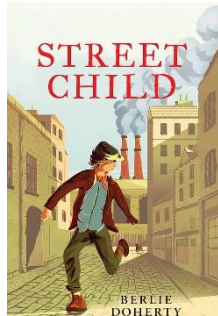




Year 5 Curriculum Overview
Term 3.1

Please see below an overview of the main themes, knowledge, and skills we will be covering this half term.

Enquiry Question	How do energy sources affect our world?
Significant People	Noor Inayat Khan (Linked to the value of Resilience)
Class Texts	Street Child Berlie Doherty 
Reading	2b – Retrieve and record information/identify key details from fiction and non-fiction. 2c - summarise main ideas from more than one paragraph. 2e – Predict what might happen from details stated and implied. In Reading, the children will be introduced to the new class text for the term and will begin by making predictions about what they think is going to happen. The children will then move onto word meaning, where we will focus on looking at the choice of language used and the intended effect on the audience. We will then move on to retrieval where we will be focussing on our comprehension skills and will explore the themes from the book. The children will also infer from different parts of the class text. Inference helps children have a deeper understanding of the text.
Writing	This half term, children will explore a variety of genres, honing their writing skills with a clear focus on purpose and audience. To begin, they will craft narratives that emphasize rich characterisation and vivid setting descriptions. Using techniques such as dialogue, expanded

	noun phrases, similes, and metaphors, children will develop their ability to captivate readers and paint detailed, imaginative scenes that bring their stories to life. Later in the term, the focus will shift to diary entries, linked to the class text. This will allow children to practise writing informally in the first person, adopting a conversational and engaging tone. They will learn to write in a chatty style, addressing the diary as though it were a trusted friend or family member, further developing their creativity and connection to the writing process.
Maths	During this half-term, children will deepen their understanding of key mathematical concepts, focusing on both perimeter and area. They will explore how to calculate the perimeter of rectangles and polygons, while also learning to determine the area of rectangles and compound shapes through practical and engaging activities. In addition, the focus will shift to statistics, where children will develop their ability to interpret and analyse data. They will learn to read and interpret tables, draw line graphs, and work confidently with two-way tables. Alongside this, children will continue tackling worded problems to refine their reasoning skills. To support their preparation for Year 6, they will be introduced to SATS-style questions, helping them build confidence and familiarity with these formats.
Geography	During this half term, pupils will investigate renewable and non-renewable energy sources, gaining a clear understanding of the term's "reusable" and "non-reusable." They will explore examples of both types of energy and examine their environmental impacts. Using six-figure grid references, students will locate

	coal mines and wind farms on maps, analysing the effects these energy sources have on local environments. Pupils will also explore the global trade of energy, learning why and how energy is exchanged worldwide. The unit will culminate with a research project in which students evaluate differing viewpoints on non-renewable energy and form their own opinions about its long-term impact on the planet. This will provide an opportunity for critical thinking and personal reflection on a pressing environmental issue.
Science	In Year 5, children will learn more about our Solar System. They will learn about the Sun, planets, moons, and other celestial bodies, discovering how they move and interact with one another. Pupils will explore key facts about each planet, understand the concept of orbits and rotations, and investigate how day, night, and seasons occur. Through engaging activities, models, and investigations, children will develop a deeper understanding of Earth's place in space and the wider universe, while also building essential skills in scientific enquiry and critical thinking.
Art	This unit provides children with a comprehensive exploration of Early Islamic art and its defining features, such as symmetry, geometric patterns, arabesques, and calligraphy. Through hands-on activities, children will create clay sculptures inspired by this art form, using techniques like coil, pinch, and slab to build 3D forms. They will practice incorporating intricate surface decorations and repeated patterns, drawing inspiration from Islamic tiles and mosaics. The unit culminates in the design and creation of a final clay sculpture that integrates

