# St Thomas More Primary School
# Science Whole School Overview

| Year 1 Personalised Curriculum | | | | |
|---|---|---|---|---|
| **Flashback** | | | | |
| **Previous Key Stage-** | | | | |
| **Previous Unit** | **Previous Unit** | **Previous Unit** | **Previous Unit** | **Previous Unit** |
| **Autumn 1- My Body** | **Autumn 2-Everyday Materials** | **Spring 1- -Identifying Plants** | **Sprig 2-Identifying Animals** | **Summer 1-Seasonal Changes** |
| **Children will know by the end of the unit:**<br>- The nose is used for the sense of smell, tongue with the sense of taste, ears with the sense of hearing, eyes with the sense of seeing and skin with the sense of touch.<br>Food keeps us healthy.<br>How to ask simple questions and recognise that they can be answered in different ways. | **Children will know by the end of the unit:**<br>-Objects are made from different materials.<br>-Types of materials are wood, plastic, glass, metal, water, and rock. (Identifies these)<br>-Materials can be hard or soft; smooth or rough; shiny or dull.<br>-You can see through some materials which means they are transparent, like the glass in windows.<br>-Some materials are waterproof, which means that water cannot go through them.<br>How to observe closely, using simple equipment. | **Children will know by the end of the unit:**<br>-Plants include garden plants, wild plants, and trees.<br>-Deciduous trees lose their leaves.<br>-Evergreen trees keep their leaves.<br>-Plants have roots, a stem, leaves and flowers.<br>Flowers help to make new plants.<br>-An invertebrate is a creature without a backbone.<br>-Snails, spiders, beetles, and worms are all examples of an invertebrate.<br>-A habitat is where an animal or plant lives.<br>How to perform simple tests. | **Children will know by the end of the unit:**<br>-Birds, fish and mammals are types of animals.<br>-Lions and tigers are carnivores, sheep and cows are herbivores and pigs, rats and chickens are omnivores.<br>-Birds have feathers.<br>-Fish live in water.<br>-Amphibians and reptiles are animals.<br>-To describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). | **Children will know by the end of the unit:**<br>Weather, plants and our environment changes during the four seasons.<br>The Four seasons are Autumn, Winter, Spring and Summer.<br>Summer changes into autumn, spring changes in to summer, autumn changes into winter and winter changes into spring.<br>It is colder in the autumn and winter.<br>It is warmer in the spring and summer.<br>There is more daylight in summer and spring than in autumn and winter. |
| Mastery Questions | | | | |
| - Why is it important to eat healthy foods? Can you name any?<br>How have you changed from a baby to now?<br>Where can you find your brain, heart and spine?<br>Can you name 2 senses and when you use them? | -What materials would you wear in the winter and why?<br>Name 4 different materials.<br>Name some objects that are made from wood. | Why are plants important and how do we help them grow well?<br>Can you name and label the different parts of a plant? | Can you name the animals that you might find in a rock pool?<br>What are amphibians?<br>What is the difference between a mammal and a bird? | What happens to plants as the seasons change?<br>What is the weather and temperature like in (any season)? |

**Substantive Knowledge** **Disciplinary Knowledge**

| | | | | |
|---|---|---|---|---|
| | | | Can you describe the differences between mammals, birds and fish? | |

