

## Science: Space and Earth

### YEAR 5 SPRING TERM



#### National Curriculum subject content:

- ✓ 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 idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky

#### National Curriculum working scientifically

- ✓ planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- ✓ taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
- ✓ recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- ✓ using test results to make predictions to set up further comparative and fair tests
- ✓ reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations
- ✓ identifying scientific evidence that has been used to support or

#### Key Vocabulary:

axis	an imaginary line about which a body rotates.
constellation	a group of stars forming a recognizable pattern
crescent	the curved sickle shape of the waxing or waning moon.
Earth	the planet on which we live; the world.
gibbous	The moon having the illuminated part greater than a semicircle and less than a circle.
moon	the natural satellite of the earth
Phases of the moon	A phase is an angle of the moon to the earth so it appears differently every day.
planets	a celestial body that is in orbit around the Sun
Solar system	Collection of 8 planets that orbit the sun
star	a fixed luminous point in the night sky which is a large
sun	a star that is the source of light and heat for planets in the solar system
waning	(of the moon) have a progressively smaller part of its visible surface illuminated
waxing	the moon at any time after new moon and before full moon, so called because its illuminated area is increasing.

#### Sequence of Learning:

##### Objectives (key knowledge): (This topic is a full term- Objectives may span 2/3 lessons).

Objective 1 To understand the Earth, sun and moon as spherical bodies	Objective 2 To learn about the planets in our solar system and know that they orbit the sun.	Objective 3 To understand the theories around heliocentric and geocentric planetary movement	Objective 4 To explain day and night and the apparent movement of the sun across the sky. To take measurements using scientific equipment, record data, present data and explain findings	Objective 5 To know that the moon orbits the Earth and that this alters the way we see it.	Objective 6 To demonstrate our understanding of Earth and space
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#### Sticky Knowledge about Earth and space

Earth rotates on its axis and takes 24 hours to complete one full turn.

Daytime occurs when Earth faces the sun.

Night occurs when the side of the Earth faces away from the sun.

The moon orbits the Earth anti-clockwise and takes approximately 28 days.

The moon spins once on its axis every time it orbits Earth. This means we only see one side of the moon.

It appears as different shapes because the sun lights up different parts as it rotates Earth.

There are 8 planets in our solar system- Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune.

Mnemonic for remembering the order of the planets: My Very Easy Method Just Speeds Up Naming