



Models & Materials: Geologic Timeline with Fossils

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Introduction

Lesson Goals

- Research Earth's 4.6 billion year history
 - Biological
 - Geological
 - Atmospheric
- Construct class timeline reflecting important researched events
- Sculpt Model Magic® models of fossils from specific time periods in class
- Create a fossil model for homework that will be tested with simulated Earth forces



Abstract

In this 3-part activity, students will be constructing a Geologic Timeline to show the earth's biologic and geologic history to gain perspective on the succession and age of Earth's important events. Approximately 30 students, divided into groups covering 11 time periods, will construct a 4.6-billion year timeline. Each group will research one geologic period's biologic and geologic events and artistically render them on the class timeline. This will allow them to experiment with different materials in 2-D and 3-D. In addition, students will create a fossil of an organism that lived during that time to display in the classroom. They will also make mock fossils out of a material of their choice that they feel will last long enough to become a true fossil. This final step will show them how different materials resist the ravages of time better than others, which explains why there are large gaps in the fossil record.

Models & Materials Connections

Paper:

- Easy to manipulate
- Inexpensive
- Can be drawn on with many different media (crayons, colored pencils, pens)
- Can be recycled

Model Magic®:

- 3-dimensional material
- Malleable
- Can be painted
- Cures quickly and without heat



Art Emboss® Metal:

- Metal elements make up most of the periodic table
- Adds dimension to a 2-dimensional work of art
- Malleable
- Can be easily cut
- Students can emboss on it with ease

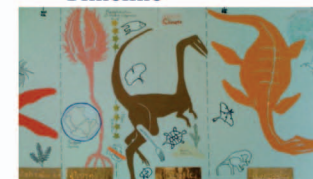


7th Grade CA Science Content Standards

4. Evidence from rocks allows us to understand the evolution of life on Earth. As a basis for understanding this concept:
- Students know* Earth processes today are similar to those that occurred in the past and slow geologic processes have large cumulative effects over long periods of time.
 - Students know* the history of life on Earth has been disrupted by major catastrophic events, such as major volcanic eruptions or the impacts of asteroids.
 - Students know* that evidence from geologic layers and radioactive dating indicates Earth is approximately 4.6 billion years old and that life on this planet has existed for more than 3 billion years.
 - Students know* fossils provide evidence of how life and environmental conditions have changed.
 - Students know* how to explain significant developments and extinctions of plant and animal life on the geologic time scale.

3-Part Series

Timeline



Fossils



Test of Time

