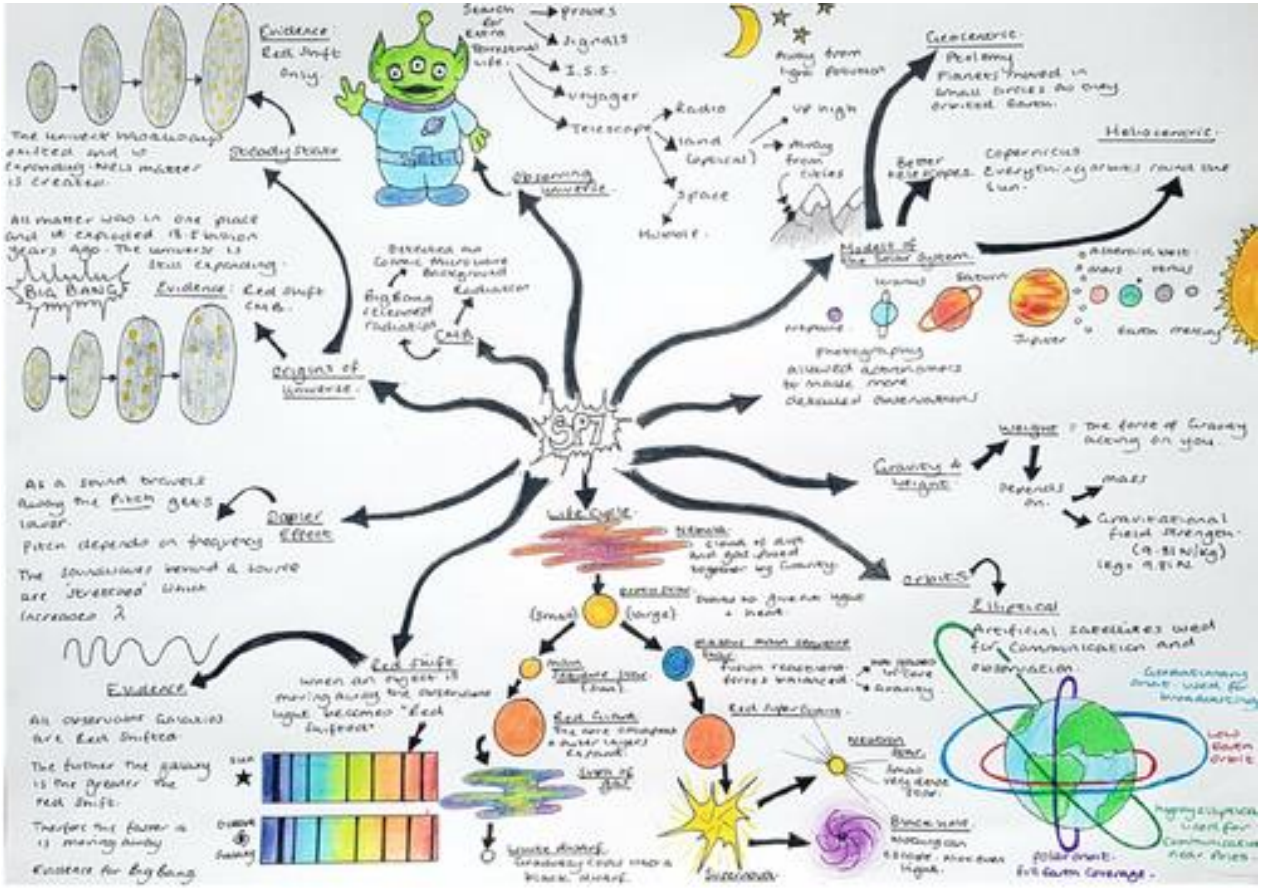
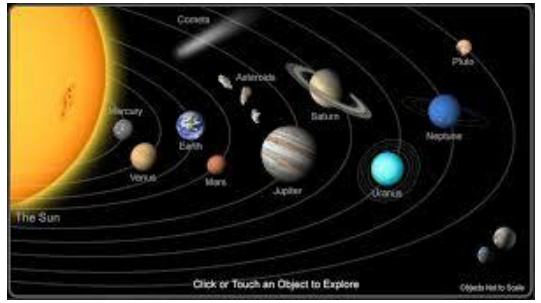
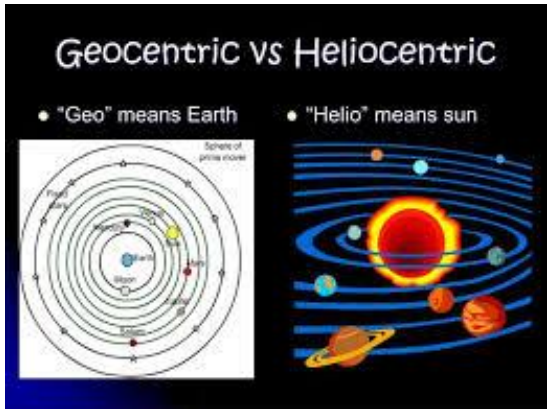
Before you start this lesson

