Progression Plan for Science

	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Biology								
Plants	Introduce plants to children, ask them to draw a plant and then discuss what they know about plants. Provide examples of plants that may differ from children's concept of a plant. Talk to children about plants, including trees and grasses. Ask children what they notice about each plant. Give children lots of opportunities to see different types of plants. Is interested to explore familiar and new experiences in nature, e.g. looking at plants, animals, puddles, mud. Talk about what they see. Describes, in simple terms, life cycles of plants and animals. Can identify differences	Ask children what they know about seeds and what seeds need to make them grow. Plant sunflower seeds in containers and water them. Give children an instruction card with words and pictures for planting sunflowers. Give children lots of time to discuss and explain their predictions for what will happen to plants in different conditions. Listen to what children say to correct any misconceptions. Ask questions such as 'What do plants need to grow?', 'What do seeds need to germinate? To share stories about animals and understand their features and suitability to their environment.	Name common garden & wild plants including trees. Name the structures & parts of plants and observe in their natural habitat. What do plants need to grow?	Identify and describe the basic structure of a variety of common flowering plants, including roots, stem/trunk, leaves and flowers. Taking a selection of (real) different flowering plants, what are the structural features? (apply) Identify and name a variety of common plants, including garden plants, wild plants and trees and those classified as deciduous and evergreen. What are the similarities and differences between deciduous and evergreen trees? Think of some ways to categorise plants. Categorise what plants according to similarities and differences including their	Describe the functions of the parts of a flowering plant. Label the parts of a flower. Grow, **observe** & record the growth of a range of different plants. Observe and explain the transportation of water in plants. Experiment with food colouring to demonstrate how water is transported through a plant. Explain the experiment and summarise your observations. Compare and contrast your observations with those of others. Grow, observe and record the growth of a range of different plants. Describe the features of plants and classify them Describe the lifecycle of flowering plants including pollination and seed dispersal and know how	Compare and contrast the conditions for growth for a range of different plants. Explain why these differences may exist. Explain how leaves are important in creating food for plants. Using a range of (real) flowering plants, locate and name the parts of a flower. (apply) Compare different flowers and explain the differences in the size and shape of the parts of a flower. Explain why a flower that is not pollinated will not reproduce.	Describe how living things (plants & animals) have evolved through adaptation to their environment. Matching living things (plants& animals) to their environments. How living things (plants (& animals) have adapted to their environments. Understand how living things evolve. Classify plants according to their characteristics and how this relates to adaptation Compare the different processes of reproduction in plants: asexual & sexual.	Compare and contrast the way different plants and animals have adapted to their environments. Explain and give examples of the idea of adaptation. Organise adaptation information. Graphically Explain the similarities and differences between the process of reproduction in plants and animals.

	between some materials/animals Is interested to explore familiar and new experiences in nature, e.g. looking at plants, animals, puddles, mud. Talk about what they see. Describes, in simple terms, life cycles of plants and animals. Can identify differences between some materials/animals Children to paint photos of themselves and use mirrors to accurately record their features.	Read *The Tiny Seed* by Eric Carle. Ask children what they know about seeds and what seeds need to make them grow. Observe first-hand the chick's eggs and the start of new life.		habitats/seed v bulb. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. How could you try to revive these plants? (apply) (Give pupils a dried-out plant, one that's been in the fridge, one that's been kept in the dark etc.)	some plants are adapted to their environment. List ways in which plants are pollinated. Describe how seeds are formed. List ways in which seeds are dispersed.			
Animals & Humans			Describe a healthy diet. Describe a healthy lifestyle. Observe and describe the effect of exercise. Label the main parts of the human body. Illustrate the parts of the body associated with the five senses.	Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. Explain why the sense of touch may be important to a blind person. Categorise food types and explain why each group is important to humans.	Name the seven different types of nutrition that humans (and named animals) need. Describe a healthy fraction of the main nutrients for humans (and named animals). Illustrate how humans (and named animals) get nutrition from the food they eat. Label the parts of the human digestive system. Describe the functions of the human digestive system. Label the types of adult human teeth.	Summarise the main nutritional differences between carbohydrates, fibres, fats, proteins and water. Point out the effects of various vitamins and minerals on human health. Relate the human digestive system to the way humans get nutrition. Contrast this with how plants get nutrition. Compare and contrast human teeth with those of a carnivorous animal. Identify	Describe the main changes in the human body from childhood to adulthood to old age. What are the physical signs of humans ageing? (describe) Describe a healthy, balanced diet. Describe some of the possible effects of poor exercise, drug misuse (including smoking) and poor diet on the way the human body functions. Draw diagrams that show how arteries and veins	Compare and contrast the physical appearance of children and adults Graph changes in average heights of males and females at different ages. Summarise your findings. Graph the effect of exercise on pulse rate. Explain your findings. Explain the possible effects of too much sugar in the diet on how the human body functions.