	multiple techniques and surface decorations. Children will have the opportunity to evaluate their finished work, reflecting on how their sculpture embodies the characteristics of Early Islamic art. This unit encourages creativity, attention to detail, and cultural appreciation through practical and artistic expression.
Music	This term, students will explore and enhance their musical abilities through the song "Make You Feel My Love," originally by Bob Dylan and popularised by Adele. They will: • Listen and Appraise: Engage in critical listening sessions to appreciate the song's structure, melody, and emotional depth. • Musical Activities: Participate in activities that highlight key musical elements such as rhythm, harmony, and dynamics. • Singing Practice: Develop vocal techniques and practice singing the song, focusing on expression and accuracy. • Performance: Showcase their newly acquired skills in a final performance, demonstrating their understanding and interpretation of the song.
Computing	Year 5 Computing introduces students to programming concepts through hands-on exploration with Micro:Bits. Over six lessons, learners begin by connecting Micro:Bits to iPads, experimenting with LED outputs, and sending programs across devices. They deepen their understanding of algorithms using flowcharts, discovering how decisions and processes link to programming. Key concepts, such as conditions, loops, and functions, are taught to control program flow and trigger specific outputs based on real-world inputs like light and motion sensors.

	Later lessons focus on exploring Micro:Bit sensors—including accelerometer, thermometer, compass, and light sensor—helping students consider practical applications. By the end of the unit, learners design a model integrating sensors, loops, and conditional statements, allowing them to apply their programming skills. Debugging and peer review ensure collaboration and critical thinking. This comprehensive unit equips students with essential computational thinking and problem-solving skills.
RE	In RE, the children will cover two topics, the first being 'Being Temperate, Self-Disciplined and Seeking Contentment' and 'Being Accountable and Living with Integrity'. Children will be exploring how different religions show self-discipline and why they believe integrity is vital in a person.
PSHE	Our unit this half term is called 'How can drugs common to every life (including smoking/vaping – nicotine, alcohol, caffeine and medicines) affect health?' During this unit the children will learn: • That some drugs are legal (but may have laws or restrictions related to them) and other drugs are illegal. • How laws surrounding the use of drugs exist to protect them and others. • Why people choose to use or not use different drugs. • How people can prevent or reduce the risks associated with them. • That for some people, drug use can become a habit which is difficult to break. • How organisations help people to stop smoking and the support available to help

	people if they have concerns about any drug use. • How to ask for help from a trusted adult if they have any worries or concerns about drugs.
PE	This half term the children will be having swimming lessons. As well as this, they will alternate and be taking part in tennis and athletics. They will learn the skills, techniques, and rules. The children will learn about communication, co-operation, and good sportsmanship.

Teaching Team:

Miss Rehman, Miss Nur, Miss Begum and Mrs Patel

SLT: Mr Mazhar

PE Day: Monday

Homework: Homework is set on Friday and returned by Wednesday.

Homework Books

At the end of each week, your child will return home with their homework books in both English and Maths. They will be given two pages to complete based on the learning they have completed that week or the learning they will be doing the following week.

Please encourage your child to complete these to the best of their ability and return to school by Wednesday for them to be marked and any issues to be addressed.

Spellings

These are words your child will be using daily and will need to be familiar with. We will also be sending home words with your children that are key in Year 5 and 6.

Please encourage your child to practise their spellings at the weekend and across the course of the week, as they will be tested on these at the end of each week.