Add to your mind map what you learnt from last week's lesson.

What did you learn from last week's lesson?







I can explain how planets move in our solar system.
I can identify scientific evidence which does or does not provide evidence for an idea or argument.

Success Criteria – By the end of this lesson:

I can explain how the planets orbit the Sun.

I can distinguish between heliocentric and geocentric ideas of planetary movement.

I can explain theories of planetary movement in the solar system using evidence.

I can identify scientific evidence with support.

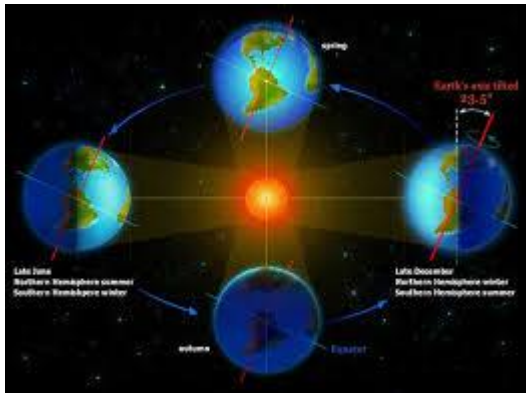
Orbit or Rotate

What is the difference between

orbiting and **rotating**?

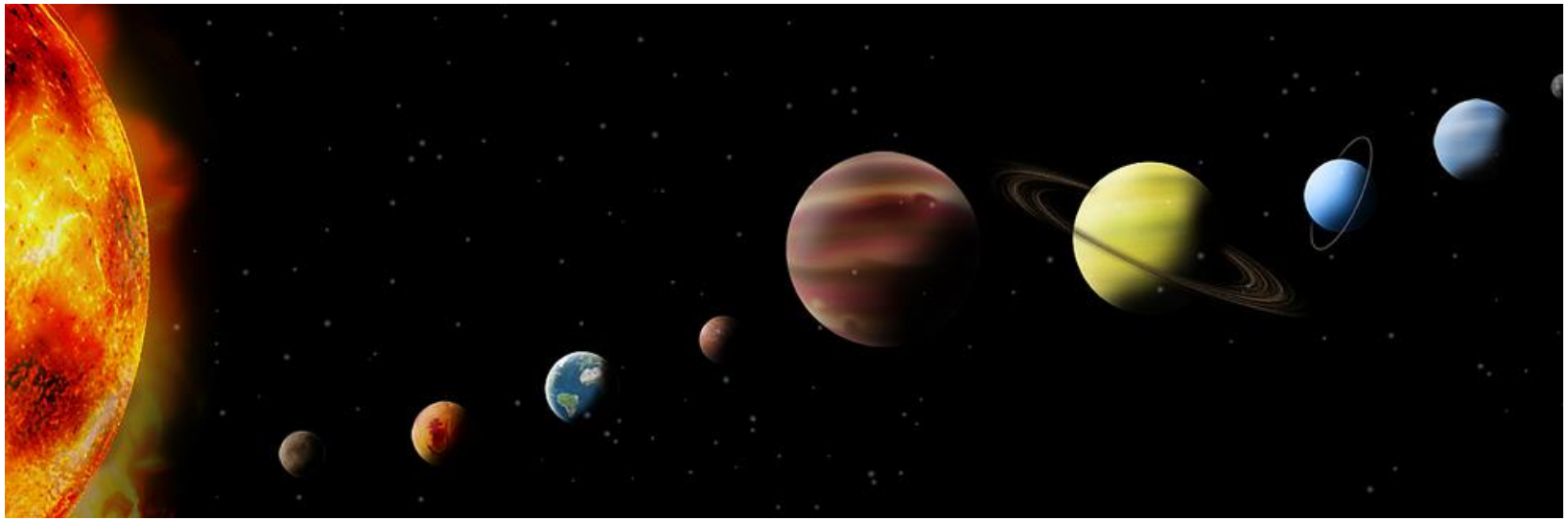
rotate

orbit



How Do Planets Move?

Answer the following questions



How do the planets in the solar system move?

Where is your evidence?

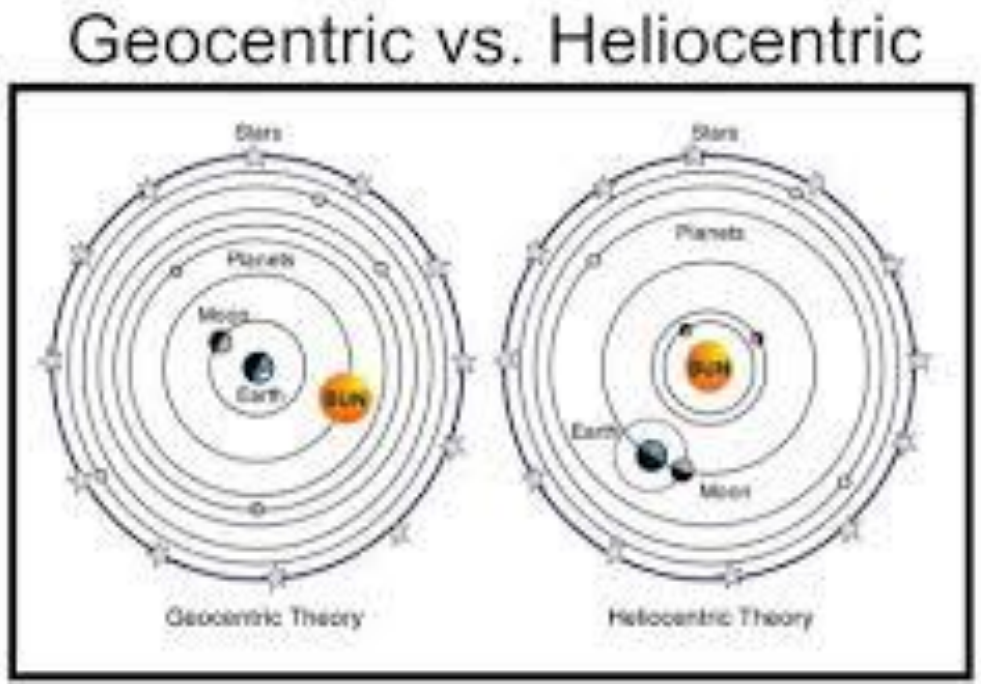
How do you know?

Geocentric Versus Heliocentric

How did these ideas change?

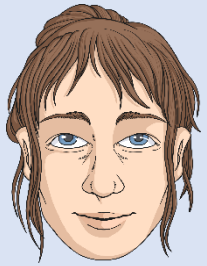
From ancient times many people believed that the solar system was Geocentric. This means they believed that the Earth was the centre of the solar system and all the other planets and Sun orbited it.

Slowly over time ideas changed to what we now believe, which is the Heliocentric Model. This means that the Sun is the centre of the solar system and it is orbited by the other planets.