					Label the main bones and joints in the human skeleton (and that of some animals). Name the main muscles in the human body (and some animals). Describe the role of the skeleton and muscles in support, protection and movement. Observe and describe the role of muscles in human movement. Describe the functions of the different types of teeth. Describe good care of teeth.	patterns in the flow of energy in a food chain. Demonstrate how food chains always start with sunlight and how essential water is to them. Categorise muscle movement as relaxing or contracting. Explain the relationship between the muscle groups as they relax and contract.	are connected by capillaries. Draw and label diagrams of the human circulatory system. Describe the functions of the heart, blood vessels and blood. Describe how water and nutrients pass from the arteries, through capillaries, to veins. Describe the life processes common to all living things. Read and answer questions about the importance of diet and exercise. Observe and record the effect of exercise on the heartbeat. Name some nutrients that are important for humans. Describe how nutrients are important for animals and humans.	To understand the structure of the heart.
Living Things			Name some common animals. Match the animals to the labels: bird, fish, amphibian, reptile, mammal and invertebrate. Label animals as carnivore,	Explore and compare the differences between things that are living, that are dead and things that have never been alive. Organise things of your choice into	Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food. Explain	Compare and contrast the features of animals (and plants) in different groups. Summarise the key similarities and differences of animals (and	Describe how plants and animals may evolve through adaptation to their environment. Illustrate how animals and plants adapt to	Explain the similarities and differences in the life cycles of a mammal, an amphibian, an insect and a bird. In which ways do the life processes

			herbivores or omnivore. Match common animals. to their habitats.	groups: living, dead and never been alive. Describe and compare the structure of a variety of common animals Point out and explain the main differences between birds, fish, amphibians, reptiles, mammals and invertebrates. Categorise animals according to the conditions they require. Explain your categories.	the differences in a food chain for a herbivore and a carnivore. Name producers, predators and prey in a food chain. Describe producers, predators and prey as herbivores, carnivores or omnivores. Name groups of animals (and plants). Describe the features of animals (and plants) in particular groups. Match animals (and plants) to groups. Complete a classification key from a list of animals (and plants). Name and describe a range of different habitats. Identify and label specific plants and animals in these habitats. Describe how a change to an environment (e.g. deforestation in rainforests) is a danger to specific habitats.	plants) in different groups Explain how you have chosen the key similarities and differences to summarise. Identify animals (and plants) using a classification key. (apply) Adapt a classification key to include different criteria. Compare changes in two or more habitats and categorise the effects of the changes Explain and give examples of the idea of adaptation. Compare and contrast different types of adaptation. Compare changes in two or more habitats and categorise the effects of the changes	environments in different ways. Match a range of animals and plants to their environments in which they are found. Draw and describe the life cycle of an insect, bird, amphibian and mammal Look at and copy classification keys for common insects. Use classification keys to identify insects and animals. Draw and describe the process of reproduction in some animals. Make classification keys.	of all living things vary? (contrast) Organise information, including data that supports the theory that the life processes of all living things vary. Explain some of the problems with not using specific characteristics when classifying living things. Identify plants, mammals, amphibians, insects and birds from classification keys.) Explain why observable features are used to classify living things into broad groups. Compare and contrast different types of adaptation.

