HPS Geologic Time Discussion Questions Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Per\_\_\_\_\_\_\_\_\_

Chapter 22.1-3 GEO Book

OBJECTIVE 1: Describe and use evidence to explain how land, atmosphere, and oceans changed throughout Earth’s history.

KEY TERMS: Cyanobacteria (think stromatolites), supercontinent, differentiation, outgassing, meteoroid, red bed

BACKGROUND INFO: Precambrian Time (also referred to as “early Earth”) makes up approximately 90% of geologic time. After that comes the three eras: Paleozoic (old life), Mesozoic (middle life), and Cenozoic (recent life).

1. According to your reading, what is the age of the Earth?
2. Describe the evidence used to determine the age of the Earth.

1. Describe early Earth’s major heat sources (3). Why is this important to our discussion?

4. Describe the formation of the crust.

1. What was the first supercontinent? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
Which supercontinent became North America? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
Which was the most recent supercontinent? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Describe Earth’s early atmosphere. What was abundant, what was missing, etc.?

1. Describe the significance of stromatolites?
2. What are red beds, and why are they significant?
3. Where do scientists believe the water that formed the oceans came from? pg 588
4. Describe the formation of the oceans.
5. Draw three graphic organizers below to compare and contrast early and present day land, atmosphere, and oceans.