# St Thomas More Primary School
# Science Whole School Overview

| Year 2 Personalised Curriculum | | | | |
|---|---|---|---|---|
| **Flashback** | | | | |
| **Previous Key Stage-** | | | | |
| **Previous Unit** | **Previous Unit** | **Previous Unit** | **Previous Unit** | **Previous Unit** |
| **Autumn 1- Growth and Survival** | **Autumn 2-Exploring Everyday Materials** | **Spring 1--Living in Habitats** | **Sprig 2-Growing Plants** | **Summer 1-Super Scientists** |
| **Children will know by the end of the unit:**<br>- To know that animals, including humans, have offspring which grow into adults.<br>To know that animals and humans need water, food, and air to survive.<br>To know a balanced diet keeps humans healthy.<br>To know exercise keeps us healthy by burning fat and calories.<br>To know exercise builds muscle and pumps blood around our body.<br>To understand germs are living things that can cause us to be sick.<br>To know germs are so small that they are hard to notice.<br>To understand that germs can spread from our hands and things we touch.<br>To understand that washing hands, brushing teeth, and having regular | **Children will know by the end of the unit:**<br>-To identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.<br>To know some materials can be changed by squashing, bending, twisting and stretching.<br>To know that natural Materials come from plants, animals or the ground.<br>To know that man-made materials go through a process and are made by people.<br>How to identify and classify.<br>. | **Children will know by the end of the unit:**<br>To know that some things are living, dead or have never been alive.<br>To name a variety of plants and animals in their habitats, including micro-habitats.<br>To know some materials are used for more than one thing, such as metal, which can be used for coins, cans, keys and cars.<br>To know that scientists use specific language to record observations.<br>To know scientists record observations using tables, charts, drawings and writing.<br>How to gather and record data to help answer questions | **Children will know by the end of the unit:**<br>To know that seeds don't need light to germinate.<br>To know that plants need water, light and a suitable temperature to grow and stay healthy.<br>To know that plants need a suitable temperature to grow.<br>To understand that plants are a very important part of our environment because they provide us with oxygen to breathe and food to eat.<br>To know that most plants grow from seeds. With dark conditions and the right temperature, the seed sprouts (germinates). | **Children will know by the end of the unit:**<br>Humans need a balanced diet of a range of different food groups to stay healthy.<br>It is important to prepare and store food correctly to keep it fresh and safe.<br>Eating different foods will help our bodies to grow and keep us healthy.<br>Food gives us energy to allow us to perform activities but it also helps our bones stay strong and helps our body to mend itself.<br>Water helps us get rid of waste and clean out our bodies<br>To know a force can cause something to speed up, slow down, change shape change direction<br>To know some things are living, such as animals and plants; somethings have never been alive; such as toys, models and materials |

**Substantive Knowledge** **Disciplinary Knowledge**

# St Thomas More Primary School
# Science Whole School Overview

| | | | | |
|---|---|---|---|---|
| baths/showers is part of personal hygiene.<br>How to use observations and ideas to suggest answers to questions. | | | | |
| Mastery Questions | | | | |
| - What are the different ways that you can keep fit?<br>How does food help strengthen your muscles?<br>How can we stop germs from spreading? | -Name 2 materials and processes that are reversible.<br>What materials does a builder need and why?<br>What are the properties of the chosen materials for your monster? | What makes a material suitable for its purpose?<br>Name one plant and animal and describe its habitat.<br>How would a scientist record an investigation? | To know that seeds don't need light to germinate.<br>To know that plants need water, light and a suitable temperature to grow and stay healthy.<br>To know that plants need a suitable temperature to grow.<br>To understand that plants are a very important part of our environment because they provide us with oxygen to breathe and food to eat.<br>To know that most plants grow from seeds. With dark conditions and the right temperature, the seed sprouts (germinates). | Can you name any food groups and describe how they help our bodies?<br>Which types of foods helps our bones to stay strong?<br>What happens if food is not stored or prepared correctly?<br>How can you make an object change direction?<br>How can you make an object speed up?<br>Which material is most suitable for bending? |