Evolution & Inheritance			Name the offspring of animals and humans (e.g. babies for humans, puppies for dogs). Match the offspring to the adult.	Identify how humans resemble their parents in many features. Present similarities and differences between parents and their children. Notice that animals, including humans, have offspring which grow into adults. Explain the main differences between adult animals and humans and their offspring.	Match pictures of (human and animal) offspring to their parents. Notice and describe how they sometimes resemble each other. Notice that and describe how this may not be the case for all humans. Notice and label the resemblance between plants and those that grow from their seeds. Name a variety of animal and plant fossils. Describe the conditions in which the fossils once lived. Note, name and describe plants and animals that inhabited the Earth millions of years ago. Match a range of animals and plants to the environments in which they are found. Describe how animals and plants are suited to the environments in which they are found. Illustrate how animals and	Categorise the resemblance between humans, animal and plants and organise your findings. Explain the process of the formation of fossils, categorise them and compare and contrast their differences. Identify the types of fossils (identify patterns) that are most likely to be found in different types of sedimentary rocks (e.g. in shale, limestone, sandstone etc). Explain and give examples of the idea of adaptation. Compare and contrast different types of adaptation.	Name a variety of animal and plant fossils. Describe the conditions in which the fossils once lived. Note, name and describe plants and animals that inhabited the Earth millions of years ago. Observe and describe differences between living things and their offspring. Observe and name offspring that are not identical to their parents and describe how they vary. Describe the theory of evolution. Describe how animals and plants are suited to the environments in which they are found.	Categorise fossils in a number of ways. Compare and contrast different fossils. Explain the process of the formation of fossils. Categorise differences in living things and their offspring. Explain, with examples, how offspring are not identical. Explain why adaptation may lead to evolution

					plants adapt to environments in different ways.			
Chemistry								
Materials	Show children some ice shapes you have prepared in advance. Ask them what they know about ice. Children to observe the changes in food during the process of cooking.	Explore dissolving and mixing. Demonstrate dissolving sugar in water and ask children what they think has happened to the sugar. Dilute some squash with water and ask what they think has happened. Show children two beakers of water. Tell them you are going to put a sugar cube in one and a rock in the other and stir them up. Ask them what they think will happen. Provide jam jars with lids. Explain to children that they are going to add some water to their jar and then some oil. What do they think will happen? What might they do to mix them up? Encourage them to try out their predictions.	To be able to identify a variety of common materials. To be able to distinguish between an object and the material from which it is made. Observe and name the properties of everyday materials. Complete tables that describe the properties of materials. List different uses for everyday materials. List reasons for the suitability of materials for particular uses. Place materials into groups under the headings given to you. Observe and describe changes to the shape of solid objects when they are squashed, bent, twisted or stretched	Compare and group together a variety of everyday materials on the basis of their simple physical properties. Group objects based on the materials they are made from. Explain your groupings. Distinguish between an object and the material from which it is made. Explain how a bottle is made from sand. Choose some objects and explain how they were made from their original material. Distinguish between an object and the material from which it is made. Explain how a bottle is made from sand. Choose some objects and explain how they were made from	Describe the formation of fossils. Illustrate the formation of fossils. Describe the water cycle. Suggest practical uses for the relationship between temperature and evaporation. Observe evaporation. Observe and describe the different rates of evaporation in different temperatures. Create a testable hypothesis about states of matter, carry out tests and prove or disprove your hypothesis. Measure the changing temperature of materials as they are heated and cooled and complete tables and graphs to show the effects.	Compare and contrast the properties of different rocks. Group rocks on the basis of their properties (rather than their origins). Infer the names and types of rocks based on their observable properties or descriptions of their minerals. Explain the main differences between igneous and sedimentary rocks. Compare the origins of different types of rocks and identify patterns that would help you to infer the type of rock. Identify the types of fossils (identify patterns) that are most likely to be found in different types of sedimentary rocks (e.g. in shale, limestone, sandstone etc). Explain how weathering contributes to the formation of soils.	Observe and describe materials on the basis of their hardness, solubility, conductivity and their response to magnets. Carry out comparative tests to group materials (follow instructions). Carry out fair tests to group materials (follow instructions). Observe and describe materials based on their hardness and conductivity. Label materials, including insulators and conductors using a range of scientific vocabulary. Observe and describe how mixing is reversible. Observe and describe how adding an acid (e.g. to bicarbonate of	Adapt a comparative test to group materials. Predict the outcomes of your test. Modify a fair test to group materials. Predict the outcomes of your test. Apply your understanding of the properties of materials to explain why a range of everyday items has been made from a particular material. Apply your knowledge of solutions to explain how a substance has not disappeared when it forms a solution. Modify a fair test to demonstrate your knowledge. Demonstrate reversible changes by graphing the temperature of water as it changes state from a liquid to a solid and from a solid to a liquid,

