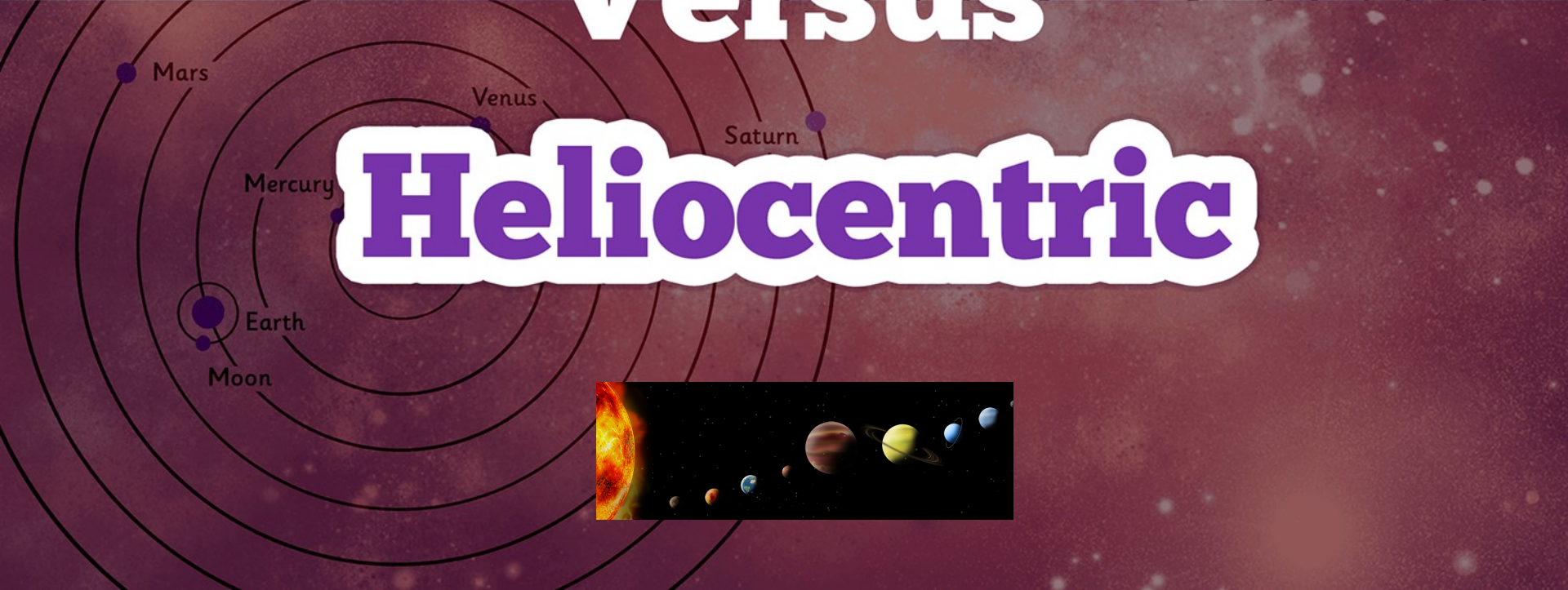
Geocentric Versus Heliocentric



Learning Objectives

- We are learning about how the planets move in our solar system.
- We are learning to identify scientific evidence which does or does not provide evidence for an idea or argument.

Success Criteria

I will be successful if:

- I can explain how the planets orbit the Sun.
- I can distinguish between the heliocentric and geocentric ideas of planetary movement.
- I can explain theories of planetary movement in the solar system using evidence.

Orbit or Rotate

What is the difference between **orbiting** and **rotating**?