# St Thomas More Primary School
# Science Whole School Overview

| Year 3 Personalised Curriculum | | | | | |
|---|---|---|---|---|---|
| Flashback | | | | | |
| **Previous Key Stage-** | | | | | |
| **Previous Unit** | **Previous Unit** | **Previous Unit** | **Previous Unit** | **Previous Unit** | |
| **Autumn 1- Rocks, Fossils and Salts** | **Autumn 2-Light and Shadows** | **Spring 1- -How plants grow** | **Sprig 2-Health and Movement** | **Summer 1-Forces and Magnets** | **Summer 2 – Space** |
| **Children will know by the end of the unit:**<br>-How to compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.<br>-How to describe in simple terms how fossils are formed when things that have lived are trapped within rock.<br>-How rock erodes<br>- Rocks are used for many different purposes, including making glass, plastic, building houses, fireplace surrounds etc.<br>-That soils are made from rocks and organic matter.<br>--How fossils are formed.<br>-The Earth is made up of four layers.<br>-How to ask relevant questions and use different types of scientific enquiries to answer them. | **Children will know by the end of the unit:**<br>-You need light to see things and that dark is the absence of light.<br>-That light is reflected from surfaces.<br>-Light from the sun can be dangerous and that there are ways to protect eyes<br>-Shadows are formed when the light from a light source is blocked by a solid object.<br>-How the size of shadows can change.<br>-Light travels in straight lines and it cannot bend to travel around corners.<br>-Opaque materials form dark shadows because they do not let any light through<br>-Transparent materials can make a faint shadow because they block some light. | **Children will know by the end of the unit:**<br>To identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.<br>To know that plants need air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant.<br>Water is transported from the roots, through the tubes in the stem, to the tip of the plant.<br>To know that the life cycle of flowering plants, includes pollination, seed formation and seed dispersal.<br>Seed germination is when a seed begins to grow.<br>How to use a range of equipment, including thermometers and data loggers. | **Children will know by the end of the unit:**<br>To identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat.<br>To identify that humans and some other animals have skeletons and muscles for support, protection and movement.<br>Vertebrates are organisms with a backbone (spine) and invertebrates are organisms without a backbone (spine.)<br>Humans have a number of different joints.<br>How to set up simple practical enquiries, comparative and fair test.<br>How to make systematic and careful observations.<br>How to take accurate measurements using standard units. | **Children will know by the end of the unit:**<br>To know objects, move in different ways when on different surfaces.<br>To know that some forces need contact between two objects, but magnetic forces can act at a distance.<br>To know that magnets can attract or repel each other and attract some materials and not others.<br>To identify some magnetic materials.<br>To describe magnets as having two poles. | **Children will know by the end of the unit:**<br>The planets of the Solar System have many moons.<br>The Earth has one moon.<br>We always see the same side of the Moon from Earth.<br>The Moon travels around the Earth. This is called an orbit.<br>Neil Armstrong and Buzz Aldrin are two r famous astronauts.<br>Gravity makes things fall down towards the centre of the earth. There is gravity everywhere<br>How to gather, record, classify and present data in a variety of ways to help in answering questions |

**Substantive Knowledge** **Disciplinary Knowledge**

# St Thomas More Primary School
# Science Whole School Overview

| | | | | | |
|---|---|---|---|---|---|
| Mastery Questions | | | | | |
| -Describe the differences between granite rock and limestone.<br>-What are the four layers of the earth called?<br>-What is the difference between permeable and impermeable rocks and can you name one of each? | -Can you see your reflection in all materials? Which materials can you see your reflection in? Do you know why?<br>-What is a source of light? What is a natural source of light? What is a man-made source of light? What is happening in these pictures? Why are the reflections not as we would expect? | What do you know about the life cycle of a flowering plant?<br>Explain how to grow a plant from a seed. Include what the seed / plant needs to survive.<br>How do plants grow in desert climates? | Explain the benefits of having a balanced diet and how carbohydrates, protein, vitamins and fats play a part in this.<br>Draw a skeleton and label as many different types of joints as you can.<br>List 3 invertebrates then explain how being an invertebrate benefit them in their living environment | What is the difference between gravity and magnetism?<br>How do magnets help us in our everyday lives? | Describe the movement of the Earth's moon.<br>Describe the surface of the Earth's moon, explain why it is like this.<br>Can you remember the date and name of the first person on the moon?<br>Explain how the Earth is like a Magnet. |