		Encourage children to make mixtures in different		their original material. Describe the simple physical properties of a variety of everyday materials. - Compare and group together a variety of everyday materials on the basis of their simple physical properties. Compare and contrast the different properties of materials. Decide how best to group materials on the basis of their properties. Explain your reasons for your groups. Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick/rock and paper/cardboard for particular uses. Explain why the properties of materials are useful for deciding which materials to		Compare and contrast different types of soils. Categorise soils using a range of different criteria. Test soils in various ways in order to identify them. Compare and contrast solids, liquids and gases. Classify liquids in different ways. Classify solids in different ways. Classify gases in different ways. Explain why a helium filled balloon will float in air. Summarise, using scientific terminology, the relationship between temperature and states of matter. Explain the three states of matter of water and how temperature affects its state. Graph the relationship between temperature and evaporation. Summarise your results.	soda) creates a new material and is not reversible. Observe (through direct experience) and describe materials as soluble or non-soluble. Observe and describe how items may be separated through filtering, sieving and evaporation. Observe and describe how dissolving a substance into a solution is reversible. Observe and describe how changes of state are reversible. Observe and describe the effect of evaporation of a solution on a substance (solute) that has dissolved in a liquid (solvent). Carry out comparative tests to assess the suitability of everyday materials for a purpose (follow instructions). Carry out fair tests to assess the suitability of everyday materials for a	and identify patterns between temperature and state. Summarise your findings. Experiment with ways to separate pebbles and silt in a solution of salt. Explain your methods and summarise your results. Categorise changes as reversible or not reversible, and give examples. Experiment with making plaster of Paris moulds. Observe, record and explain what happens to the material as water is added to the powder. Summarise your findings.

				use for an object. Give examples. Compare and contrast the properties of materials and use this to explain why certain materials are used for particular purposes. Experiment with changing the shape of solid objects. Organise and summarise your findings. Describe the simple physical properties of a variety of everyday materials. - Work scientifically to carry out a fair test. (Depth task) Design an item of clothing to keep the wearer dry.			purpose (follow instructions). Observe and describe how burning a material creates a new material and is not reversible. Observe and describe how oxidisation of (e.g. of steel) creates a new material and is not reversible.	
Physics								
Forces & Magnets	Children to test out their hypotheses about what makes things sink in the water tray. Summarise by saying 'So our hypothesis was …', 'We checked it by …' and 'We found out that	Magnets and magnifiers in CP outdoor provision. Magnets: Push and Pull! Learn About Magnets (and other texts). Find 3 non and 3 magnetic items. Create a magnetic maze. Fish game (use Nursery's	What happens to objects when they are pushed? What happens to objects when they are pulled? Compare how different things move. Observe and describe the movement of a range of things	Notice and describe how things move, using simple comparisons such as faster and slower. - Compare how different things move. Experiment with pushing objects	Observe and illustrate how objects need a contact force for them to move. Name the contact forces that move objects. Observe and illustrate how magnetic forces act at a distance. Observe and describe the	Identify patterns in the type of surface and how this affects movement. Explain why these patterns may exist. Experiment with practical applications of this relationship. Experiment with magnets to	Label the north and south poles of magnets. Observe and describe the effect of placing like and different poles of a magnet next to each other. Complete tables that show what you expect to happen when	Explain why magnets have poles. Experiment with cutting magnets in two. Observe and explain what happens. Apply your knowledge of magnetic poles to create a game that uses the idea

