

Activity 8.1 Geologic Timescale

Objective

To construct a time line for the appearance of organisms on the geologic time scale.

Approximate Time:

30 minutes to 1 hour

Materials:

- 5 meters of adding machine tape
- Meter stick
- Metric ruler
- Markers
- Adhesive tape

Procedure

1. Measure out 5 meters of adding machine tape and spread it out on the floor. Use adhesive tape to hold it down.
2. Use the following time scale:
 - 1 meter = 1 billion years
 - 10 centimeters = 100 million years
 - 1 centimeter = 10 million years
 - 1 millimeter = 1 million years
3. At the end of the tape draw a line and label it “present.”
4. Measure to find the spot on the tape where 4.6 billion years ago would be and label this “Earth’s beginning.”
5. Now plot each of the following events on your time line:

• Earliest evidence of life	3.5 billion years ago
• Mesozoic Era begins	245 million years ago
• First land plants	400 million years ago
• Insects and amphibians on land	370 million years ago
• Age of reptiles	225 million years ago
• Dinosaurs become extinct	66 million years ago
• End of the Cretaceous period	65 million years ago
• Age of mammals	65 million years ago

- Humans appear 200,000 years ago
- Recorded history 6,000 years ago

6. Add pictures to your timeline of the various life forms at each time.

Analysis Questions

1. Recorded history represents what percentage of geologic time?
2. Why is it important for scientists to study the history of Earth? How does that history relate to the study of environmental science?
3. During what time frame has species extinctions caused by humans been the highest?