

Title: History of the Earth

Grade Ranges:

_____ K-4
X _____ 5-8
_____ 9-12

Subject Tag:

Science: Earth Science: Geology

Science: Earth Science: Environmental Studies

Science: Earth Science: Weather

Synopsis:

For this project, students will be divided into three groups to research specific periods within the Mesozoic Era. They will use a variety of resources to gather information about climate, landforms, animals, and plants of their assigned time frame. Each group will summarize the results of their research by using pictures and text in a timeline format on a huge sheet of banner paper. All three banners will then be attached to form one timeline of the entire Mesozoic Era.

Keywords:

Mesozoic, Triassic, Jurassic, Cretaceous, paleontology, dinosaurs, geology, fossils, timelines

Body:

Introduce the project by letting students know they will create a giant timeline that covers the Mesozoic period. Divide the class into three groups, and assign each group a specific time frame to research within the Mesozoic Era.

→Triassic (245-195 mya)

→Jurassic (195-135 mya)

→Cretaceous (135-65 mya)

Then, use the following student instructions for this lesson plan. (These instructions are the same as in the accompanying handout, which can easily be distributed to students.)

1. After you have been assigned your time frame, work as a group to investigate the ANIMAL and PLANT life present on Earth during your time period.
2. You will also need to find out what the environment of the Earth was like at that time. Temperature? Climate? What kinds of habitats were available for plants and animals? Were there any major geological events that occurred during your period?
3. Keep a log of all plants and animals and their descriptions so that you will have plenty of information for your timeline.
4. Keep in mind that this is a PICTORAL time line...therefore you MUST include pictures. You may draw these on your own or get them from the Internet. Please cite the source of any picture that you obtain from the Internet!
5. Beneath each picture on the timeline should be a TYPED caption explaining the picture above. These captions must be IN YOUR OWN WORDS, not merely printed from the Internet. In the caption, you should name and describe the organism. If it is an animal, what does it eat? If it is a plant, what eats it? What types of habitats does it occupy? Be creative!
6. The background of your banner should represent the climate and geological events of your period. For example, if the period was a time of flooding, indicate this by showing rising waters on your backdrop.

7. Once all groups have completed their portion of the class timeline, each group will give a short presentation of their period to the entire class. In this way we will be able to compare and contrast life in the different periods.

Objectives:

1. Students will be able to gather information about a topic assigned to them by the teacher.
2. Students will be able to follow directions.
3. Students will be able to work in groups to complete a task.
4. Students will be able to organize information.

Standards:

NY: Physical Setting 4.1 The Earth and celestial phenomena can be described by principles of relative motion and perspective. **Physical Setting 4.2** Many of the phenomena that we observe on Earth involve interactions among components of air, water, and land. **The Living Environment 4.5** Organisms maintain a dynamic equilibrium that sustains life. **The Living Environment 4.6** Plants and animals depend on each other and their physical environment.

NYC: A2a. Make an oral presentation of project plans or findings to an appropriate audience. **A3a.** Gather information to assist in completing project work. **A5a.** Work with others to complete a task. **S2d.** Populations and ecosystems, such as the roles of producers, consumers, and decomposers in a food web; and the effects of resources and energy transfer on populations. **S2e.** Evolution, diversity, and adaptation of organisms, such as common ancestry, speciation, adaptation, variation, and extinction. **S3b.** Earth's history, such as Earth processes including erosion and movement of plates; change over time and fossil evidence. **S4a.** Big ideas and unifying concepts, such as order and organization; models, form, and function; change and constancy; and cause and effect.

CT: 3. Living Things and Their Environments. Students will understand that all organisms in the biosphere are linked to each other and to their physical environments by the transfer and transformation of matter and energy. **7. The Earth.** Students will understand the processes and forces that shape the structure and composition of the Earth.

NJ: Cross-Content Workplace Readiness: 2: All students will use technology information and other tools. **4:** All students will demonstrate self-management skills.

Science: 5.7: All students will investigate the diversity of life. **5.10:** All students will gain an understanding of the structure, dynamics, and geophysical systems of the Earth. **5.12:** All students will develop an understanding of the environment as a system of interdependent components affected by human activity and natural phenomena.

Time Required:

four to five 50-minute class periods

Recommended Lesson Plan Review Date:

Review Comments:

Mesozoic Timeline Project Instructions

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