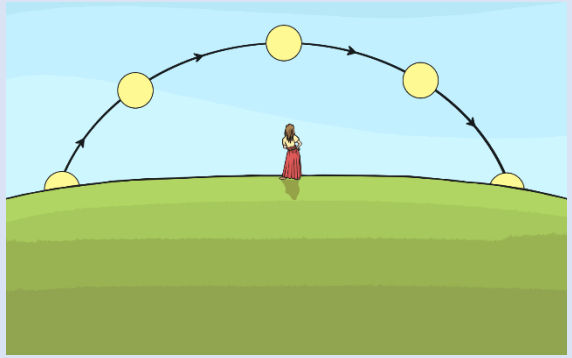


Solar System Story Map
Ancients 1

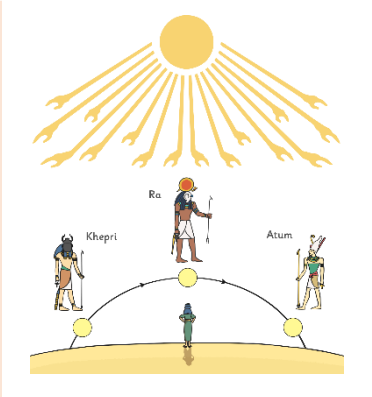
Lets go back in time:
Read these next 6 slides and make notes!



