

# SCIENCE

Friday 22nd

## How old is the Earth?

Guess! Go on, give it a guess.

How old do you think the earth is?

A thousand years old?

Ten thousand years old?

A million years old?

10 million?

Older?

Write down how old you think the earth is – no cheating!

Now watch this video to see how close you were

<https://www.spiral.ac/sharing/u7kp9kc/how-old-is-the-earth>



THIS IS THE DIFFICULT BIT!!!

This is a clock for telling time.

Look at the hands on the clock.

This hand shows the passage of seconds.  
We call it the “Second Hand.”

This one shows the passing of minutes. We call it the “Minute Hand.”

This one shows us the hour; we call it the “Hour Hand.”

Let’s review how a clock measures time.

The second hand ticks for every second that passes: 60 in a minute.

Then the minute hand moves one tick for every minute: 60 in an hour. It takes the minute hand one hour to go all the way around the clock. The hour hand moves once every hour and tells us the hour that the other hands are working in, like the two o’clock hour, the four o’clock hour and so on. It takes the hour hand twelve hours to go around once.

Look at the numbers on the clock. They divided the time into sections-intervals-of five minutes. That makes it faster for us to decide how many minutes or hours have passed.



THIS IS EVEN MORE DIFFICULT – KEEP STRONG!

This is a new clock.

There are a few differences between this clock and the clock we use for telling time.

The intervals don't show time that is passing now. They show time that has already passed.

This clock hand began to move when the Earth was just forming.

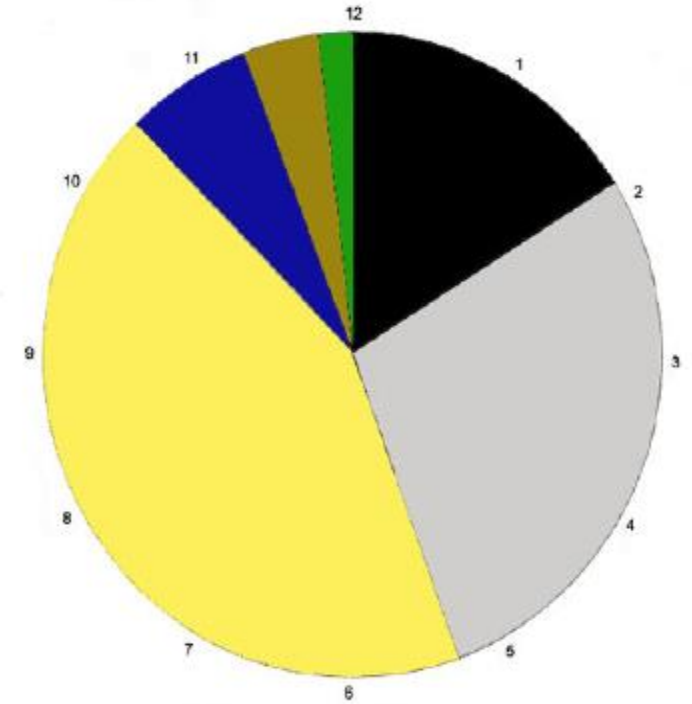
This clock represents the time the Earth has been in existence, about 4.5 billion years.

So one hour would represent 375,000,000 years passing.

On our standard clock we have second hands that measure seconds, minute hands that measure minutes, and hour hands that measure hours.

On this clock our hand measures Eras. As it passes around the clock, it colours the clock as it marks off the eras. Each new colour represents a new era. The colours on the clock will remind us of how the earth was forming and how life was taking shape on the planet.

Look at those crazy scientific names in the table! Don't worry, we are not asking you to remember them but we will be asking you to understand them.



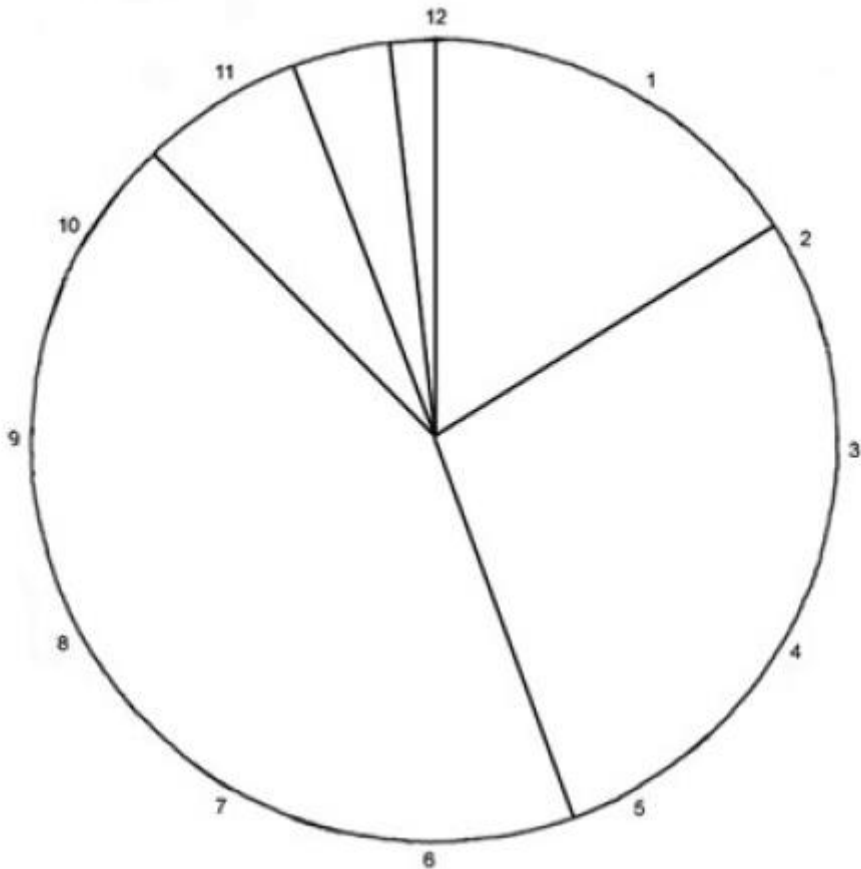
## Clock of Eras

1 hour = 375,000,000 years

	Era	Years	Clock Time
1	Hadean	700,000,000	1 hour 52 minutes
2	Archaean	1,300,000,000	3 hours 28 minutes
3	Proterozoic	1,957,000,000	5 hours 12 minutes
4	Paleozoic	295,000,000	47 minutes
5	Mesozoic	183,000,000	29 minutes
6	Cenozoic	65,000,000	10 minutes

This video might help explain a little more:

<https://www.stem.org.uk/resources/elibrary/resource/36610/evolutionary-history-life>



After you have watched the video can you show on your blank clock of eras: (there is a blank copy on the next slide)

- When the first life happened
- When the dinosaurs first roamed the earth
- When the dinosaurs became extinct
- When the first humans (*homo sapiens sapiens*) appeared

Use the resources in the additional support area to help you.