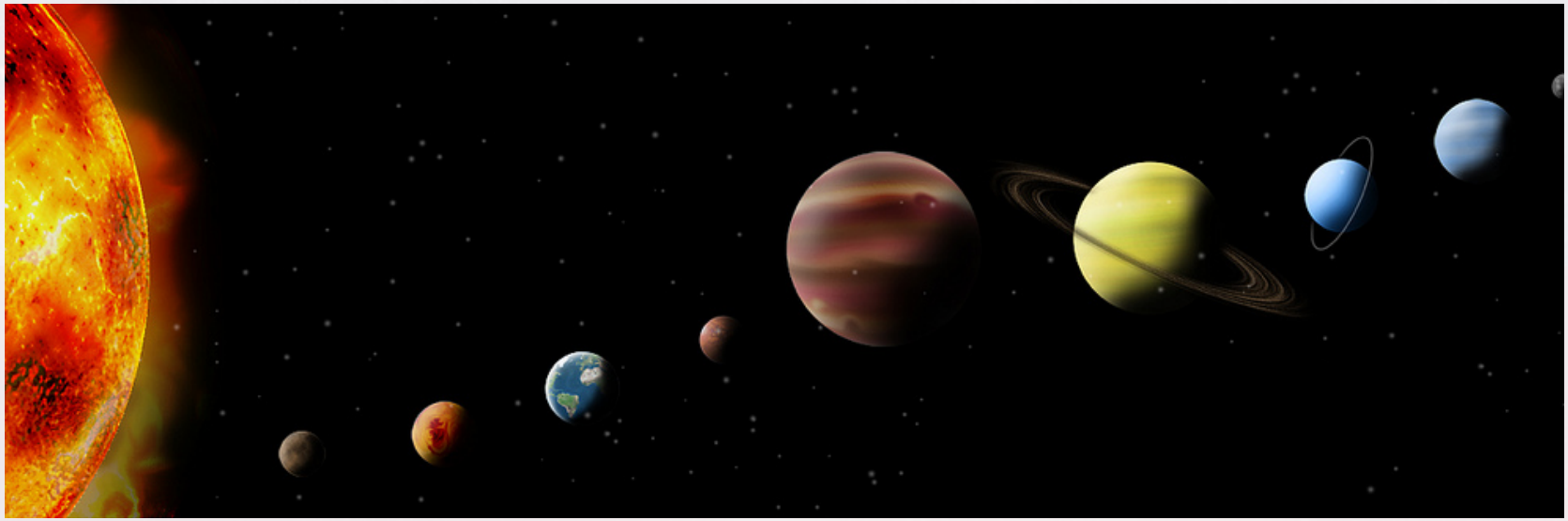
Rotate is when a planet spins on its own axis whereas **orbit** means where a planet moves in a determined path around a star (e.g. the Sun.)

rotate

orbit

How Do Planets Move?

Discuss the following questions with a family member or simply reflect yourself:



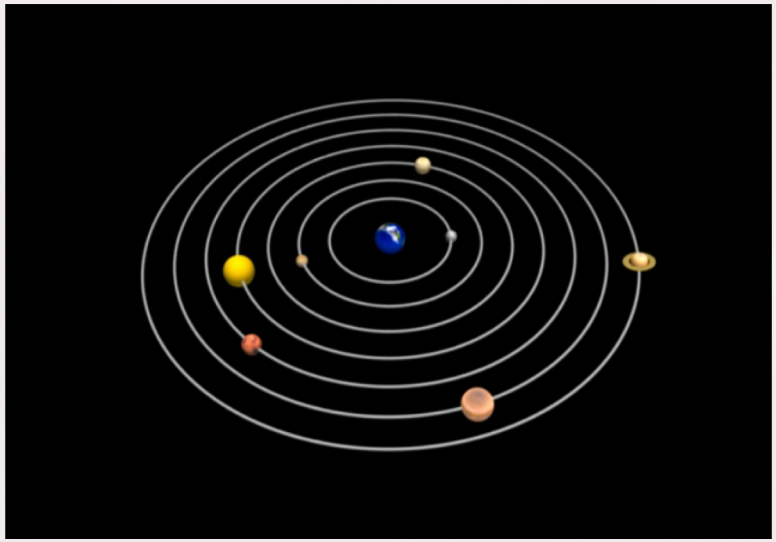
How do the planets in the solar system move?

Where is your evidence?

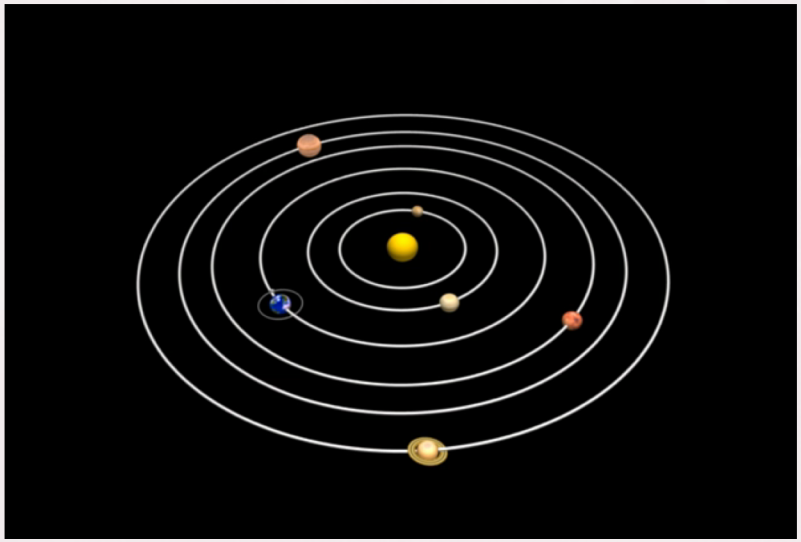
How do you know?

