

## Understanding Geologic Time

# Geologic Time Activity Worksheet

### Instructions

Go to <http://pubs.usgs.gov/gip/fossils/numeric.html> and use the geologic time scale to find the missing dates and fill in the blanks under the Approximate Age category. Next, calculate the corresponding distance on a football field that each event represents and fill in the blanks under the Distance category. For this activity, 1 yard = 50 million years. Mark the events on the Geologic Time Football Field. One end zone is labeled "TODAY" and the other is "BEFORE EARTH." As you place your events on the football field, pay close attention to which end is which. Place events at the nearest yard.

Geologic Event	Approximate Age	Distance (yds)
Rocky Mountains are formed	80 million years	
First known fish	510 million years	
Paleozoic Era begins		
Earliest humans	2 million years	
Formation of the Earth	4.6 billion years	
First known mammal	200 million years	
Proterozoic Eon begins		
First single-celled organism	1.2 billion years	
Columbus discovers America	506 years	
Oldest rock	3.8 billion years	
Extinction of the dinosaurs	65 million years	
First known plant	498 million years	
First known reptile	325 million years	
First multi-celled organism	700 million years	
First known amphibian	375 million years	
First known bird	160 million years	

# Geologic Time Activity Worksheet (continued)

## Investigation

1. What event is exactly in the middle of the football field?

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2. Find where your birth date would be on the football field. Why is it almost impossible to show a human's life on this scale? Would it be easier if we changed the number of years that 1 yard represents?

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3. In what periods did fish, mammals, reptiles, amphibians, and plants appear on Earth?

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4. Look at the geologic time scale. Why do you think the Phanerozoic Eon has many more divisions and dates associated with it than the Archean Eon?

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5. How many years does the first 10 yards represent? What events are within the first 10 yards of the football field from the TODAY end zone?

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# Geologic Time Football Field

