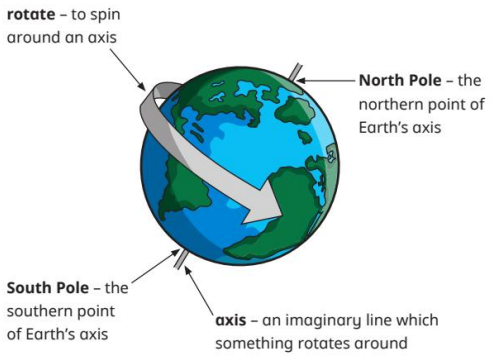
Ridgeway Farm CE Academy - Knowledge Organiser:

Topic	Science - Earth and Space	Theme	Explorers	Year Group	5

What should I already know?

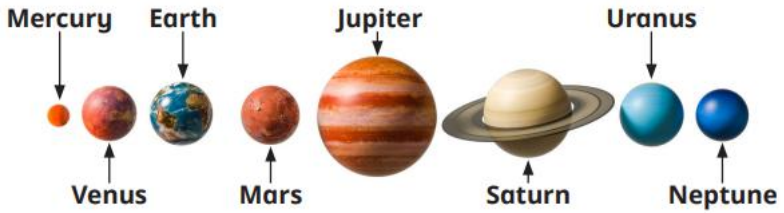
- The Sun provides light and warmth and is important for life on Earth.
- The Earth, Sun and Moon are separate objects in space.
- Day and night occur because Earth rotates on its axis.
- The Moon orbits the Earth, and its shape appears to change (phases).
- Shadows change length and position during the day as the Sun appears to move.



A mnemonic to remember the order of the planets is:
My (Mercury) Very (Venus)
Easy (Earth) Method (Mars)
Just (Jupiter) Speeds (Saturn)
Up (Uranus) Nothing (Neptune).

Key learning:

- The Solar System is made up of the Sun, eight planets, their moons, and other celestial bodies.
- The Sun, a star at the centre of the Solar System, provides heat and light.
- The eight planets orbit the Sun: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune.
- The inner planets (Mercury-Mars) have solid surfaces; the outer planets (Jupiter-Neptune) are mostly gas.
- Pluto is a dwarf planet, not one of the eight main planets.
- The Sun's gravity keeps all planets in orbit; Earth takes about 365 days to orbit once.
- Scientific models help us represent and understand how the Solar System works.
- Our understanding has changed over time – we now know the Sun, not Earth, is at the centre.
- Earth rotates once every 24 hours, causing day and night, and its tilted axis causes the seasons.
- The Moon, Earth's natural satellite, orbits every 27 days and reflects sunlight, not its own light.



Key Vocabulary

Solar System	the Sun and the other bodies that orbit it
planets	a roughly spherical object which orbits a star
orbit	the path an object takes around another object because of gravity
Sun	the star at the centre of our Solar System
Pluto	a former planet, that was reclassified as a dwarf planet
celestial body	an object in space
model	a representation of an idea or process
gravity	a non-contact force caused by objects with mass pulling each other
heliocentric model	a model that puts the Sun at the centre of the Solar System
geocentric model	a model that puts Earth at the centre of the Solar System
rotate	to spin around an axis
North Pole	the northern point of Earth's axis
South Pole	the southern point of Earth's axis
axis	an imaginary line which something rotates around
Earth	the planet that we live on
night	when it is dark on the half of Earth that is facing away from the Sun
day	when it is light on the half of Earth that is facing the Sun
moon	a natural satellite that orbits Earth
gravitational force	a non-contact force caused by objects with mass pulling each other
satellite	an object that orbits a planet or a star

Ridgeway Farm CE Academy - Knowledge Organiser

Subject	RE	Theme	Explorers	Year Group	5
Key Question	Was Jesus the Messiah?				

What we have already learnt...

