

“Teacher Cheat Sheet”

Set Up:

Place *Life on Earth – A Fossil History* on the wall using hangers (included in box) or lay flat on a table.

Discuss the Earth’s age and its strata, how fossils are created, extinction, and the geological time scale. Explain what constitutes periods and eras and how scientists use them describe the ages of fossils.

Divide class into 2 groups.

Directing discussions:

Prior to this exercise, it is recommended the instructor discuss the following:

- Age of the Earth (thought to be 4.6 billion years)
- Periods and eras of the geological time scale (i.e. *Pre-Cambrian, Jurassic, Devonian*, etc.), and how scientists use these terms in describing time, fossil ages and natural occurrences
- Ways scientists date fossils (*superposition* and *absolute dating*)
- How fossils are made, what parts of animals are most likely to fossilize and what conditions must be present. Also, discuss the likelihood of fossilization of sea animals versus that of land animals.
- Discuss modes of preservation, such as cast/molds, partial alteration, petrification, carbonization, and preservation of actual remains by ice, resin, or tar.

Exercise:

1. Group 1 should answer the questions on the *Test Your Knowledge* handouts. Encourage open discussion of the answers within the group.
2. Group 2 is to arrange the plastic fossils in the correct recessed pockets on the “cliff” on the model. A small piece of **white** modeling clay provided with the model may be used to temporarily hold the fossil in place (please do not use the brown/gray clay in the trunk – for 4th grade only). Allow the students to draw and discuss unique characteristics of some their favorite fossils.
3. Upon completion, allow the two groups to swap.
4. In closing, discuss the group’s answers to the handout.