i>Apatosaurus</i> , <i>Stegosaurus</i>
74"	= 120 mya	= first flowering plants
78"	= 100 mya	= first ants
84"	= 70 mya	= first <i>Triceratops</i> , <i>Tyrannosaurus rex</i>
85"	= 65 mya	= extinction of most dinosaurs (except birds) and many other animals
94"	= 20 mya	= first grasses
96"	= 4 mya	= first humans
98"	= Today	