



Discussion Guide for

THE HISTORY OF THE EARTH: OVER THE EONS

OBJECTIVES

After viewing this program, students will be able to:

- Describe what scientists believe to be the early physical history of the Earth.
- Explain the major geological occurrences of the Precambrian era and why there are few fossil remains from that era.
- Describe specific developments in the living and non-living environments during the six periods of the Paleozoic era.
- Describe the formation of the continents from Pangea to the present.
- Describe the development of plant and animal life on earth.
- Explain when and how the major geological features of the North American continent were formed.

This program is part of the AIMS Interactive Science Essentials Series. This twenty-four part series covers four subject areas- Earth Science, Biology, Physics, and Chemistry. There are six programs in each subject area. The individual programs are divided into randomly accessible sections.

A glossary provides written definitions of terms used in the program, and in most cases will run a section of the video where the word is used in context. A script of the narration is accessible, as well as a bulletin board containing a general introduction to the subject. A quiz allows the student to test their knowledge and the results are recorded for you. In the teacher's section you can view each student's test responses and edit or create your own quiz and test questions.

OVERVIEW

The History of the Earth: Over the Eons is part six of the Earth Science Essentials series which examines modern day earth science. The program provides an integrated video outline of the geologic and biologic history of the Earth from the Precambrian Era to the present. After watching this beautifully photographed and animated program, students will be able to place major geologic and biologic events within the correct era and period along the geologic time line. In addition, students will come away with a basic understanding of how scientists learned what they know about the history of the Earth.

TEACHER'S PREPARATION

- Before the student uses the program set up the computer so that they can easily reach the mouse and the keyboard.
- Load the CD-ROM into the computer so that it is ready for the student to begin using.
- While students are able to work at their own pace, some students may benefit from using the program more than once.

SUGGESTED DISCUSSION QUESTIONS

1. Why aren't fossils usually found in igneous rock?
2. Are there any sedimentary rock formations in your area that may contain fossils?
3. What geological forces shaped the area where you live?
4. Do you think it is reasonable to believe that the Grand Canyon was formed over millions of years of erosion or do you think it happened as a result of sudden large shifting in the Earth's crust?
5. If one of the Earth's plates moves 4 or 5 centimeters a year, how far would it move in 3 or 4 billion years?

6. Describe the forces that caused Pangea to separate into the continents we see today. What evidence makes geologists believe Pangea existed?

7. How would you explain the rise of the dinosaurs? How would you explain the fall of the dinosaurs and the rise of mammals?

8. Describe all the evidence you are aware of regarding the Earth being struck by a meteor or asteroid at the end of the Cretaceous Period.

9. How can geologists tell that the Alps and Himalayas were formed more recently than the Rocky Mountains or the Appalachians?

10. Based on the evidence of the last two billion years what would you expect the Earth to look like two billion years from now? Where will the continents be? What species do you think will still exist?

11. Come up with realistic circumstances under which the human race could become extinct.



Discussion Guide for

THE HISTORY OF THE EARTH: OVER THE EONS

VOCABULARY

algae	Carboniferous period
Cenozoic	Cretaceous period
Devonian period	dinosaurs
fossil	hotsprings
ice age	igneous rock
Jurassic period	mammoth
mesozoic	Ordovician period
paleozoic	pangea
permian	precambrian
Precambrian shields	reptiles
sedimentary rock	sequoia
Silurian period	spores
Triassic period	trilobite
Tyrannosaurs Rex	vertebrates

ADDITIONAL BENEFITS

Students will be able to:

- Describe the formation of many of North America's largest mineral deposits.
- Describe specific developments in the living and non-living environments during the three periods of the Mesozoic era.
- Analyze the possible causes for the rise and fall of dinosaurs.

PROGRAMS DETAILS

LENGTH:
30 minutes

SUBJECT AREAS:
Earth Science

AUDIENCE LEVELS:
Junior-Senior High

ORDER NUMBER:
1-9086SG-SG

CANADIAN LEARNING COMPANY

95 VANSITTART AVENUE
WOODSTOCK, ON N4S 6E3
INFO@CANLEARN.COM
TEL:(800) 267 2977
FAX:(519) 537 1035