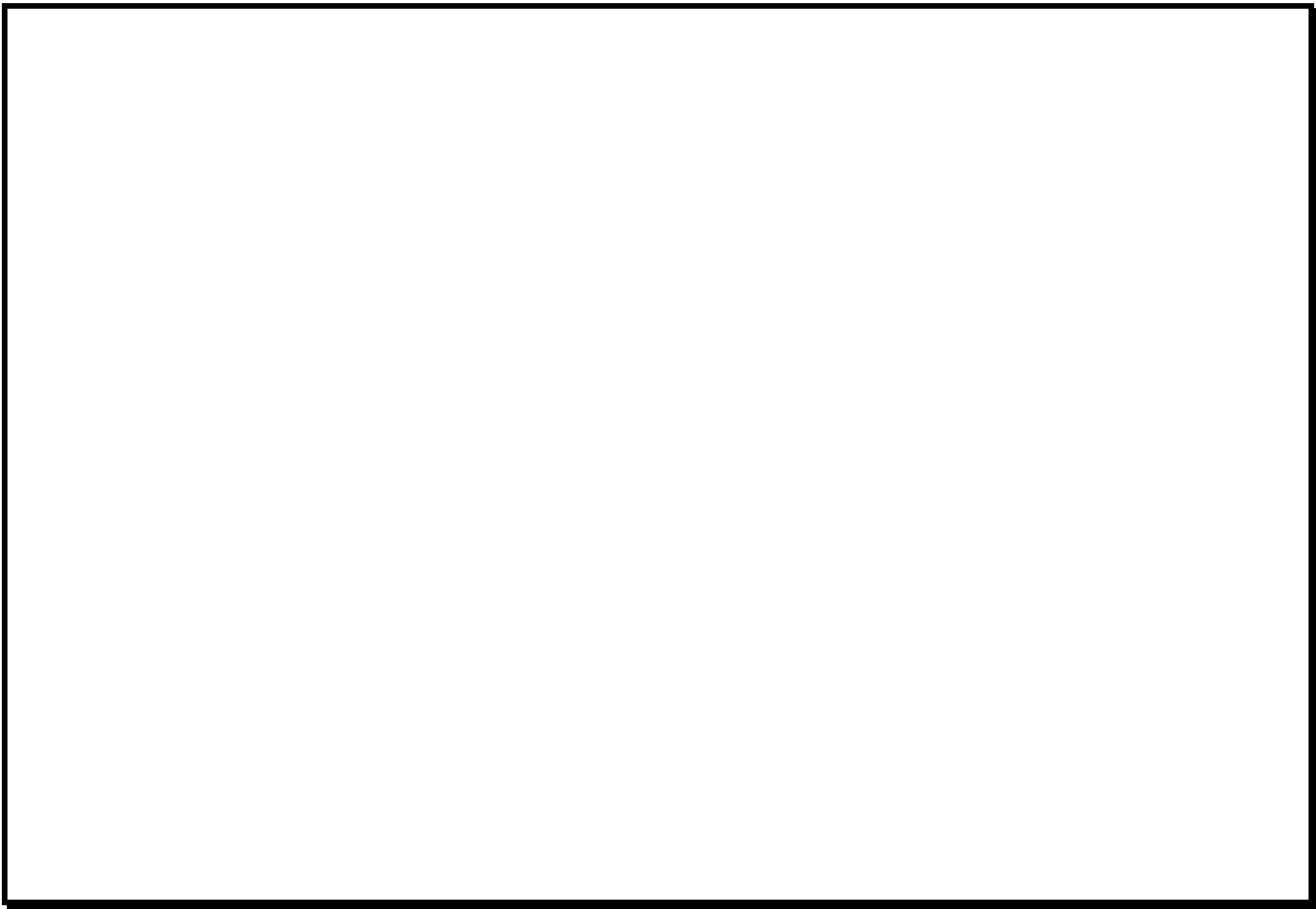
Reading:

At the end of each week, your child will also come home with a reading book.

Please encourage your child to read this book regularly and listen to them read when you can.

Within their reading diary, we ask that you please make a comment on how your child has read, whether they are enjoying their book or even any questions you may have asked them and discussed about their story.

Both the reading book and reading diary need to be returned to school by Wednesday.



KNOWLEDGE ORGANISER
BIG IDEA: ENERGY
TOPIC: ENERGY RESOURCES

Key Word	Definition
Energy resource	Something with stored energy that can be released in a useful way.
Non-renewable	An energy resource that cannot be replenished and will be used up.
Renewable	An energy resource that can be replenished and will not run out. Examples are solar, wind, waves, geothermal and biomass.
Fossil fuels	Non-renewable energy resources formed from the remains of ancient plants or animals. Examples are coal, crude oil and natural gas.