	Use questions and comments such as, 'Let's check our ideas.', 'How can we be sure?' and 'What else might you check?' Children to use the 'lightbox' to explore light and transparency. Children to access magnifiers to closely observe Children taught to 'tune into sounds' through listening tasks. Access to musical instruments in continuous provision and during directed time. Sound: identify environmental sounds. Begin to explore percussion instruments. Explore percussion and 'found' instruments Begin to explore various ways to start sounds in different instruments, and how to stop the sound.	game and create own) This activity is best started on a sunny day and can go on over a week. Ask children what they notice about their shadows. Take photos and draw around shadows. Take children out on an overcast day. What do they notice? What are their predictions about shadows? After the initial activities, read Moonbear's Shadow by Frank Asch. Sounds: Match instruments to their sound (duration/ timbre, dynamics, quality of sound, pitch). Become familiar with both indoor and outdoor instruments (commercial and 'found' sounds) Create music with percussion instruments. Further discuss sound qualities.	including things that move with magnets.	gently and hard. Record and explain what happens. Experiment with a slope and record how this changes the speed at which an object rolls. Compare how different things move. Compare the movement of remote control cars and a helicopter drone. Explain the differences in movement. Compare how different things move. (Depth task) Do heavy and light things move differently? Is there a pattern?	movement of objects on surfaces that are smooth and rough, flat and inclined to different degrees. Complete tables to record observations. Use the word 'friction' appropriately. Observe and describe that magnets attract some materials and not others. Observe then complete tables that describe everyday materials as 'attracted' or 'not attracted' to magnets. Label the north and south poles of magnets. Observe and describe how magnets attract or repel each other. Observe and describe the effect of placing like and different poles of a magnet next to each other. Complete tables that show what you expect to happen when different combinations of	explore whether the force of magnetism can act through materials (e.g. by placing magnets in ice). Identify any patterns in the type and amount of material the force is acting through. Explain why magnets have poles. Experiment with cutting magnets in two. Observe and explain what happens. Apply your knowledge of magnetic poles to create a game that shows the idea that magnets attract or repel each other. Experiment with iron filings to see how they act when magnets attract and repel each other. Record your findings and explain what is happening. Explain why some materials are attracted to magnets and others are not.	different combinations of poles are facing each other. Observe and describe the effect of the force of gravity. Observe and describe how objects tend to slow down because of drag forces. Observe and describe the effect of changing gears on a bicycle. Observe and describe the effect of using a lever to try to move a heavy object (e.g. to lift the teacher). Observe and describe the effect of air resistance. Observe and describe the effect of water resistance. Observe and describe the effect of friction. Describe these forces as drag forces. Observe and describe how forces and motion can be transferred through gears, pulleys, levers and springs.	that magnets attract or repel each other. Apply your knowledge of friction to positive applications. Explain your ideas. Interpret data about the rate that different materials fall towards Earth. Summarise your findings. Air resistance/water resistance Apply your knowledge of gears, pulleys and levers to demonstrate and explain how a small force can have a greater effect. Apply your knowledge of drag forces to some positive applications. Apply your knowledge of forces and movement to make a working mechanism.

