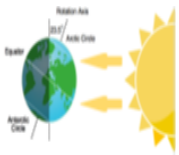
Knaphill School– *Other than Earth, where could humans live?*

Focus subjects: Science, History and Geography | **Year Group: 5** | **Term: Autumn**

What do I already know?

- We have four seasons (Autumn, Winter, Spring and Summer).
- The Sun is a source of light but the Moon is not.
- Know that a shadow is caused when an object blocks light from passing through it.
- The properties of a sphere.
- We have used maps to locate Africa as a continent and some of the countries
- Have identified lines of longitude, latitude and the equator; Northern and

What will I know by the end of the topic?

The Space Race	The Soviet Union (now Russia) and USA competed to be the first in space
To locate a range of countries within Europe and the location of the continents	To use a map to locate a range of countries within Europe, including Russia, and to locate the continents.
 What causes day and night?	The Earth rotates on its axis anti-clockwise and makes a complete rotation over 24 hours (a day). •This makes it appear as though the Sun moves through the sky but the Earth's rotation causes day and night. •Different parts of the Earth experience daylight at different times. This is also the reason why we have time zones. •Because of the Earth's tilt, the poles experience 24 hours of sunlight in the summer, and very few hours of sunlight in the winter. •As the Earth rotates, shadows that are formed change in size and orientation.
What do humans need to be able to survive?	•The basic needs of humans are: oxygen, water, food and shelter.
Year length and the seasons	•The Earth takes 365 and a quarter days to orbit the Sun. •Because of the extra quarter day it takes to orbit the Sun, every four years on Earth is a leap year! •It is the Earth's tilt that causes the seasons.
The Moon	•The Moon orbits the Earth anticlockwise and takes approximately 28 days. The Moon spins once on its axis every time it orbits Earth. This means that we only see one side of the Moon. •The Moon has different phases depending on where it is in its orbit. •The Moon's gravity causes high and low tides.
What are conditions like on the planets in our solar system?	•There are 8 planets in our Solar System (Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune). Pluto is a dwarf planet. •They all orbit the Sun, which is a star. •The first four planets are relatively small and rocky, while the four outer planets are gas giants (Jupiter and Saturn) or ice giants (Uranus and Neptune). •The Solar System is in a galaxy called the Milky Way. •The galaxy is in the universe.

Key information

The Sun, Earth and Moon are approximately spherical.

The Earth orbits the Sun.

The Moon orbits Earth.

Vocabulary

Astronaut	A person whose job it is to travel and work in space.
Asteroid	A rock that orbits the sun. It ranges enormously in size and are mostly within the orbits of Mars and Jupiter.
Axis	An imaginary line through the middle of something.
Comet	A bright object with a long tail that travels around the sun.
Galaxy	An extremely large group of stars and planets. Our galaxy is called the Milky Way.
Gravity	The force which causes things to drop to the ground.
Gravitational pull	The larger the mass, the greater the gravitational pull.
Meteorite	A rock from outer space that reaches the surface of a planet or a moon.
Orbit	The curved path in space that is followed by an object going around a planet, moon or star.
Planet	A large, spherical object in space that moves around a star.
Shadow	A dark shape on a surface that is made when something stands between a light and the surface.
Solar system	The sun and all the planets that go round it.
Sphere	An object that is round in shape like a ball.
Spin	Turns quickly around a central point.
Time zones	One of the areas into which the world is divided where the time is calculated as being a particular number of hours behind or ahead of GMT (Greenwich Mean Time).
Universe	The whole of space and all the stars, planets and other forms of matter and energy in it.