Fossil fuels

Crude oil, coal and gas are **fossil fuels**. They were formed over millions of years, from the remains of dead organisms:
 •coal was formed from dead trees and other plant material
 •crude oil and gas were formed from dead marine organisms

Energy from the burning fuel is used to boil water. The steam turns **turbines**, and these turn electrical **generators**. Unfortunately, the use of fossil fuels releases pollution, including:
 •carbon dioxide, which is a **greenhouse gas** and increases **global warming**
 •sulfur dioxide and nitrogen oxides, which cause **acid rain**

Geothermal energy

The hot rocks beneath the Earth's surface heat water, and this may rise to the surface naturally as hot water and steam. Here the steam can be used to drive turbines and electricity generators.
Advantages
 •Geothermal energy is a renewable energy resource.
 •There are no fuel costs and no harmful polluting gases are produced.
 •The hot water and steam can be used to heat buildings directly.
Disadvantages
 •Most parts of the world do not have suitable areas where geothermal energy can be exploited.

Solar energy

The Sun is a renewable energy resource.

Solar cells

A **solar cell** is a device that converts light energy directly into electrical energy. Some pocket calculators use solar cells, and you may have seen large panels of solar cells on house roofs.

Solar heating

Do not confuse solar cells with **solar panels**, which use energy from the Sun to heat up water. These may also be put onto house roofs so that they can absorb the Sun's energy.

Advantages

- Solar energy is a renewable energy resource.
- There are no fuel costs and no harmful polluting gases are produced.
- Solar cells can provide electricity in remote locations where there is no mains electricity.

Disadvantages

- Solar cells are expensive and inefficient, so the cost of their electricity is high.
- Solar cells do not work at night and not as well when it is cloudy.

Wind energy

The wind is produced as a result of large movements of air, driven by energy from the Sun. This means that the **kinetic energy** in wind is a renewable energy resource.

Wind turbines

They have huge blades mounted on a tall tower. The blades are connected to a generator. As the wind blows, it transfers some of its kinetic energy to the blades, which turn and drive the generator.

Advantages

- Wind is a renewable energy resource. There are no fuel costs and no harmful polluting gases are produced.

Disadvantages

- Wind farms are noisy and may spoil the view for people living near them.
- The amount of electricity generated depends on the strength of the wind. If there is no wind, there is no electricity.

Waves

The water in the sea rises and falls because of waves on the surface. Wave machines use the kinetic energy in this movement to drive electricity generators.

Tides

A tidal barrage is a barrier built over a river estuary to make use of the kinetic energy in the moving water. The barrage contains electricity generators, which are driven by the water rushing through tubes in the barrage.

Hydroelectric power

The water usually comes from behind a dam built across a river valley. The water high up behind the dam has a lot of **gravitational potential energy**. This is transferred to kinetic energy as the water rushes down through tubes inside the dam. The moving water drives electrical generators, which may be built inside the dam.

Advantages

- Water power in its various forms is a renewable energy resource.
- There are no fuel costs and no harmful polluting gases are produced.
- Tidal barrages and hydroelectric power stations are very reliable and can be easily switched on.

Disadvantages

- It has been difficult to scale up the designs for wave machines to produce large amounts of electricity.
- Tidal barrages destroy the habitats of estuary species, including wading birds.
- Dams flood farmland and push people from their homes.
- The rotting vegetation underwater releases methane, which is a **greenhouse gas**.