	Begin to explore fast/ slow, loud/ quiet and high/ low. Continue to develop vocabulary and observations when playing instruments.	Play pitched instruments. Observe effects of vibration e.g. rice on a drum, metal instruments allowed (or not) to vibrate. Continue to develop related vocabulary and an instruments physical construction e.g .materials. / metal/ wood/ skin) Make telephones using cups and string- vibration travelling along the string. Using different lengths of string, compare and contrast quality of sound travel.			poles are facing each other.		Label the forces and draw the directions in which they transfer. Observe and describe the effect of using a pulley, or geared pulleys to lift heavy objects.	
Light & Seeing			Name a variety of sources of light. learn that we see things because light travels from them to our eyes. Illustrate how light travels from light sources to our eyes	Observe and name a variety of sources of sound, noticing that we hear with our ears. Categorise sounds. Compare and contrast sounds based on your own criteria. (choose) Observe and name a variety of sources of light, including electric lights, flames and the Sun, explaining that we see things because light travels from them to our eyes. Experiment with ways to block light from reaching our eyes. Point out how this demonstrates that light travels from a source to our eyes.	Observe and record the effect of light in seeing things. Answer questions about the effect of light on seeing. Describe darkness. Observe light reflected from surfaces. Describe the effect of light reflecting from surfaces. Label a number of effects of reflection. Name some safety rules to avoid damaging your eyes with light from the Sun. Observe and record the effect of blocking light with solid objects. Name the effect and describe what is happening. Name the effect and describe what is happening.	Explain the relationship between light and seeing. Experiment with the effect of different levels of light on the visibility of different coloured objects. Explain why it is important to dress in high visibility clothing in some situations Experiment with light reflecting from a variety of different surfaces. Categorise surfaces in terms of their reflective properties. Apply your knowledge of safety rules to explain how to safely view a solar eclipse. Explain why an umbrella is a useful practical	Draw and label diagrams to show how light travels. Draw and label diagrams to explain how we see. Draw and label diagrams that show how objects are seen. Observe and describe how light diverges from a source. Draw and label diagrams that show how shadows are formed and that the size of the shadow may be predicted when the position of the source of light changes. Describe how divergent light from a source affects the size of shadows.	Experiment with ways that demonstrate how light travels Predict where light will appear after hitting a reflective surface. Experiment with making or using a periscope to demonstrate how objects may be seen. Explain what is happening to the light. Explain why shadows are 'longer' in the winter and 'shorter' in the summer.

					Observe and record the length of shadows at different times of the day. Observe and record how the size of a shadow changes when the source of light is moved closer or further away from the object causing the shadow.	example of shadows. (apply) Give examples of other practical uses for shadows. (apply). Explain why shadows change size. Predict when shadows will take a particular shape (e.g. the shadow of a tree on a bright summer evening with the Sun in a particular position).		
Sound & Hearing			Observe and name a variety of sources of sound, noticing that we hear with our ears. Observe how we hear sounds with our ears. Illustrate that ears allow us to hear sounds.	Observe and name a variety of sources of sound, noticing that we hear with our ears. (Depth task) Suggest ways to protect our ears from loud sounds.	Listen to and describe a range of sounds from different sources. Identify the source of sounds. Complete experiments and record findings that demonstrate a tuning fork is vibrating when it makes a sound.	Compare and contrast how loud and quiet sounds are made. Experiment with stringed musical instruments to discover how high and low notes are made and explain your findings. Explain the role of vibration in creating sounds. Compare and contrast the effectiveness of different mediums in transmitting sounds.	Observe and describe the differences in the pitch of a sound and the object that produced it. Observe and describe differences in sounds that are close to and far away from their sources.	Experiment with, explain and demonstrate the pattern between pitch of sound and the features of the object that produced it. *Emphasise continuous variables where the comparative degrees end in er Experiment with, explain and demonstrate the pattern between the volume of a sound and the strength of the vibrations that produced it.

