Science Progression of Knowledge and Skills

Lockdown learning which needs to be revised

If learning skills overlap, put an asterisk in the colour of the next term.

	Science
Subject & Learning	**KEY SKILLS**
	RECEPTION
EYFS: To know about similarities and differences in relation to places, objects, materials and living things. To talk about the features of their own environment and how environments might vary from one another. They make observations of animal and plants and explain why some things occur and talk about changes.	To identify what difference means. To identify what similar means. To observe similarities and differences in relation to places. To identify a variety of objects. To observe similarities and differences in relation to objects. To identify the 5 senses. To observe similarities and differences in relation to materials using senses. To identify that a material is what something is made from. To name some common materials. E.g. wood, soil, glass To identify that something is alive. E.g. pet, human To observe similarities and differences in relation to living things. To talk about the features of their own environment. To talk about how environments might vary from one another. To be able to say what an animal is. To name a variety of animals. To observe that animals change over time. To observe changes with animals and explain why some things occur. To identify what a plant is. To observe changes with plants and explain why some things occur
EYFS 2021: **ELG – The Natural World** To explore the natural world around them, making observations and drawing pictures of animals and plants.	To name a variety of animals. To name types of plants (e.g. flower, tree) To observe features of animals. To observe features of plants. To name the seasons. To recognise how things can be changed (heating, cooling).

To know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class. To understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. (**ELG – Speaking** To offer explanations for why things might happen.)	To observe changes in animals. To observe changes in plants. To explain why some changes happen (e.g. why leaves fall from trees) To recognise different materials in a familiar environment. To name different materials. To identify similarities between different animals. To identify differences between animals. To identify similarities between different plants. To identify differences between different plants.	
	YEAR 1	**YEAR 2**
SCIENCE (Working Scientifically) To ask simple questions and recognise that they can be answered in different ways. To observe closely, using simple equipment. To perform simple tests. To identify and classify. To use their observations and ideas to suggest answers to questions. To gather and record data to help in answering questions.	To identify a variety of plants To identify a variety of animals To identify a variety of materials. To observe closely, and use simple description. (plants, animals and materials) To be able to observe closely using simple equipment. (plants, animals and materials) To be able to engage with texts and use a variety of sources to research (internet, library, databases) To be able to ask simple questions about their world and the world around them (what I can see, smell, taste, touch etc.) To recognise that questions can be answered in different ways.	To identify and classify a variety of plants, Using scientific vocabulary. To identify and classify a variety of animals, Using scientific vocabulary. To identify and classify a variety of materials Using scientific vocabulary. To consider and ask simple questions. To explain that questions can be answered in different ways. To observe using equipment. (E.G. Microscopes, magnifying glasses etc.) To describe observations using scientific language. To explore answers to questions. To ask questions with relevance to a topic.

	To be able to perform simple tests. To be able to make a simple prediction based on experiment. To be able to use simple equipment to measure length, time, capacity, weight) using non- standard units. To be able to use scientific vocabulary to describe an event or observation. To be able to gather and record simple data in order to answer a question. To be able to complete pre-prepared tables and graphs. To be able to use simple labels for diagrams.	To be able to gather and record data to help in answering questions. To be able to use a variety of research to inform discussion. (internet, library, databases) To be able to perform simple tests. To be able to create charts and tables. To be able to label diagrams using scientific vocabulary. To be able to use simple measurements to gather data. (non-statutory) To be able to use simple secondary sources to find answers (non-statutory). To be able to talk about what they have found out and how they found it out. (non-statutory). To be able to notice relationships with help (non-statutory). To be able to sort objects using observable features. (non-statutory). To be able to record data in a tally chart, bar chart, flow diagram. (non-statutory).
Learning to be repeated due to Lockdown **Year 2 to do Everyday Materials**		Explore To identify what an object is made from. To describe an object using your sense. To identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock.

Y1: To distinguish between an object and the materials from which it is made. To identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock. To describe the simple physical properties of a variety of everyday materials To compare and group together a variety of everyday materials on the basis of their simple properties.		To distinguish between an object and the materials from which it is made. To explain what properties of materials means. To identify the simple physical properties of a variety of everyday materials. E.g. hard, bendy. To investigate physical properties of materials by performing simple tests. E.G. floating and sinking. To compare a variety of everyday materials on the basis of their simple properties. To sort a variety of everyday materials on the basis of their simple properties To describe the simple physical properties of a variety of everyday materials. E.g. hard, bendy.
SCIENCE: (Plants) Y1: To identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. To identify and describe the basic structure of a variety of common flowering plants, including trees. Y2: To observe and describe how seeds and bulbs grow into mature plants. To find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	To identify different types of plants. E.g. tree, flower, grass To be able to sort plants into different categories. E.g. flower, tree To identify a variety of common, wild and garden plants. To explore trees that lose their leaves and those that don't. To identify deciduous trees and ever green trees. To classify trees as deciduous and evergreen. To investigate the basic structure of a variety of common plants and including roots, stem/trunk, leaves and flowers. To investigate the basic structure of a tree. To investigate the basic structure of a variety of common plants and including roots, stem/trunk, leaves and flowers. To describe the basic structure of a variety of common plants and including roots, stem/trunk, leaves and flowers.	To identify that all plants start as seeds/ bulbs To explain that plants grow from seeds (and bulbs). To be able to identify a bulb is a seed. To observe and describe how seeds grow into mature plants. To observe how bulbs grow into mature plants. To observe what plants need to survive. I.e. Water, light and a suitable temperature to grow and stay healthy. To investigate what plants need to grow and survive. To identify that plants need Water, light and a suitable temperature to grow and stay healthy. To explain what a plant needs to grow and survive.
SCIENCE: (Animals including humans) **Revise from EYFS** They make observations of animal and plants and explain why some	From reception revise; To be able to say what an animal is. To name a variety of animals. To observe that animals change over time. To observe changes with animals and explain why some things occur.	<u>Classify</u> To observe that animals, including humans, have offspring that grow into adults. To discuss how different animals including humans, change into adults. To explain that human offspring grow into adults.