Nuclear fuels

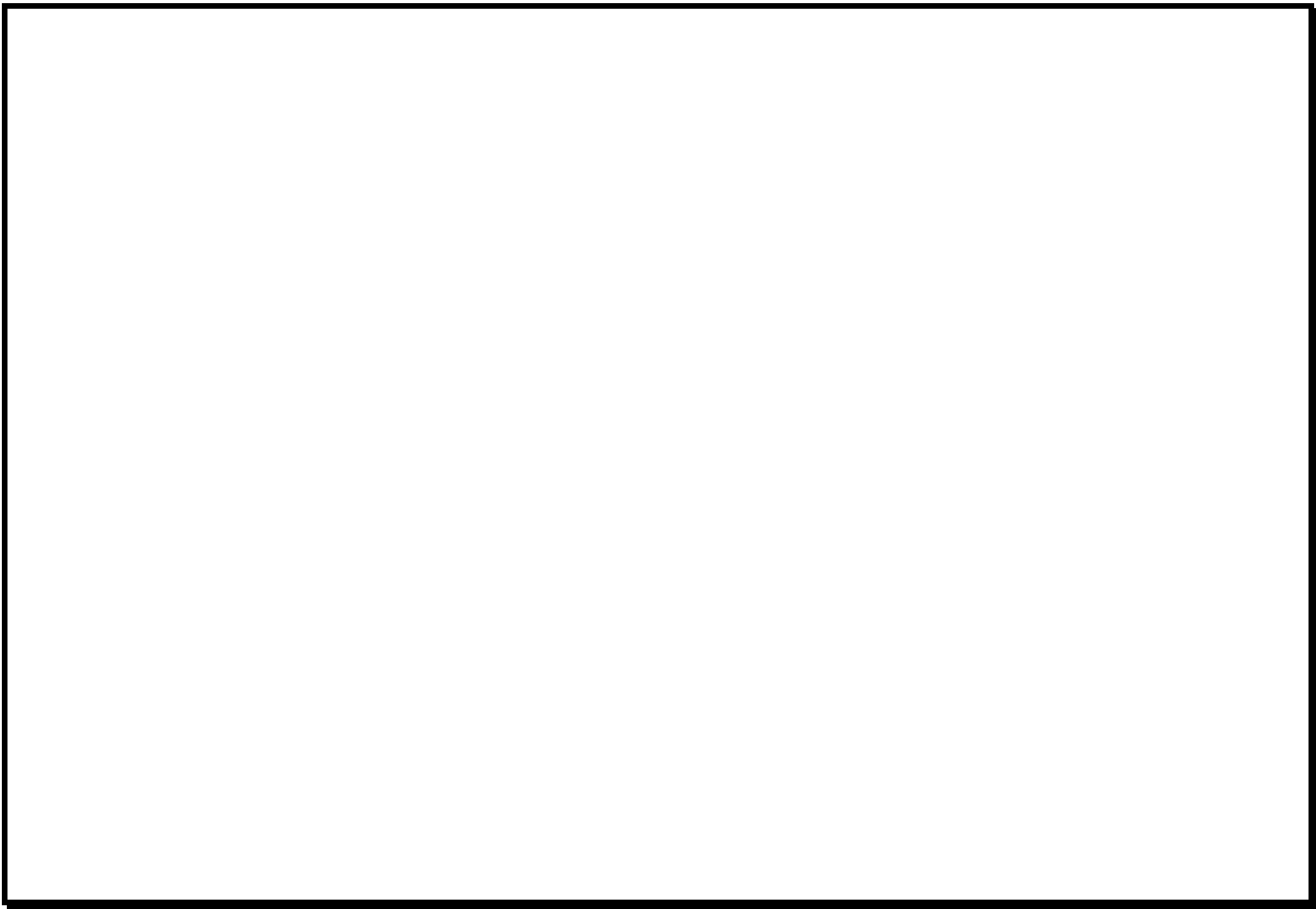
The main nuclear fuels are uranium and plutonium. In a nuclear power station, the energy released is used to boil water. The expanding steam spins turbines, which then drive generators to produce electricity.

Advantages

- Unlike fossil fuels, nuclear fuels do not produce carbon dioxide or sulfur dioxide.

