

## Piecing Together the Puzzle Activity

### Time Scale Labels (Rope scale model)

*If using a total length of 23 meters, place labels every 50 cm. If you have enough students, you may use 46 meters of rope and place labels every 100 cm.*

4600 mya

3200 mya

4400 mya

3000 mya

4200 mya

2800 mya

4000 mya

2600 mya

3800 mya

2400 mya

3600 mya

2200 mya

3400 mya

2000 mya

1800 mya

1600 mya

1400 mya

1200 mya

1000 mya

800 mya

600 mya

400 mya

200 mya

180 mya

160 mya

140 mya

120 mya

100 mya

80 mya

60 mya

40 mya

20 mya

18 mya

16 mya

14 mya

12 mya

10 mya

8 mya

6 mya

4 mya

2 mya

Present Day

# Time Division Cards

## Hadean Eon

4600-3800 mya  
Start of Precambrian Time

## Proterozoic Eon

2500-543 mya  
End of Precambrian Time

## Archaean Eon

3800 - 2500 mya

## Phanerozoic Eon

543 mya – Present Day

## Paleozoic Era

543 - 248 mya  
Start of Phanerozoic Eon

## Mesozoic Era

248 - 65 mya

## Cenozoic Era

65 mya - Present Day  
Current era of Phanerozoic Eon

## Quaternary Period Begins

1.8 mya

## Precambrian Time

4600 - 543 mya

## Holocene Epoch Begins

0.01 mya

# Timeline Event Cards

Earth's crust cools and  
solidifies  
No life/fossils  
4500 mya

First evidence of life  
(prokaryotic single-celled  
bacteria & archaea)  
3500 mya

Rise in oxygen levels;  
photosynthetic bacteria  
form stromatolites  
2400 mya

First eukaryotes as  
unicellular organisms  
with nuclei in cells  
1400 mya

Development of  
multicellular organisms  
(sponges, soft-bodied  
invertebrates)  
570 mya

Cambrian Explosion  
seen with increased  
diversity in marine life  
543 mya

First plants moved to  
land; diversity in marine  
life continues to increase  
505 mya

First terrestrial (land)  
organisms appear  
(amphibians, arthropods)  
430 mya

Permian-Triassic  
extinction of 95% of  
marine species and  
50% of all land animals  
251 mya

First dinosaurs and early  
mammals appear in  
fossil record  
245 mya

First placental mammals  
appear in fossil record  
220 mya

Extinction of dinosaurs;  
rise of placental  
mammals & birds  
65 mya

First hominids appear  
(oldest human ancestors)  
5 mya

Modern humans appear  
amid four ice ages  
that change Earth's  
ecosystems  
0.2 mya

First flowering plants  
appear on Earth  
245-202 mya