things occur and talk about changes. Y1: To identify and name a variety of common animals, including fish, amphibians, reptiles, birds and mammals. To identify and name a variety of common animals that are carnivores, herbivores and omnivores. To describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets). To identify, name and label the basic parts of the human body and say which part of the body is associated with each sense. Y2: To notice that animals, including humans, have offspring which grow into adults. To find out about and describe the basic needs of animals, including humans, for survival (water, food and air) To describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	To identify features of a variety of common animals that are birds, fish, amphibians, reptiles, mammals and invertebrates. To describe features of a variety of common animals that are birds, fish, amphibians, reptiles, mammals and invertebrates. To compare features of a variety of common animals that are birds, fish, amphibians, reptiles, mammals and invertebrates. To sort features of a variety of common animals that are birds, fish, amphibians, reptiles, mammals and invertebrates. To identify that animals eat different things. To identify the things that animals, including humans, eat. To identify and name a variety of common animals that are carnivores, herbivores and omnivore. To compare a variety of common animals that are carnivores, herbivores and omnivore. To sort a variety of common animals that are carnivores, herbivores and omnivore. To describe the structure of a variety of common animals. To compare the structure of a variety of common animals. To identify and name the basic parts of the human body. To label the basic parts of the human body. To draw the basis parts of the human body. To identify which part of the body is associated with each sense.	To identify the basic needs of humans for survival (water, food and air). To describe the basic needs of animals for survival (water, food and air). To explain the basic needs of humans for survival (water, food and air). To explore the basic food groups. To explore the importance for humans of eating the right amounts of different types of food. To explain the importance for humans of eating the right amounts of different types of food. To identify the importance for humans of exercise. To identify the importance to humans of hygiene.
SCIENCE: Living things and their habitats.		To identify things that are living and dead To identify things that have never been alive. To discuss things that are living and dead and never been alive.

Y2: To explore and compare the differences between things that are living, dead and things that have never been alive. To identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other. To identify and name a variety of plants and animals in their habitats, including micro-habitats. To 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.		To compare things that are living, dead and those that have never been alive. To compare the differences between things that are living, dead and those that have never been alive. To identify what a habitat is. To identify habitats of different living things. To explore different types of habitat. To identify and name a variety of plants and animals in different habitats. To describe what different animals eat. To describe how living things are suited to their habitat. To investigate how habitats provide for the basic needs of different plants and animals. To describe how living things depend on each other. To investigate different sources of food for different animals. To sort animals by the foods they eat. To identify a simple food chain. To explore food chains for different animals. To explain a simple food chain.
SCIENCE: (Everyday Materials) **From EYFS** To know about similarities and differences in relation to places, objects, materials and living things. Y1: To distinguish between an object and the materials from which it is made. To identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock. To describe the simple physical properties of a variety of everyday materials To compare and group together a variety of everyday materials on	To identify what similar means. To identify a variety of objects. To observe similarities and differences in relation to objects. To identify what an object is made from. To describe an object using your sense. To identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock. To distinguish between an object and the materials from which it is made. To explain what properties of materials means. To identify the simple physical properties of a variety of everyday materials. E.g. hard, bendy. To investigate physical properties of materials by performing simple tests. E.G. floating and sinking. To compare a variety of everyday materials on the basis of their simple properties.	To identify a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard. To explain what properties of materials means. To identify the uses of everyday materials. To compare the properties of everyday materials. To explore why materials are used for their purpose. To suggest ways to change a material. To explore out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. To investigate if the properties of a material can be changed by squashing, bending, twisting, folding etc. To be able to suggest reasons to change the shape of a material.