Disadvantages

- Like the fossil fuels, nuclear fuels are non-renewable energy resources. They will run out one day if we keep on using them.
- If there is an accident, large amounts of **radioactive** material could be released into the environment. In addition, nuclear waste remains dangerously radioactive and harmful to health for thousands of years. It must be stored safely.



Earth and Space

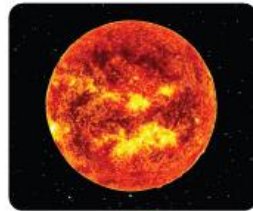
The Solar System

The Solar System consists of eight planets that orbit around the Sun.



The Sun

The Sun is a 4.5 billion-year-old star. It is a huge, hot ball of gas that rotates on its axis once every 27 Earth days. The Sun is the only source of light and heat in the Solar System. Without it, life as we know it would not exist on Earth.



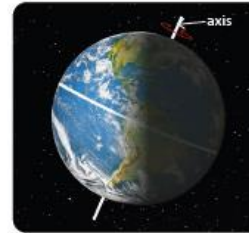
The planets

There are eight planets in the Solar System. The planets closer to the Sun (Mercury, Venus, Earth and Mars) are terrestrial planets because they are made of rock. They are hotter and have a shorter orbit and a shorter year than the planets farther away. Planets that are farther from the Sun (Jupiter, Saturn, Uranus and Neptune) are made of gas and are called gas giants. They are colder and have a larger orbit and a longer year than the closer planets.



The Earth

The Earth is the third planet from the Sun in the Solar System and is the only one to support life. The Earth rotates on an axis at a tilt of 23.5°. One rotation takes 24 hours, which is one day. The Earth orbits the Sun once every 365.25 days, which is a year.



Models of the Solar System

Geocentric model

In the past, many philosophers and scientists believed the Solar System was geocentric, meaning that the Earth was at the centre, orbited by the Sun and the other planets. The observations and common sense of Aristotle, the mathematics of Ptolemy and the scientific methods of Alhazen supported this theory. The geocentric model was accepted for 1500 years.



Aristotle,
c384–c322 BC



Claudius Ptolemy,
AD c100–c170



Alhazen,
AD c965–c1040

Heliocentric model

In the 16th century, Nicolaus Copernicus suggested the heliocentric model, with the Sun at the centre of the Solar System and the Earth and other planets orbiting around it. Even though this was an unpopular theory at the time, the observations of Galileo Galilei and the scientific laws of Sir Isaac Newton proved that the heliocentric model was correct.



Nicolaus Copernicus,
1473–1543



Galileo Galilei,
1564–1642



Sir Isaac Newton,
1643–1727

The planets and stars are spheres

Each planet and star is spherical because gravity, created by their large mass, pulls all material towards their centre and compresses it into the most compact shape, a sphere.



Beliefs about the shape of the Earth

Many ancient civilisations believed the Earth was flat and shaped like a floating disc, a cylinder or even a square.

In ancient Greece, around 500 BC, the philosopher, Pythagoras, thought a sphere was the perfect shape, so the Earth must be a sphere.

Aristotle proved the Earth was a sphere when he observed a ship sailing away to sea. He noticed that the bottom of the ship disappeared first and the sail last. If the Earth were flat, the whole ship would have looked gradually smaller as it sailed away.



Modern technology has provided further evidence that the Earth is spherical. For example, the famous *Earthrise* photograph was taken from the spacecraft *Apollo 8* during the crew's first orbit around the Moon.



Earthrise, 1968

Islamic Art

Islamic art includes all religious and secular artwork created over the last 1400 years in the Islamic world and countries that used to be part of the Islamic Empire.

Islamic art includes:



calligraphy



glasswork



ceramics



metalwork



textiles



architecture

Islamic art seeks to make objects beautiful and help people to reflect and think about the world, rather than recreate physical forms and real objects. Depicting people is not a part of the Islamic faith, so Muslim artists concentrate on the use of abstract forms, patterns and shapes in their work.