Geocentric Versus Heliocentric

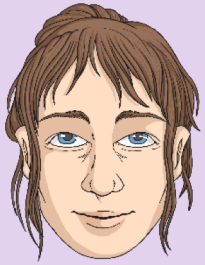
From ancient times many people believed that the solar system was Geocentric. This means they believed that the Earth was the centre of the solar system and all the other planets and Sun orbited it.



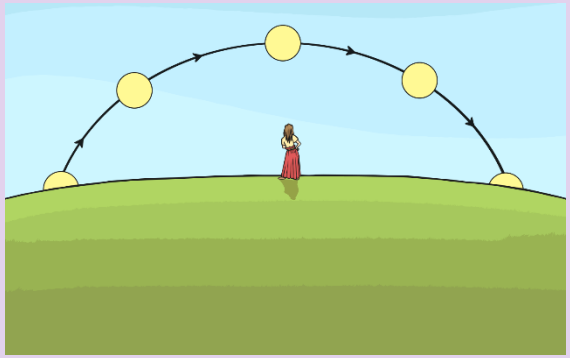
Slowly over time ideas changed to what we now believe, which is the Heliocentric Model. This means that the Sun is the centre of the solar system and it is orbited by the other planets.



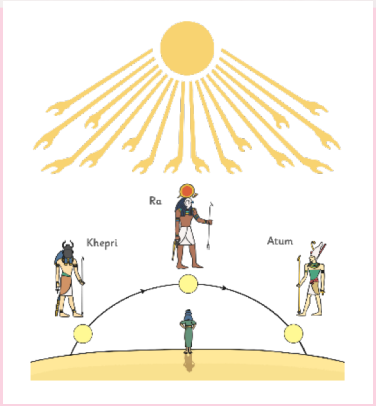
Solar System Story Map – Ancients 1



Early Humans – circa 12000 BC



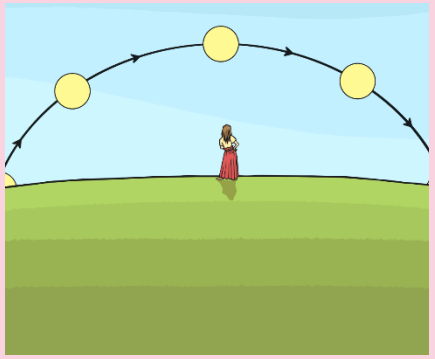
Ancient Egyptians – circa 5000 BC



Solar System Story Map – Ancients 2

Ancient Indians – 1400 BC

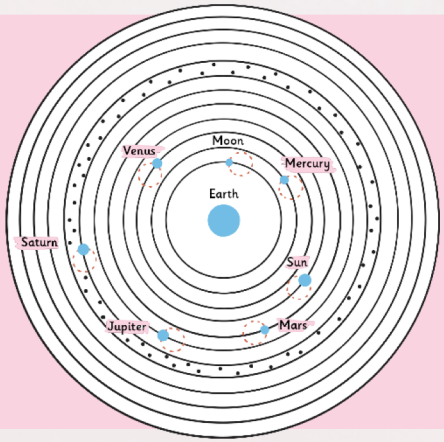
Ancient Babylonian/Sumerians – 700 BC



Solar System Story Map – Ancient Greeks

Aristotle - 384 - 322 BC

Ptolemy - AD 85 - 165

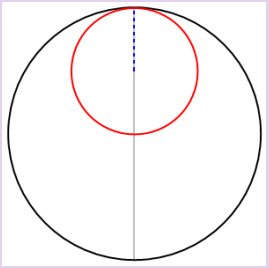


Solar System Story Map – Islamic Scholars

Alhazen - AD 1025 – 1028

