



English

Main text: Cosmic by Frank Cottrell Boyce (Sci-Fi)

To know how to use persuasive techniques and language to write persuasive letters.

To know how to write descriptions of different planets a rocket could land on.

To know how to write weather reports coming from different planets.

To know how to read and discuss a range of poems.

To know how to write and perform our own list poems.

To know how to draw inferences such as inferring characters' feelings, thoughts and motives from their actions, and justifying inferences with evidence.



Computing

Coding

To know how to use sequence, selection and repetition in programs; to know how to work with variables and various forms of output and input.

To know how to use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.

Spreadsheets

To know how to use spreadsheets to create tables of data, to format cells in order to perform calculations, to create tables and graphs and to make practical use of spreadsheets to help them plan actions.

Maths

Addition and Subtraction

To know how to use the inverse.

To know how to complete multi-step word problems.

Multiplication and division

To know how to find factors, multiples, prime and square numbers.

Fractions

To know how to recognise equivalent fractions.

To know how to convert and order fractions.

Physical Education

Rounders

To know how to throw and catch a ball accurately, to bowl underarm accurately towards a target, to learn how to hold a rounders bat and strike a ball effectively away from fielders, to work as part of a fielding team including returning a ball quickly and accurately and choosing where to stand for maximum impact.

Dance

To be able to explore and improvise ideas for a dance in a particular style, working on their own or with a partner, to compose dances by using, adapting and developing steps, to combine movement ideas fluently and effectively, to begin to use compositional principles when creating dances, such as listening and responding to music's expressive qualities, to practise and perfect a dance in preparation for performance.

To take part in a stamina runs to promote health for life and improve stamina.

Music

Guitar - Delivered by OCM using First Access programme.

PSHE

To know what culture means.

To know that differences in culture can sometimes be a source of conflict.

To know what racism is and why it is unacceptable.

To know that rumour spreading is a form of bullying on and offline.

To know external forms of support in regard to bullying e.g. Childline.

To know that bullying can be direct and indirect.

To know how their life is different from the lives of children in the developing world.

Science

To know how to describe the movement of the Earth and other planets relative to the Sun in the solar system.

To know how to describe the movement of the Earth relative to the Moon.

To know how to describe the Sun, Moon and Earth as approximately spherical bodies.

To know how to use the idea of the Earth's rotation to explain day and night, and the apparent movement of the sun across the sky.

Religious Education

Does God communicate with man (Christianity)?

To know, describe and compare different Christian beliefs about how God might communicate with humans exploring concepts of sacred texts, revelation and the Holy Spirit.

French

Getting to Know You

To know the parts of the body in French.

To know how to write descriptions using the 1st and 3rd person singular.

To know how to talk about clothes, feelings and illnesses.

To know how to ask and answer questions about everyday actions in the classroom.

Art and Design

To know how levers work.

To know how pulleys work.

To know how gears work.

To design and make a (space based) game using a combination of levers, pulleys and gears.

To know how to evaluate my work thinking about the whether the choice of mechanism was right for the game and why.



Year 5 – Autumn 2 – Knowledge Organiser

Enquiry Question: Where is our place within the universe?



Subject Specific Vocabulary	
Asteroid	A rock that orbits the sun in a belt between Mars and Jupiter.
Axis	An imaginary line through the middle of something.
Celestial body	A natural object which is located outside the Earth's atmosphere such as a comet, asteroid, moon, star, moon or the sun.
Comet	A bright, celestial object with a tail that travels around the sun.
Gravity	The force that attracts objects to the centre of the Earth.
Meteorite	A rock from outer space which has landed on Earth.
Moon	The natural satellite of the Earth, visible (mostly at night) by reflected light from the sun.
Orbit	The curved path of a celestial object or spacecraft round a star, planet or moon.
Planet	A large, rounded celestial body that is not a star.
Rotate	To move or cause to move in a circle round an axis or centre.
Shadow	A dark area or shape produced by a body coming between rays of light and a surface.
Solar system	The collection of 8 planets and their moons in orbit around the sun, together with smaller bodies in the form of asteroids, meteoroids and comets.
Sphere	An object that is round in shape like a ball.
Space	The area that contains the entire material world and its events.
Star	A fixed, luminous point in the night sky which is a large, remote, incandescent body like the sun.
Time zone	Areas of the world where time is calculated as hours behind or hours ahead of GMT.
Universe	The whole of space, all the stars and all the planets.
Waning	Where the moon has a progressively smaller part of its visible surface illuminated so that it appears it is getting smaller.
Waxing	Where the moon has a progressively larger part of its visible surface illuminated, increasing its apparent size.

Key Knowledge

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 and all have moons.

The Earth rotates on its axis anti-clockwise and makes a complete rotation over 24 hours. The Earth's rotation causes day and night. Different parts of the Earth experience daylight at different times – this means that it is day and night in different places at different times. As a result of the Earth's tilt, the poles experience 24 hours of sunlight in the summer and very few hours of sun in the winter.

The Earth takes 365 and a quarter days to orbit the sun. As a result of the extra quarter of a day, every 4 years on Earth is a leap year. It is the Earth's tilt that causes the seasons.

The moon orbits the Earth anti-clockwise and takes approximately 28 days. The moon rotates once on its axis every time it orbits Earth. The moon has different phases depending on where it is in its orbit.

Key images and diagrams