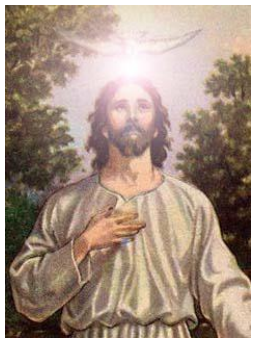
- Christians believe Jesus is one of the three persons of the Trinity: Father, Son and Holy Spirit.
- Christians believe God the Father sends the Son who saves his people.

While investigating this question we will:

- Explain the place of Incarnation and Messiah within the 'big story' of the Bible.
- Identify Gospel and prophecy texts, using technical terms.
- Explain connections between biblical texts, Incarnation and Messiah, using theological terms.
- Show how Christians put their beliefs about Jesus' Incarnation into practice in different ways in celebrating Christmas.
- Comment on how the idea that Jesus is the Messiah makes sense in the wider story of the Bible.
- Weigh up how far the idea that Jesus is the Messiah – a Saviour from God – is important in the world today and, if it is true, what difference that might make in people's lives.

Key vocabulary	
Advent	The coming or second coming of Christ.
Bible	The sacred text used by Christians, consisting of the Old and New Testaments.
Christ	The title given to Jesus.
Jesus	The man that Christians believe is the son of God.
Incarnation	A person who embodies the flesh of a spirit or God.
Messiah	Regarded as the saviour of Christians.
New Testament	The second part of the Bible which includes stories after the birth of Jesus.
Old Testament	The first part of the Christian Bible which includes stories before the birth of Jesus







PUPILS WILL KNOW THAT:

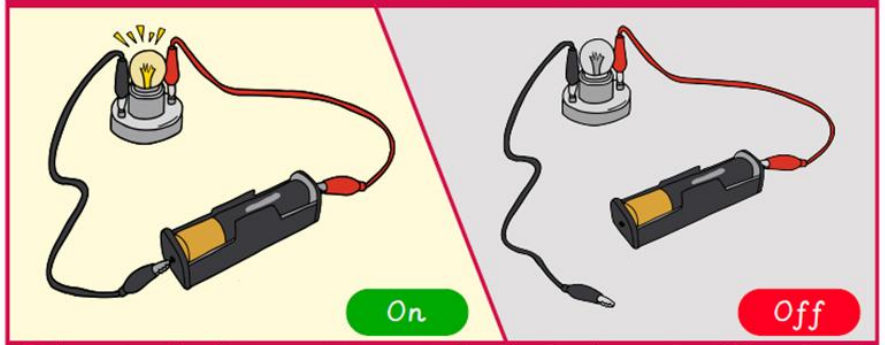
- The Old Testament is the first part of the Christian Bible which is written about time before Jesus.
- The life of Jesus was planned by God to restore the relationship between humans and God.
- Christians believe that when Jesus was born, God became present on earth as a human. This is referred to as the incarnation of Jesus, as it was when God took on human form, becoming fully God and fully human at the same time.
- Jesus is referred to as Christ or Messiah, and he showed Christians how they should live. The Messiah is also known as ' The Promised Saviour.'
- Advent is the period leading up to the birth of Jesus.
- Each year, Christians celebrate Christmas as a time when Jesus was brought to the earth as 'God in the flesh'.
- The Gospel is the teaching of the life of Jesus.

Ridgeway Farm CE Academy - Knowledge Organiser

Topic	Earth and Space	Theme	Explorers	Year Group	5
Key Question	What have we learned from our space explorations?				
Subject	Design Technology: Doodlers				