Early Humans – circa 12000 BC



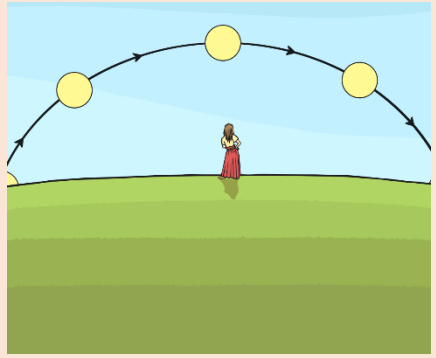
Ancient Egyptians – circa 5000 BC



Solar System Story Map
Ancients 2

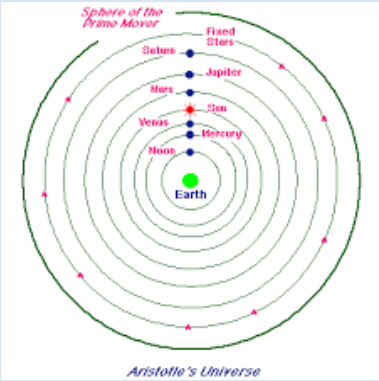
Ancient Indians – 1400 BC

Ancient Babylonian/Sumerians – 700 BC

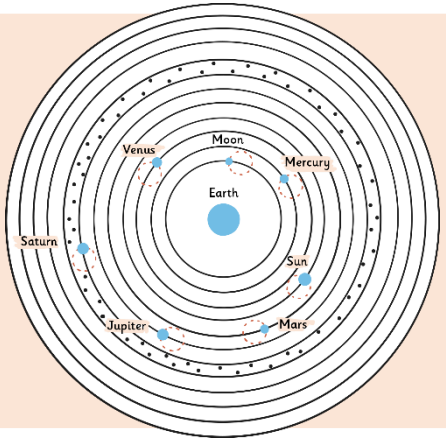


Solar System Story Map
Ancient Greeks

Aristotle - 384 - 322 BC



Ptolemy - AD 85 - 165

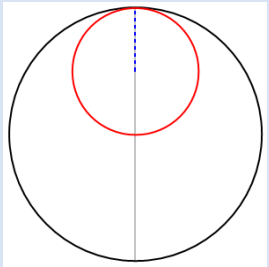


Solar System Story Map
Islamic Scholars

Alhazen - AD 1025 – 1028

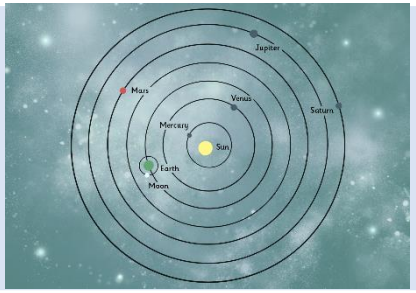
Al Katabi – circa AD 1230 - 1240

Tusi – AD 1247

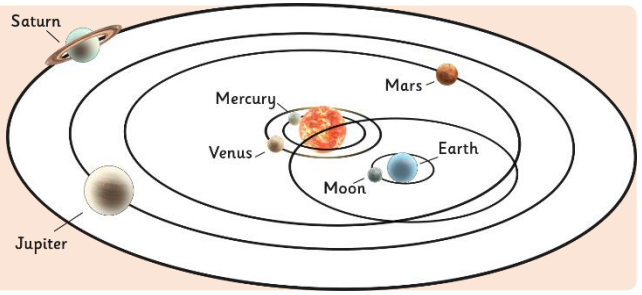


Solar System Story Map
Changing Europe

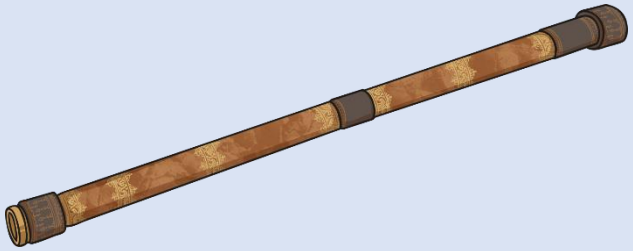
Copernicus – circa AD 1530