**Substantive Knowledge** **Disciplinary Knowledge**

# St Thomas More Primary School
# Science Whole School Overview

| Year 4 Personalised Curriculum | | | | | |
|---|---|---|---|---|---|
| **Flashback** | | | | | |
| **Previous Year-** | | | | | |
| **Previous Unit** | **Previous Unit** | **Previous Unit** | | **Previous Unit** | **Previous Unit** |
| **Autumn 1- States of Matter** | **Autumn 2-Changing Sound** | **Spring 1– Living in Environments** | **Spring 2-Eating and DIgestion** | **Summer-Circuits and Conductors** | |
| Children will know by the end of the unit:<br>To identify some materials that are solids, some that are liquids and some that are gases.<br>To know that materials change when they are heated or cooled.<br>To know evaporation is when a liquid changes to a gas - and that this is important in the water cycle.<br>To know that condensation is when the water vapour turns into a liquid - which is part of the water cycle.<br>To know that evaporation increases with the increase of temperature.<br>0°C is the freezing point of water | Children will know by the end of the unit:<br>To know that sounds are made when something vibrates. To know that sounds can travel through solids, liquids and gases.<br>To know that ears hear sounds.<br>To understand that pitch is how high or low the sound is.<br>To know that volume is how loud or quiet a sound is.<br>To recognise that sounds get fainter as the distance from the sound source increases.<br>Sound travels in sound waves.<br>The smallest bone in the human body is in the ear.<br>How to record findings using simple scientific language, | Children will know by the end of the unit:<br>Identify and name a variety of living things in their local and wider environment.<br>Environments can change and that this can sometimes pose dangers to living things.<br>Organisms are living things.<br>Animals can be classified as birds, reptiles, fish, mammals or amphibians.<br>Insects, molluscs, and arachnids are all types of invertebrate.<br>Non--flowering plants include conifers, ferns and mosses.<br>Pollution can change/affect the habitats of plants and animals. | Children will know by the end of the unit:<br>To know that the mouth has teeth to help to chew food, and it is the first part of the digestive system.<br>To know that food travels down the oesophagus to the stomach.<br>To know that the large intestine is the last part of the digestive system.<br>To recognise molars, canines and incisors.<br>To know that molars grind food, canines are sharp in order to rip / tear and incisors are used to cut.<br>To know (and be able to create) a food chain includes a producer, predator and prey. | Children will know by the end of the unit:<br>To identify common appliances that run on electricity.<br>To construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.<br>To identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery.<br>To know some electrical appliances are plugged into the mains electricity supply and some use batteries.<br>To know that wind turbines produce electricity and is a renewable form of energy.<br>To understand the importance of using renewable forms of energy in today's world.<br>To recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.<br>To recognise some common conductors and insulators, and associate metals with being good conductors.<br>The voltage is a kind of electrical force that makes electricity move through a wire and we measure it in volts.<br>Plastic, rubber and glass are all insulators.<br>How to use results to draw simple conclusions. | |

**Substantive Knowledge** **Disciplinary Knowledge**

# St Thomas More Primary School
# Science Whole School Overview

| | | | | |
|---|---|---|---|---|
| To report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.<br>To identify differences, similarities or changes related to simple scientific ideas and processes.<br>To use research skills. | drawings, tables and bar charts. | Flowering plants include all other plants, including most trees, grasses and shrubs.<br>To use a classification key. | | How to suggest improvements<br>How to use a key.<br>How to use straightforward scientific evidence to answer questions or to support their findings.<br>How to make predictions for new values |
| Mastery Questions | | | | |
| What is the difference between a solid, liquid and gas?<br>What happens to water at 0°C?<br>Is it a solid, liquid or gas?<br>How does wet washing dry on a washing line?<br>Why can you see water particles on a mirror / window after a hot shower or bath? | How does the tightness of a drum skin affect the pitch?<br>What happens inside the ear when sounds are heard?<br>Could you hear sounds in space? Explain your answer. | Why do scientists use classification keys?<br>What are the differences between insects and spiders?<br>What is the difference between a conifer tree and an oak tree? | How are the teeth of carnivores different to that of herbivores?<br>How does food travel through your body?<br>What would happen if there were no producers in a food chain? | Explain why a torch runs on batteries and a washing machine needs to be plugged into the mains.<br>Why is renewable energy necessary in today's society?<br>How does a simple series circuit works?<br>What types of materials would you find on a switch and why?<br>When are electrical conductors and insulators useful?<br>What effect does increase the number batteries in a circuit have on a bulb? |