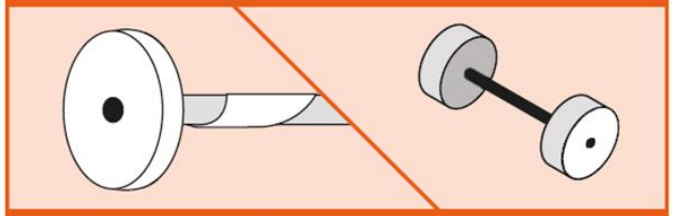
Circuit	A collection of components that make an electrical system.
Circuit component	One of several parts that complete a circuit (e.g. bulb).
Configuration	How different parts are put together to form an object.
Current	The flow of electricity.
Develop	Continue to work on something to make progress or improve it.
DIY	The acronym means 'Do it yourself' and represents various activities that someone chooses to do themselves at home, rather than through a service or professional.
Investigate	Research something by looking at it in greater detail.
Problem-solve	Develop and test solutions to an issue.
Product analysis	To look at an object and evaluate it based on certain criteria (e.g. function).
Stable	Object does not easily topple over.
Target user	A particular person at whom the product is aimed.

Series circuits only have one path for the electrical current to flow.



If there is a break in a series circuit, the electrical current will be cut and all the components will stop working. Causing a break in a series circuit can act as a switch to turn the circuit off.

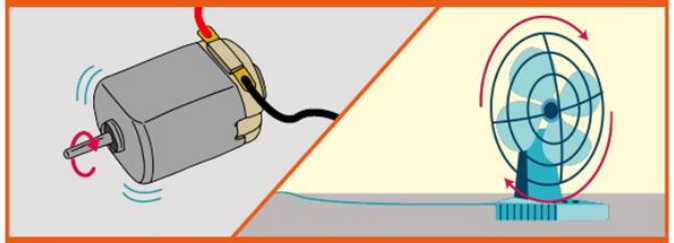
Axles form part of the wheel mechanism in wheeled products such as toy cars, wheelbarrows and bicycles.



For a bicycle to function we need to use our legs and feet to push the pedals that rotate the axle and spin the wheels.



An electric motor converts electrical energy into rotational movement, causing the motor's axle to spin. Motors use electricity instead of human force to move the axle.



A motorised product is an object that uses a motor to function.

Key Knowledge:

- To know that, in a series circuit, electricity only flows in one direction.
- To know when there is a break in a series circuit, all components turn off.
- To know that an electric motor converts electrical energy into rotational movement, causing the motor's axle to spin.
- To know a motorised product is one which uses a motor to function.

Key Skills:

- Look at products to see what works well and what could be better.
- Plan your design based on what the product needs and who will use it.
- Change and improve products by trying out new ideas.
- Write clear steps so someone else could make your product.
- Make your product carefully, including working circuits or motors.
- Check and share your work and help others improve theirs.

Prior Knowledge:

- Circuits need a battery, wires, and a bulb to work.
- Switches can turn a circuit on and off.
- Circuits can have bulbs, buzzers, or motors.
- Electricity can make things light up or make a sound.
- If a circuit is broken, things stop working.

Ridgeway Farm CE Academy - Knowledge Organiser

Topic	Computing - Programming I: Scratch - Music	Theme	Explorers	Year Group	5

Debug	To find and fix errors in code.
Genre	A category of films with similar styles and themes.
Input	Information sent to a computer or program from a device, like a keyboard or mouse.
Loop	A repeated sequence of instructions.
Nested loop	A loop inside another loop, used to repeat actions multiple times within a larger repeated action.
Output	Information sent from a computer or program to a device, like a monitor or speakers.
Pitch	How high or low a sound is.
Program	A set of instructions that a computer follows.
Remixing	Changing and improving an existing project to make it your own.
Repeat	To do something again multiple times.
Rhythm	The pattern of long and short notes.
Tempo	The speed of the music (fast or slow).
Soundtrack	The music and sounds that go with a movie, game or story.