Electricity			Identify common appliances that run on electricity. - Construct a simple series electrical circuit. Describe the circuit, naming each component	Identify common appliances that run on electricity. Categorise electrical appliances. Explain the reasons for your categories. Compare and contrast some appliances in each of your categories. Construct a simple series electrical circuit. Modify a circuit to add more components. Experiment with and categorise the effect that adding more components has.	Identify and name common appliances that run on electricity. Label appliances that run on high and low voltage electricity. Identify and describe sources of electricity for appliances, including mains, battery, solar and others. Follow instructions to create a series circuit. Label the components of the circuit. Complete incomplete circuits by adding the correct components. Answer questions about the completeness of various circuits. Observe and describe the effect of using switches in a circuit. Complete circuit diagrams showing and labelling switches. Observe and record how different materials act as conductors or insulators of electricity. Observe the effect of some poor and	Explain the similarities and differences between a 240 volt, 40 watt halogen light bulb and a 12 volt, 6 watt LED light bulb. Explain the similarities and differences between a 240 volt mains-powered vacuum cleaner and a 12 volt battery-powered vacuum cleaner. Make a number of series circuits containing different components. Explain the similarities between the circuits despite the different components. Predict the effect of changing the arrangement of the components of a circuit (some of which maintain a circuit and others that do not). Experiment with the effect of placing more than one bulb in a series circuit and summarise your findings.	Observe and describe the effect of changing the number and voltage of cells used in a series circuit. Observe and describe the effect of placing extra bulbs (or buzzers) into a circuit and how this is overcome by increasing the number and voltage of cells. Label and learn the recognised symbols for representing components in a circuit diagram.	Experiment with, explain and demonstrate the pattern between the voltage of cells and the brightness of a bulb Make circuits then represent them in circuit diagrams, applying component symbols appropriately. Predict the outcome of placing various components into an electrical circuit. Explain the patterns.

					good conductors and label materials as poor or good conductors.	Explain why opening and closing switches affects a series circuit.		
Earth & Space			Name the four seasons. Observe and record the weather over four seasons. Notice and name the key features of each season. Name times of the day. Observe and describe the Sun's position in the sky at different times of the school day. Describe the weather in a named season. Describe how day length varies in each season.	Observe changes across the four seasons. - Observe and describe weather associated with the seasons and how day length varies. Compare and contrast weather and day length across the four seasons. Identify patterns in day length across the four seasons. Organise images or objects from each season into categories. Explain your categories. Observe the apparent movement of the Sun during the day. Show how you might know (apply) roughly what time of day it is by looking at the position of the Sun.	Describe the movement of the Earth relative to the Sun. Label a diagram of and describe our solar system. Answer questions about the scientists who first observed the Earth's movement around the Sun. Describe how the movement of the Earth gives rise to seasonal changes. Identify the Moon and Earth, and label them on a diagram. Describe the Moon's movement relative to the Earth. Answer questions about the Moon's movement relative to the Earth. Observe, name and record the phases of the Moon.	Explain why the Earth's movement gives rise to the seasons. Describe the movement of the Earth relative to the Sun. Label and describe our solar system.	Identify the Moon and Earth and label them on a diagram. Describe the Moon's movement relative to the Earth. Answer questions about the Moon's movement relative to the Earth. Observe, name and record the phases of the Moon. Answer questions about the scientists who first observed the Earth's movement around the Sun. Describe how the movement of the Earth gives rise to seasonal changes. Observe pictures and videos of the Sun, Earth and Moon and describe them using mathematical vocabulary. Draw, label and describe how the Earth's rotation	Explain why the Earth's movement gives rise to the seasons and daylight length. Explain why the effect of the Earth's movement on seasons is more acute further away from the equator. Explain and demonstrate why we cannot always see all of the Moon. Explain why the Moon's movement affects the tides of oceans and seas on Earth. Explain how we can predict the times of high and low tide Explain, using your knowledge of gravity, why the Sun, Earth and Moon are almost spherical. Explain why shadows are

							gives rise to day and night.	‘longer’ in the winter and ‘shorter’ in the summer. Explain and demonstrate how and why a sundial, used to tell the time, works.