**Substantive Knowledge** **Disciplinary Knowledge**

# St Thomas More Primary School
# Science Whole School Overview

| Year 5 Personalised Curriculum | | | | | |
|---|---|---|---|---|---|
| **Flashback** | | | | | |
| **Previous Year-** | | | | | |
| **Previous Unit** | **Previous Unit** | **Previous Unit** | | **Previous Unit** | **Previous Unit** |
| **Autumn 1-Properties and changes of materials** | **Autumn 2-Earth and Space** | **Spring 1 –Life Cycles** | **Spring 2- Changes and Reproduction** | **Summer-Forces in Action** | |
| Children will know by the end of the unit:<br>To name some materials that are hard, soluble and transparent.<br>To name some materials that are electrical and thermal conductors.<br>To know that some materials will dissolve in to liquid to form a solution and describe how to recover a substance from a solution<br>To use knowledge of solids, liquids and gases to describe how mixtures might be separated, including through filtering, sieving and evaporating.<br>To know that dissolving, mixing and changes of state are reversible changes.<br>To know that some changes result in the formation of new materials, and that this kind of change is not usually reversible (e.g. burning)<br>To know that when sodium bicarbonate and vinegar mix, they react with each other and one of the things that is made is carbon dioxide gas. | Children will know by the end of the unit:<br>To know that the sun is a star and is at the centre of our solar system.<br>To know that the Earth and planets orbit the sun.<br>To know that the Sun, Earth and Moon are approximately spherical bodies.<br>A day on Earth lasts 24 hours – that is how long it takes for the planet to spin around once.<br>To understand that when you look up into the sky the Sun seems to move around the Earth, this is an illusion: in fact, the Earth spins and causes night and day.<br>To know that the part of the Earth that faces the Sun is in daylight, and the part that is not facing the Sun is in darkness<br>Inside the Solar System, Earth and eight other planets (including the dwarf planet Pluto) orbit (travel round) the Sun due to its gravitational pull | Children will know by the end of the unit:<br>Birth, growth, reproduction and death represent the four stages of the life cycle of all animals<br>Amphibians begin their lives as eggs.<br>The insect is born as an egg, hatches as a nymph (NIMF), and changes into an adult.<br>Birds develop in eggs which hatch.<br>Some bird life cycles involve migration.<br>Flowers produce fruit and fruit contains seed.<br>Seeds must be dispersed in order for new plants to grow<br>Seeds can be dispersed by animals, wind, water or humans.<br>Insects are attracted to flowers and pollinate them.<br>Pollination: when pollen from one plant is transferred to another.<br>To record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs | Children will know by the end of the unit:<br>There are six stages in the human life cycle:<br>1. Foetus - At this time, a baby is growing inside its mum's womb.<br>2. Baby - A baby is born after spending nine months inside the womb.<br>3. Childhood - At this stage, you learn to walk and talk.<br>4. Adolescence - Children become teenagers.<br>5. Adulthood - Your body is fully developed.<br>6. Old age - The last stage in the life cycle of a human.<br>Humans, like all mammals, give birth to live young.<br>Smaller animals normally have a shorter gestation period than larger animals.<br>Humans need vitamins and minerals to help them grow.<br>Gestation is the amount of time it takes for a baby to develop. | Children will know by the end of the unit:<br>To explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.<br>To identify the effects of air resistance, water resistance and friction that act between moving surfaces.<br>To recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.<br>Mass is how much of an object there is.<br>To take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. | |

**Substantive Knowledge** **Disciplinary Knowledge**

# St Thomas More Primary School
# Science Whole School Overview

| | | | | |
|---|---|---|---|---|
| To plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. | | | | |
| Mastery Questions | | | | |
| Describe one irreversible and one reversible change.<br>Why does sodium bicarbonate and vinegar react with one another?<br>Which materials are thermal conductors and why are they useful? | Can you classify the planets by their properties?<br>Why were Galileo theories rejected by the church?<br>What would be the consequences for Earth if the Sun died out?<br>Why do we observe different shapes of the Moon? | Why can seeds begin to germinate with only water?<br>Why are we so concerned these days about bees becoming extinct?<br>Find out 2 facts about how bananas reproduce. | Why might different animals need to learn to walk quicker?<br>What is the relationship between the size of a mammal and its gestation period?<br>What are the main features of each stage in the life cycle of a human? | How can mechanisms effect forces?<br>When are forces balanced and unbalanced?<br>List all the forces in action on an aeroplane that is flying through the air. |