Key Knowledge:

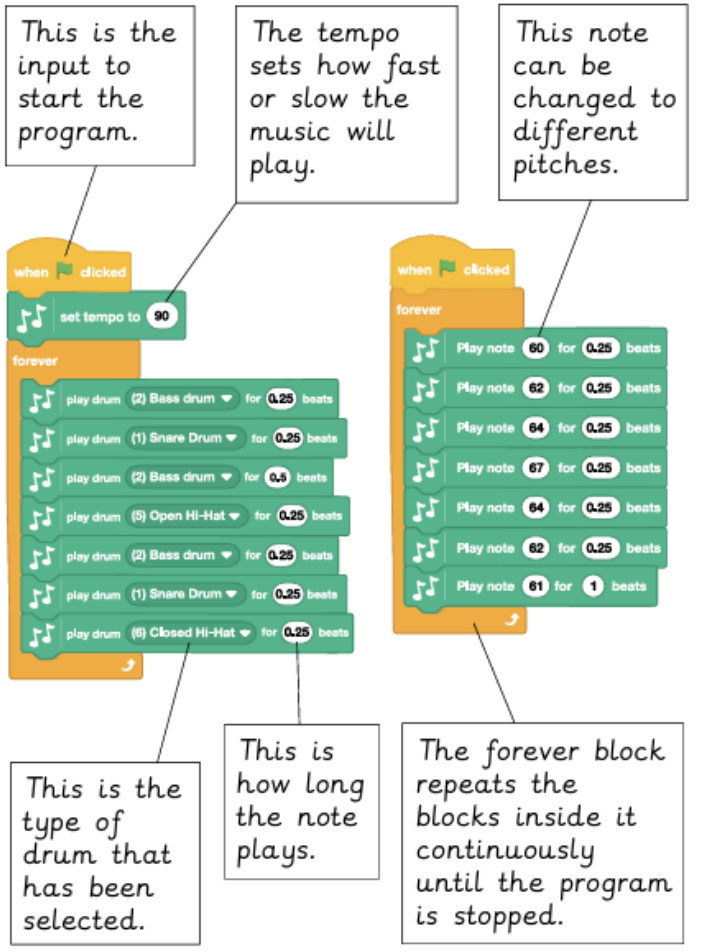
To know::

- Scratch is a coding program that can be used to create music and soundtracks.
- Different sound blocks make different things happen, such as playing notes, changing instruments or adding beats.
- Loops can repeat a set of instructions to create rhythms and patterns.
- A nested loop is a loop inside another loop and can make coding music quicker and easier.
- Breaking a program into smaller parts helps us plan and create it more successfully.
- Debugging means finding and fixing mistakes in a program.
- A good soundtrack matches its purpose or genre and can be improved through testing and evaluation.

Prior Learning:

- Writing simple programs in Scratch.
- Understanding that code gives a computer instructions.
- Using loops to repeat actions.
- Predicting what code will do.
- Breaking problems into smaller steps.
- Finding and fixing simple mistakes in code.
- Talking about what worked well and what could be improved.

Creating a soundtrack in Scratch



Ridgeway Farm CE Academy - Knowledge Organiser

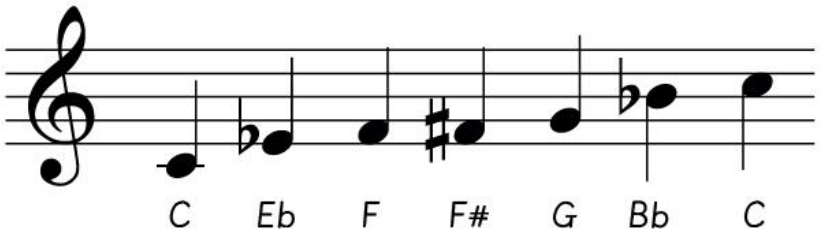
Topic	Earth and Space	Theme	Explorers	Year Group	5
Key Question	What have we learned from our space explorations?				
Subject	Music: The Blues				



Blues music is often sad and emotional, which is why we say we have 'the blues' when we feel sad. Its main features are the 12-bar blues and the blues scale, and it includes a lot of improvisation.

The Blues scale

The Blues scale to accompany our 12-bar Blues is made up of these notes:



Vocabulary

12-bar blues	A series of chords played in a specific order.

