4600 MYA
Earth is formed

#1



4530 MYA

The Moon is formed



3800 MYA
Earth’s crust solidifies and oceans formed from condensation of atmospheric water

#2



 3500 – 2800 MYA
First Prokaryotic organisms

#3

2400 MYA

Oxygen levels in the atmosphere rise



1500 MYA

#4

First Eukaryotic organisms



1500 – 600 MYA

Rise of Multicellular organisms



580 – 545 MYA
First Fossils

#5



500 – 450 MYA

First Vertebrates – Fish



430 MYA
Waxy coated Algae begin to live on land

#6



420 MYA

First Millipedes live on land



375 MYA

#7

Appearance of primitive sharks



350-300 MYA

Rise of Amphibians



 350 MYA

#8

Primitive Insects and Primitive Ferns (first plants with roots)



300 – 200 MYA

#9

Rise of Reptiles



300 MYA

Winged Insects have evolved



200 MYA
Pangea starts to break apart and the appearance of mammals

#10



65 MYA

#11

Extinction of Dinosaurs and the beginning of the reign of mammals



20-12 MYA

#12

Chimpanzee and hominid lines evolve



4 MYA

Development of hominid bipedalism



 4 – 1 MYA

#13

*Australopithecus* exist



3.5 MYA

The *Australopithecus* Lucy walks the Earth

2 MYA

#14

Widespread use of tools



2 – 0.01 MYA

Most recent ice age

1.6 – 0.2 MYA

#15

*Homo erectus* exists



1 – 0.5 MYA

*Homo erectus* tames fire



0.2 - .03 MYA

#16

*Homo sapiens neanderthalensis* exist



0.05 – 0 MYA

*Homo sapiens sapiens* exist

0.012 MYA

*Homo sapiens sapiens* domesticated dogs in Kirkuk, Iraq

#17





.006 MYA

Writing is developed in Sumeria

**#1. How many million years ago was the Earth formed? \_\_\_\_\_\_\_\_\_\_\_\_\_**

Identify the four eras in order starting with the most present.

1.

2.

3.

4.

**#2. How did the water for the oceans form?** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Which era and period are we currently in?

 Era- Period-

**#3. 3500-2800 MYA the first prokaryotic organisms came into existence, do prokaryotes have a nucleus? Yes No**

Name 4 types of events that could cause many organisms (plants and animals) to go extinct.

a.

b.

c.

d.

**#4. How old could the oldest Eukaryotic multi-celled organism be? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Which era is the longest? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Which era is the shortest?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**#5. How many millions years between the first fossil and the first vertebrate fossil? \_\_\_\_\_\_\_\_\_\_\_\_\_**

In which *eras and periods* did the following first appear on Earth:

1. Dinosaurs –
2. Mammals –
3. Flowering Plants –
4. Birds –

**#6. When did Algae begin to live on land? \_\_\_\_\_\_\_\_\_\_\_\_ Why was it waxy coated?** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Which developed first, plants or animals? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**#7. Which happened first, sharks for amphibians? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Why does that make sense? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**#8. When did rooted plants first existed? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 Ferns first appeared in Period: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Ferns first appeared in Epoch: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **#9. Could reptiles and insects have existed together at the same time? Yes No**

Could reptiles and dinosaurs have existed together at the same time? Yes No

**#10. What happened 200 MYA? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Which epoch: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**#11. How long ago did dinosaurs go extinct? \_\_\_\_\_\_\_\_\_\_\_\_\_**

 Which Epoch did mammals begin existence? \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**#12. How long ago did the first bipedal hominid develop? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **Using the picture on the gallery walk, what does bipedal mean? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**#13. When did Australapithecus Lucy walk on Earth? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Do you think this is the same as a present day human? Yes No

**#14. How long ago did the last ice age occur? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **Did man always use tools? Yes No**

**#15. How long ago did early man start to use fire? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 What epoch was this? \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**#16. How long ago did the Homo sapien sapiens first evolve? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

What epoch was this? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**#17. How long ago was writing first developed? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **Where do we find evidence of this? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

