SCIENCE: EARTH AND SPACE

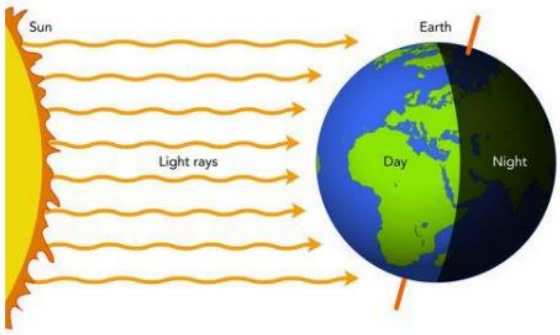
Key Vocabulary

Arctic, Antarctic, British Summer Time, Earth, Greenwich Meridian, International Date Line, Jupiter, Mars, Mercury, Milky Way, North Pole, Saturn, South Pole, Sun, Neptune, Universe, Uranus, Venus, asteroid, autumn, axis, compass, crescent, dawn, degrees, dusk, equator, equinox, fixed stars, galaxy, gibbous, hemisphere, horizon

Working Scientifically

- recording data and results of increasing complexity using scientific diagrams and labels
- reporting and presenting findings from enquiries, including conclusions
- identifying scientific evidence that has been used to support or refute ideas or arguments

Diagram: **Earth's rotation on an axis**



Must – know knowledge

The Earth orbits the Sun. The time it takes to complete one orbit is called a year. The other planets of our solar system also orbit the Sun at different distances and take different times to complete one orbit.

The Sun appears to move east to west in an arc across the sky from sunrise to sunset. Changes in shadows during the day can be explained by the changes in the position of the Sun.

The main bodies in our solar system are the Sun, which is a star, eight planets – Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune (Pluto, formerly the ninth planet of the solar system, was reclassified as a 'dwarf planet') – and various moons, including our own. They are all roughly spherical. Saturn has a visible ring system. The rings are made up of tiny pieces of ice with a small amount of dust. Jupiter, Uranus and Neptune also have faint rings.

The planets (and Pluto) all orbit (move in a roughly circular path around) the Sun, which is at the centre of the solar system. The Moon orbits the Earth. Some of the other planets also have moons orbiting them.

The solar system sits within a galaxy of other stars called the Milky Way, which is one of many galaxies.

We see the Moon as a bright object in the sky because it reflects the light from the Sun.

Diagram: **Phases of the Moon**

Experiments: How does the position of the Sun in the sky affect the length and direction of shadows?