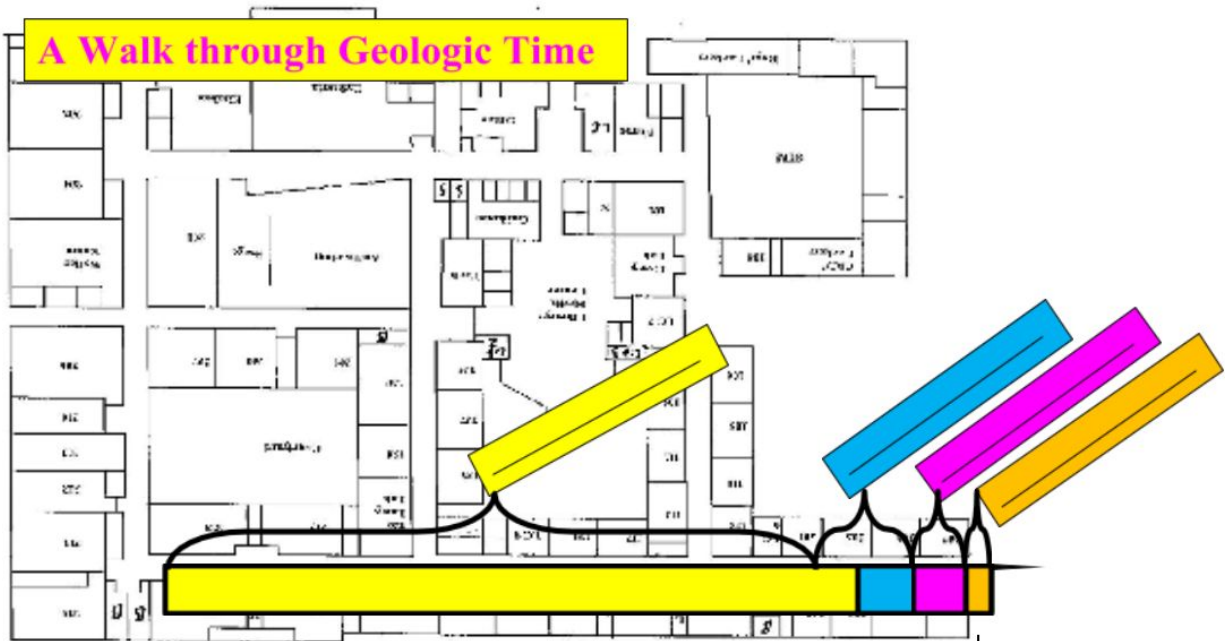


# A Walk Through Geologic Time Critical Thinking & Connection Questions

Directions:

- 1) As you travel down the hall record the names of each piece of time in the colorful boxes on the map.



Directions:

- 2) Circle biologic or geologic for each bolded event.
- 3) Answer the questions AS BEST YOU CAN, using the videos, internet, logic and discussing with your group members.

#### 4.6 bya Earth Forms



Biologic or Geologic

1)a. Explain the condition of earth during this time.

b. What allowed water to stay on Earth with these conditions?

#### 4 bya - Oceans



Biologic or Geologic

2) What do scientists theorize brought some of our water to earth? What evidence supports this theory?

3) What happened in the atmosphere that contributed to forming oceans?

### 3.8 bya- Life begins single cells



Biologic or Geologic

4) What do scientists theorize sparked the origin for the first single celled organism?

5) Why do you think the first cells needed to live in water? What was its importance?

### The First Continents Form



Biologic or Geologic

### 3.5 bya - Photosynthesis begins



Biologic or Geologic

6) What are the two things photosynthesis produces?

7) Explain why photosynthesis is considered an endothermic chemical reaction?

**2.3 bya - Ozone layer & oxygen starts building up in the atmosphere**



Biologic or Geologic

8) How did the ozone layer form?

9) Why do you think it took so long for the ozone layer to form?

**Cambrian explosion (new life)**

Biologic or Geologic

**505 mya Vertebrates (in oceans)**



Biologic or Geologic

10) Find 3 examples of vertebrates in the ocean (*use the internet as a resource*)?

\_\_\_\_\_, \_\_\_\_\_ & \_\_\_\_\_

## 438 mya Life on Land



### Biologic or Geologic

11) What do you think the first form of life on land was?

*HINT: Be CAREFUL the first form of life may not have been the main topic of the video, it may have made other lifeforms that followed possible.*

12) How did species first transition to being land dwellers?

## 245 mya - Pangaea



### Biologic or Geologic

13) What was Pangaea?

14) Have the continents always been in the same positions that they are today?

15) How do you think they moved?

## 66 mya - Age of Reptiles/Mass Extinction



Biologic or Geologic

16) What may have caused the extinction of the dinosaurs?

17) What order do you think that these species appeared in the cenozoic era?

\_\_\_\_\_ Sabertooth tigers

\_\_\_\_\_ hippos

\_\_\_\_\_ Lions

\_\_\_\_\_ apes

\_\_\_\_\_ wolves

\_\_\_\_\_ Whales

\_\_\_\_\_ mammoths

\_\_\_\_\_ armadillos

18) How did we learn about living things (like dinosaurs) that existed in the past?

## 65 mya - Age of Mammals



Biologic or Geologic

### 3.2 mya - Human ancestors

Biologic or Geologic

19) What are some common links between Lucy and modern humans?

20) What are your predictions about the future based on earth's history?