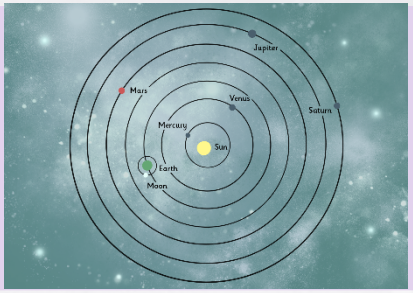
Al Katabi – circa AD 1230 - 1240

Tusi – AD 1247

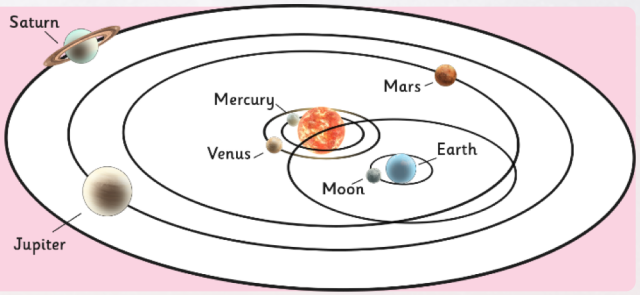


Solar System Story Map – Changing Europe

Copernicus – circa AD 1530



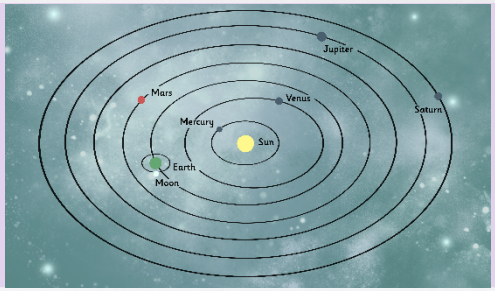
Tycho Brahe – circa AD 1587



Galileo – AD 1615

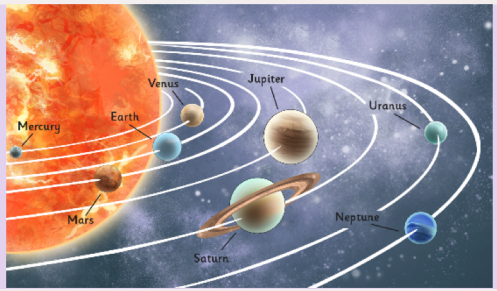
Solar System Story Map – Heliocentric Model

Kepler – AD 1617-1621



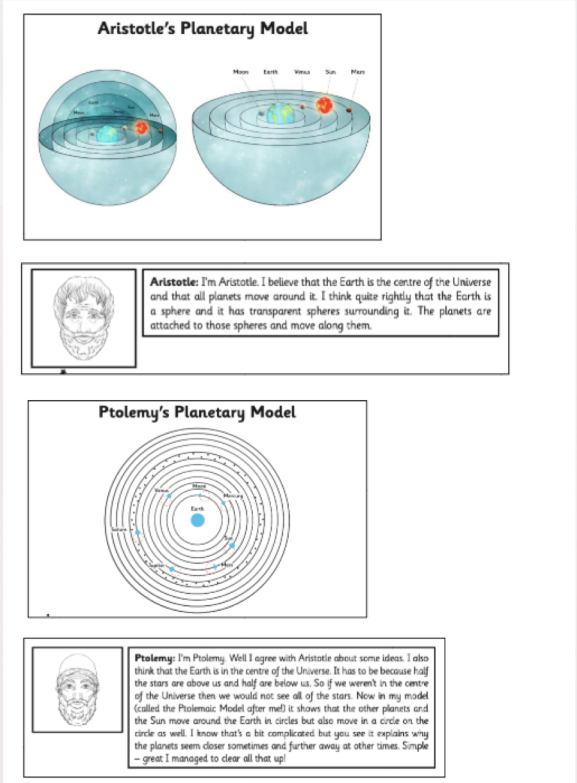
Newton – AD 1687

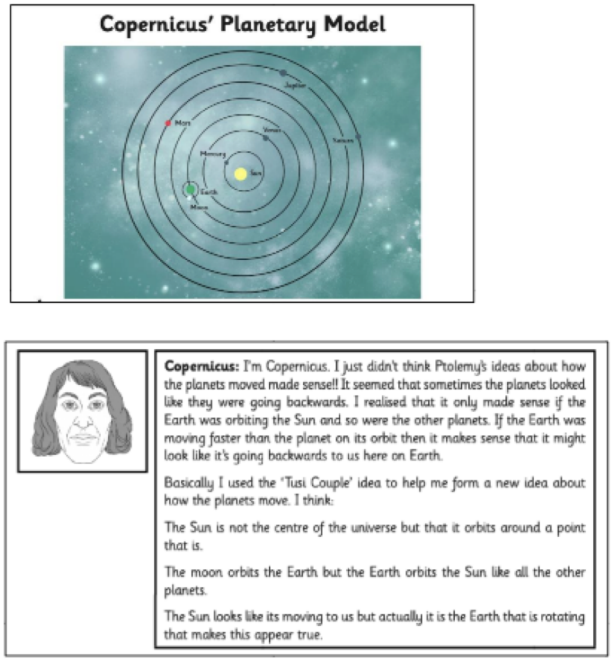
Present Day



Heliocentric vs Geocentric

- Read through the planetary models descriptions sheet to discover more about the different heliocentric and geocentric theories of key philosophers and scientists throughout history.





Heliocentric vs Geocentric

- Complete the activity sheet to show the geocentric and heliocentric models of the universe.
- Use the planetary models sheet to draw and label two of the scientists who believed in either model of the universe
- Add a short description to explain what their belief was.