# St Thomas More Primary School
# Science Whole School Overview

| Year 6 Personalised Curriculum | | | | |
|---|---|---|---|---|
| **Flashback** | | | | |
| **Previous Year-** | | | | |
| **Previous Unit** | **Previous Unit** | **Previous Unit** | **Previous Unit** | **Previous Unit** |
| **Autumn 1-Healthy Bodies** | **Autumn 2-Seeing Light** | **Spring –Classifying Organisms** | **Spring 2- Evolution and Inheritance** | **Summer- Changing Circuits** |
| **Children will know by the end of the unit:**<br>-That the heart, blood vessels and blood are all part of the circulatory system.<br>-The circulatory system allows blood to transport oxygen and nutrients to the body's cells, and waste products away from them.<br>-The heart acts as a pump moving blood around the body. Blood travels through blood vessels which includes veins, arteries and capillaries.<br>-Diet, exercise, drugs and lifestyle affect the way our bodies function.<br>-Drugs (legal and illegal) and alcohol have positive and negative effects on the body | **Children will know by the end of the unit:**<br>-That light appears to travel in straight lines.<br>-How to use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye.<br>-To explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes.<br>-To use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.<br>-Photon is the basic unit that makes up all light.<br>-White light is Visible light made up of the colours of the spectrum<br>-A Spectrum is a group of colours that a ray of light can be separated into including red, orange, yellow, green, blue, | **Children will know by the end of the unit:**<br>-That microorganisms, plants and animals are classified in different groups.<br>-Carl Linnaeus created the classification system that forms the basis of the one that scientists use today.<br>-Micro-organisms can be helpful or harmful to humans.<br>-To report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. | **Children will know by the end of the unit:**<br>-That living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.<br>-That living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.<br>-How animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.<br>-The process of evolution by natural selection was proposed by Charles Darwin. | **Children will know by the end of the unit:**<br>-How to identify common appliances that run on electricity.<br>-How to construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.<br>-Whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery.<br>-Some electrical appliances are plugged into the mains electricity supply and some use batteries.<br>-Batteries convert chemical energy into electrical energy.<br>-Metals are good conductors.<br>-Plastic, rubber and glass are all insulators.<br>-How use test results to make predictions to set up further comparative and fair tests.<br>-How report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentation.<br>How to identify scientific evidence that has been used to support or refute ideas or arguments.<br>How to compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches.<br>-The battery pushes the electrons in a circuit. |

**Substantive Knowledge** **Disciplinary Knowledge**

# St Thomas More Primary School
# Science Whole School Overview

| | | | | |
|---|---|---|---|---|
| | indigo, and violet: the colours that can be seen in a rainbow<br>-Light travels in waves.<br>-How to use test results to make predictions to set up further comparative and fair tests. | | | -Resistance is the difficulty that the electric current has when flowing around a circuit.<br>-Electrons are very small particles that travel around an electrical circuit.<br>-How to use test results to make predictions to set up further comparative and fair tests.<br>-How to report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.<br>-How to identify scientific evidence that has been used to support or refute ideas or arguments. |
| Mastery Questions | | | | |
| Describe the path of the blood around the body.<br>What advice would you give to a person who lives an unhealthy lifestyle?<br>What do you think is the cause of muscle cramps? | How can light be seen through all the index cards?<br>What does the experiment prove about the path light travels?<br>What would happen if the holes were smaller?<br>Explain, using a diagram, how we can see an object that is behind us | -How are fungi similar and different to plants?<br>-How would you classify a duck-billed platypus?<br>-Which criteria would you use for a branching database to classify different plants? | -Choose an animal you haven't studied. How is it adapted for either heat of cold?<br>-Explain why there are a variety of types of beaks. Give an example.<br>-Who was more important, Carl Linnaeus or Charles Darwin? Give reasons for your answer. | How could you adapt the circuit so that both bulbs can be lit separately?<br>Explain how the number of batteries included in a circuit affects bulb brightness.<br>Explain how the length of wire in a circuit affect the way a circuit works?<br>Why are all the lights in a parallel circuit equally bright?<br>Explain how the length of wire in a circuit affect the way a circuit works?<br>What are batteries and how do they work?<br>Describe 3 ways in which you could make a bulb dimmer or a buzzer quieter. |