Aspects of Islamic art

Three main aspects of Islamic art are calligraphy, arabesque and geometric patterns. Artists have used these aspects to decorate the surface of many objects and buildings.

Calligraphy is the art of producing beautiful and decorative handwriting. Islamic calligraphy is used in art forms to reproduce the words of the Qur'an.



Arabesque is a floral pattern based on the bindweed plant, which is made up of entwined flowers, leaves and stems.



Geometric patterns are made by repeating, interlacing and tessellating motifs and geometric shapes, such as stars, squares and triangles.



Motifs

When creating a pattern to use in Islamic art, an artist can begin by creating a motif. A motif is a decorative image or design that can be repeated to form a pattern. Motifs can be different styles. Figurative motifs are realistic representations of living things or objects. Vegetal motifs represent plants. Geometric and abstract motifs consist of shapes.



Stars in Islamic art

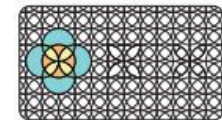
Islamic art often features geometric star motifs because the star is believed to symbolise the light and perfection of Allah. Regular stars in Islamic art have 6, 8, 10, 12 or 16 points.



Islamic tile

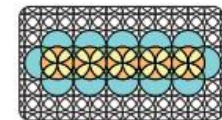
Designing patterns on a grid

Geometric motifs and patterns can be made on a grid. This motif has been made by colouring in shapes on a grid made from circles.



motif

A pattern is created when a motif is repeated. Grids can be made from shapes, including circles, squares and triangles.



pattern

Relief sculpture

Relief sculpture is any work where an image or pattern is raised from a surface. If only slightly raised, the sculpture is called low relief or 'bas-relief'. If the image or pattern is almost three dimensional but is still attached to the background, the sculpture is called high relief or 'alto-relief'. Islamic architectural surfaces are often decorated with low and high relief sculptures.



relief wall decoration

Glossary

secular	Not connected to religion.
tessellate	To fit shapes together in a pattern with no spaces in between.

Reading:

[Oxford Owl for School and Home](#)

<https://www.bbc.co.uk/bitesize/topics/zs44jxs/year/zhgppg8>

<https://schoolreadinglist.co.uk/category/reading-lists-for-ks2-school-pupils/>

Phonics:

<https://www.topmarks.co.uk/english-games/7-11-years/spelling-and-grammar>

[PhonicsPlay](#)

[Phase 2 Games – Letters and Sounds \(letters-and-sounds.com\)](#)

Writing:

<https://www.bbc.co.uk/bitesize/subjects/zv48q6f/year/zhgppg8>

<https://home.oxfordowl.co.uk/english/primary-writing/writing-year-5-age-9-10/>

[Spelling and Grammar, English Games for 7-11 Years - Topmarks](#)

Maths:

[Key Stage 2 Maths - Topmarks Search](#)

<https://www.timestables.co.uk/multiplication-tables-check/>

Science:

<https://www.bbc.co.uk/bitesize/subjects/z2pfb9q/year/zhgppg8>

[Home | WowScience - Science games and activities for kids](#)

<https://www.bbc.co.uk/bitesize/topics/z6wwxnb/articles/zdvhxbk>

Geography:

<https://www.bbc.co.uk/bitesize/articles/zntxgwx#z8whn9q>

<https://www.alliantenergykids.com/renewableenergy/renewableenergyhome>

Computing:

[Is my child safe online? Parent's questions answered | Barnardo's \(barnardos.org.uk\)](#)

[Parents and Carers - UK Safer Internet Centre](#)

[Parental Controls & Privacy Settings Guides | Internet Matters](#)

PSHE:

[Talk PANTS & Join Pantosaurus - The Underwear Rule | NSPCC](#)

[How to make an emergency 999 call – West Midlands Ambulance Service University NHS Foundation Trust \(wmas.nhs.uk\)](#)

PE:

[Nutrition Based Physical Activity Games - Action for Healthy Kids](#)

[Kids Active Learning & PE at Home – Think Active](#)