Tycho Brahe – circa AD 1587

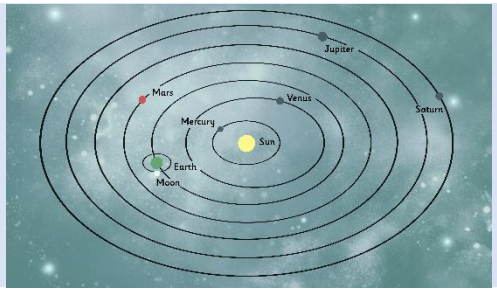


Galileo – AD 1615

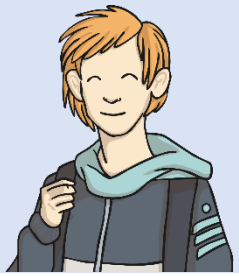


Solar System Story Map
Heliocentric Model

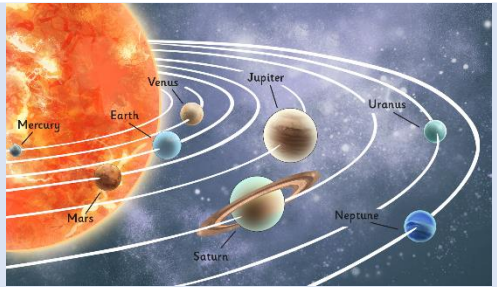
Kepler – AD 1617-1621



Newton – AD 1687



Present Day



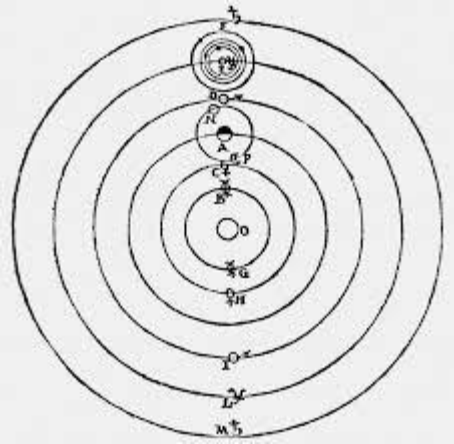
I can explain how planets move in our solar system. I can answer questions on it with evidence for an idea or argument.

Now, complete the comprehension questions on the next few slides:

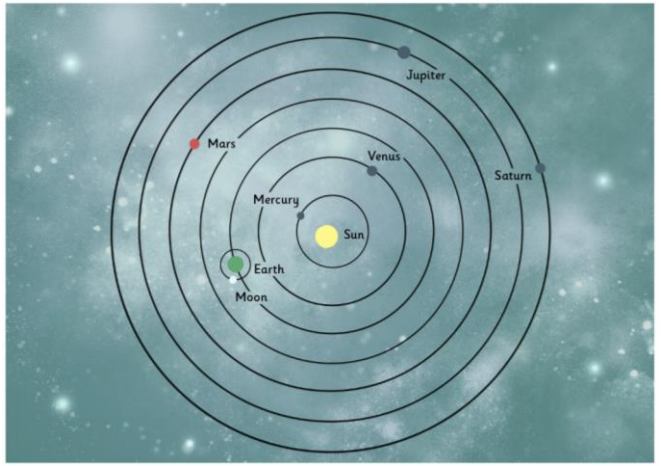
- Use your vocabulary (word bank) to complete your questions.
- You can watch the BBC clips, pause or watch it as many times you'd like to help/support to answer your questions.