1 C C C C	2 C C C C	3 C C C C	4 C C C C
5 F F F F	6 F F F F	7 C C C C	8 C C C C
9 G G G G	10 F F F F	11 C C C C	12 C C C C

chord	Two or more notes that are played at the same time and work in harmony.
scale	Any set of musical notes which are in order of their pitch.
ascending scale	A scale in which the pitch of the notes goes up.
descending scale	A scale in which the pitch of the notes goes down.
blues scale	A set of notes used to play a melody over a 12-bar blues.
improvisation	Making up music as it is played or performed.
bent notes	A musical note that varies in pitch usually going up slightly at the end.
bar	A section of music with a specific number of beats (in blues there are usually 4 beats in a bar).
quaver	A note which last for half a beat.

Key Learning:

- A **chord** is made by playing several pitches at the same time.
- **12-bar Blues** uses a repeating pattern of 12 bars built from three main chords.
- **Blues music** expresses emotions, often sadness or worry.
- A **bent note** changes its pitch slightly, sliding up or down.
- **Blues songs** use rhythm and melody to communicate feeling and tell a story.

Prior Knowledge:

- Sing and play in tune and in time with others and backing tracks.
- Remember and perform lyrics accurately.
- Identify musical structure and represent it with notation.
- Improvise and compose melodies, using both non-standard and stave notation.
- Contribute confidently and meaningfully to group performances and compositions.

Ridgeway Farm CE Academy - Knowledge Organiser

Topic	French - Space exploration in French	Theme	Explorers	Year Group	5


Mercure
Mercury

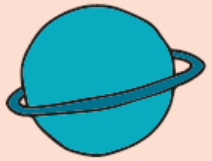

Vénus
Venus


la Terre
the Earth


Mars
Mars

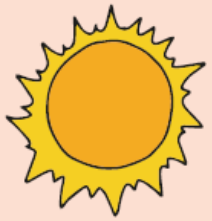

Jupiter
Jupiter


Saturne
Saturn


Uranus
Uranus


Neptune
Neptune

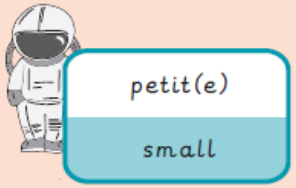

Pluton
Pluto

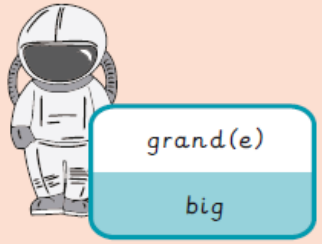

le Soleil
the Sun

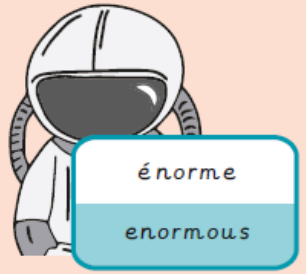

la Lune
the Moon


une étoile
a star


minuscule
tiny


petit(e)
small


grand(e)
big


énorme
enormous

Prior Knowledge

- I can recognise, pronounce and spell French words for clothes.
- I can use un, une and des correctly.
- I can choose and use the correct form of an adjective.
- I can use j'aime and je n'aime pas to talk about likes and dislikes.
- I can use il and elle correctly to describe someone.

le Système solaire	the Solar System
l'espace (m)	space
une planète	a planet
chaud(e)	hot
froid(e)	cold
glacé(e)	frozen

Descriptions

Neptune est une assez grande planète bleue.

Neptune is a quite large blue planet.



Jupiter est une énorme planète très froide.

Jupiter is an enormous, very cold planet.

très	very	assez	quite

Descriptions and metaphors

The size adjective comes before the noun, and the colour adjective after the noun.







Watch out for the words **et** and **est** both sound the same but have different meanings.

et - and

est - is

de + le = du

Saturne est loin **du** Soleil.

Saturn is far from the Sun.

Making comparisons

