



Year 5  
Spring

## Space

Throughout history and time, there have been many discoveries in the universe. We'll be exploring the way that our Earth moves to create day, night and seasons. The universe is made up of many extraordinary things, which we will be investigating and delving further into. There have been many discoveries made throughout history and so we will be examining the theories from the likes of Isaac Newton as well as looking at accounts from astronauts, such as: Neil Armstrong and Tim Peake.

### Key Vocabulary

1	orbit	The curved path in which a planet, satellite, or spacecraft moves in a circle around another body.
2	rotate	To cause to turn around on an axis.
3	Solar System	Our sun, its eight planets and their moons, and all other bodies that travel around the Sun, or any system that includes a star and all of the matter which orbits that star, including planets and moons.
4	spherical	Having or nearly having the shape of a sphere; rounded; globular.
5	gravity	The force by which all objects in the universe are attracted to each other.
6	heliocentric	Having the sun's centre as an imagined vantage point or as a starting point for measurements.
7	geocentric	Designating the Earth as the centre, as of the universe or solar system.
8	sun	A huge star that Earth and the other planets in our solar system orbit around.
9	star	A giant ball of gas held together by its own gravity
10	moon	A natural satellite which orbits Earth or other planets.
11	planets	A large object, round or nearly round, that orbits a star.
13	satellite	Any object or body in space that orbits something else, for example: the Moon is a satellite of Earth.
14	axis	A real or imaginary line through the centre of an object, around which the object turns.

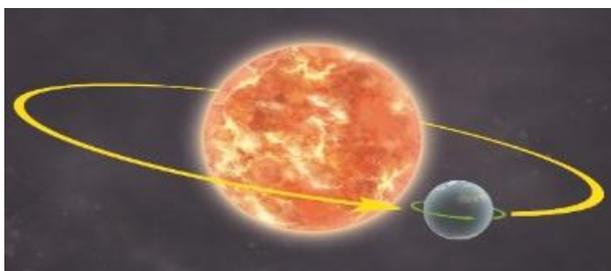
### Science:

#### Earth and Space:

- Describe the movement of the Earth, and other planets, relative to the Sun in the solar system.
- Describe the movement of the Moon relative to the Earth.
- Describe the Sun, Earth and Moon as approximately spherical bodies.
- Use the ideas of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.

#### Forces:

- Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.
- Identify the effects of air resistance, water resistance and friction that act between move surfaces.
- Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.





## Key Knowledge

Explaining why we know the Sun, Earth and Moon are spherical.

Identifying scientific evidence that has been used to support or refute ideas or arguments in the context of how ideas changed from a flat earth view.

Identifying scientific evidence which does or does not provide evidence for an idea or argument.

Explaining how planets move in our solar system.

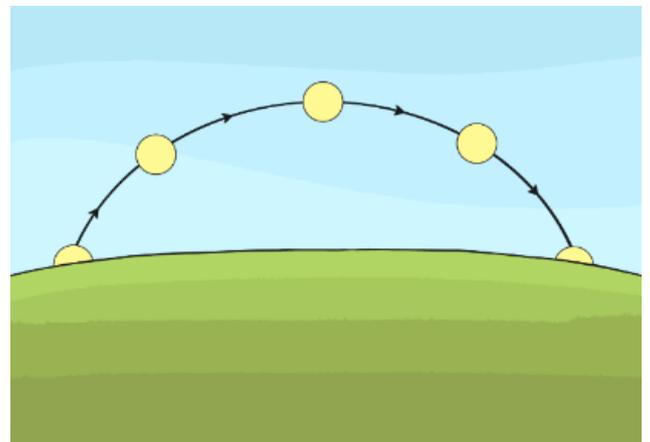
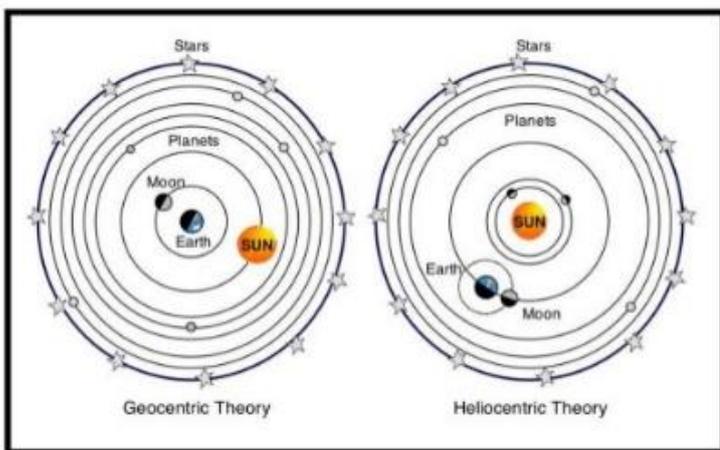
Identifying scientific evidence that has been used to support or refute ideas or arguments in the context of the shift from geocentric models of the solar system to heliocentric models.

Explaining day and night and the apparent movement of the sun across the sky.

Identifying scientific evidence that has been used to support or refute ideas or arguments in the context of the evidence for the Earth's rotation.

Explaining the movement of the Moon.

## Geocentric vs. Heliocentric



### Key Art & DT Skills:

#### Art

- To plan how to join parts of sculpture, securing work to continue at a later date.
- To use observation and imagination to create my design, adapt work as and when necessary and explain why.
- To use clay and techniques of pinch, press before firing and simple dip or painted glaze.
- To develop use of different drawing techniques (hatching, cross-hatching, stippling, blending, shading, erasing, side strokes, circulism) within their work and make sensible choices about what to do next.
- Researching, selecting, collecting, assembling, cutting, tearing, sticking, layering and collaging to create variety of found and created resources.
- To use a range of media to create collages.
- To use collage as a means of extending work from initial ideas and to create pattern for purpose.

#### DT

- To select appropriate materials, tools and techniques and develop skills in using different tools and equipment safely and accurately.
- To measure and mark out accurately.
- To evaluate a product against the original design specification.
- To create working mechanism for solar system project.