https://www.bbc.co.uk/bitesize/clips/z6shfg8

Sun	star	planet	Mercury
Venus	Earth	Jupiter	Saturn
Uranus	Neptune	orbit	rotate
	axis	sphere / spherical	

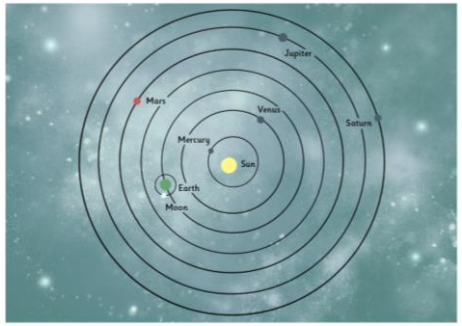


Copernicus' Planetary Model

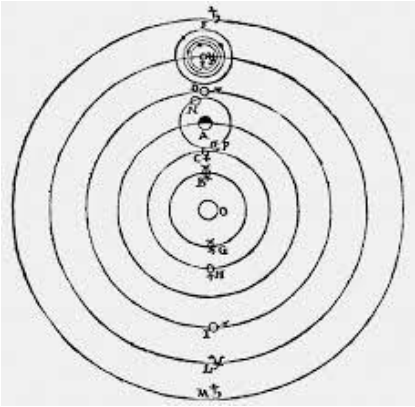


Once it's done, you can drop it in the school's 'drop box'. We look forward to seeing your work soon! Enjoy learning!

Copernicus' Planetary Model



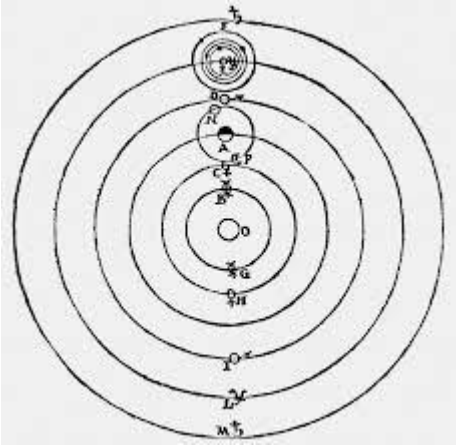
Copernicus versus Galileo



After viewing the clip, https://www.bbc.co.uk/bitesize/clips/z6shfg8 answer the questions on the worksheet.

Give reasons for your answers. PEE it (point, evidence and explain it).

1. What exactly did Copernicus work out?
2. What did Galileo confirm?
3. Is it more important to have a scientific theory or to find the proof for a scientific theory?
4. Why do you think the Church tried to stop Copernicus and Galileo from finding out about the Earth and the Sun?

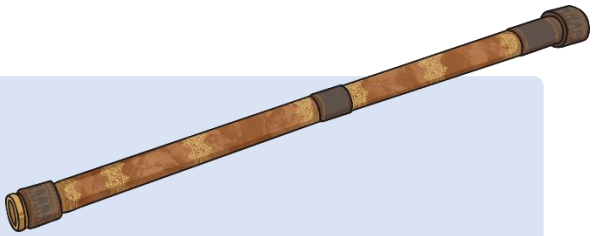


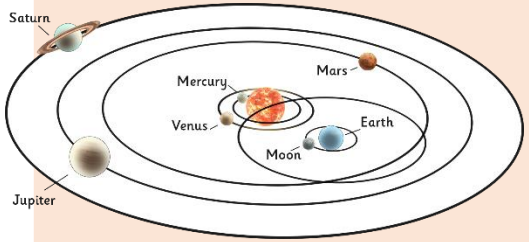
Changing scientific ideas

Answer these questions in full sentences.

You may need to refer back to the previous slides to help you to answer these questions

How do scientific ideas change?





Why did it take a long time to change from a geocentric to a heliocentric model of planetary movement?

What were the important factors leading to change?