the basis of their simple properties. Y2: 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. To find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	To sort a variety of everyday materials on the basis of their simple properties To describe the simple physical properties of a variety of everyday materials. E.g. hard, bendy.	To explore a greater range of properties of materials. E.g. bending, stretching, pressure, strength. To compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. To explain why materials are used for their purpose. To suggest reasons for any changes in the material when the shape Is changed.
SCIENCE: (Seasonal changes) To observe changes across the four seasons. To observe and describe weather associated with the seasons and how day length varies.	To Identify and name the four seasons. To compare the months of the four seasons. To describe the weather associated with each season. To observe how the length of day changes with the seasons. To observe changes across the four seasons.	(Continuous provision) To Identify and name the four seasons. To name and compare the months of the four seasons. To describe the weather associated with each season. To explain the changes in weather associated with each season. To describe why the length of day changes with the seasons. To explain why the length of day changes with the seasons. To record weather (including temperature) changes across the four seasons. To describe the changes in weather (including temperature) changes across the four seasons. To record changes in plants across the four seasons. To describe changes in plants across the four seasons. To record changes in animals (behaviour, habits, looks) across the four seasons.
	YEAR 3	**YEAR 4**
Learning to be repeated due to Lockdown **Materials** **YEAR 3 to do Y2**: To identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick,	To identify a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard. To explain what properties of materials means. To identify the uses of everyday materials. To compare the properties of everyday materials. To explore why materials are used for their purpose.	To be able to recognise that they need light in order to see things and that dark is the absence of light. To be able to notice that light is reflected from surfaces. To be able to recognise that light from the sun can be dangerous and that there are ways to protect their eyes.

rock, paper and cardboard for particular uses. To find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. **Year 4 to do Light** **Y3** Recognise that they need light in order to see things and that dark is the absence of light · Notice that light is reflected from surfaces · Recognise that light from the sun can be dangerous and that there are ways to protect their eyes · Recognise that shadows are formed when the light from a light source is blocked by a solid object · Find patterns in the way that the sizes of shadows change.	To suggest ways to change a material. To explore out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. To investigate if the properties of a material can be changed by squashing, bending, twisting, folding etc. To be able to suggest reasons to change the shape of a material. To explore a greater range of properties of materials. E.g. bending, stretching, pressure, strength. To compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. To explain why materials are used for their purpose. To suggest reasons for any changes in the material when the shape Is changed.	To be able to recognise that shadows are formed when the light from a light source is blocked by a solid object. To be able to find patterns in the way that the sizes of shadows change. To be able to set up a simple fair test. To be able to make systematic and careful observations and measurements. To be able to record findings as drawings. To be able to record findings as a bar chart. To be able to make predictions for further values.
Animals including Humans **Y3** 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 · Identify that humans and some animals have skeletons and muscles for support, protection and movement. **Y4** · Describe the simple functions of the basic parts of the digestive system in humans · Identify the different types of teeth in humans and their simple functions ·	To know that animals cannot make their own food. To know that animals, including humans, need the right amounts and types of food. To know the ways in which nutrients and water are transported within animals, including humans. To know that humans and some animals have skeletons and muscles for support, protection and movement. To be able to record using drawings. To be able to report on findings from enquiries. To be able to use evidence to answer questions. To be able to set up a comparative test. To be able to record data in a table. To be able to identify the correct type of enquiry to answer a question. To be able to record data in a scatter graph (non-statutory).	To be able to describe the simple functions of the basic parts of the digestive system in humans. To be able to identify the different types of teeth in humans and their simple functions. To be able to record findings using labelled diagrams. To be able to use written explanations to report on findings from an enquiry. To be able to identify the correct type of enquiry to answer a question. To be able to set up a comparative test. To be able to use evidence to support findings.

Construct and interpret a variety of food chains, identifying producers, predators and prey.		
Electricity **Y4** Identify common appliances that run on electricity · Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers · 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 · Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit · Recognise some common conductors and insulators, and associate metals with being good conductors.		To be able to identify common appliances that run on electricity. To be able to construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. To be able 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. To be able to recognise some common conductors and insulators, and associate metals with being good conductors. To be able 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. To be able to set up a simple practical enquiry. To be able to record findings using drawings. To be able to use results to make predictions.
Light **Y3** Recognise that they need light in order to see things and that dark is the absence of light · Notice that light is reflected from surfaces · Recognise that light from the sun can be dangerous and that there are ways to protect their eyes · Recognise that shadows are formed when the light from a light source is blocked by a solid object · Find patterns in the way that the sizes of shadows change.	To be able to recognise that they need light in order to see things and that dark is the absence of light. To be able to notice that light is reflected from surfaces. To be able to recognise that light from the sun can be dangerous and that there are ways to protect their eyes. To be able to recognise that shadows are formed when the light from a light source is blocked by a solid object. To be able to find patterns in the way that the sizes of shadows change. To be able to set up a simple fair test. To be able to make systematic and careful observations and measurements. To be able to record findings as drawings. To be able to record findings as a bar chart. To be able to make predictions for further	

	values.	
Plants **Y3** Identify and describe the functions of different parts of plants; roots, stem, leaves and flowers. · Explore the requirements of plants for life and growth (air, light, water, nutrients from soil and room to grow) and how they vary from plant to plant. · Investigate the ways in which water is transported within plants. · Explore the role of flowers in the life cycle of flowering plants, including pollination, seed formation and seed dispersal	To be able to identify and describe the function of the roots. To be able to investigate the ways in which water is transported within plants. To be able to identify and describe the function of the stem. To be able to identify and describe the function of the leaves. To be able to explore the requirements of plants for life and growth (air, light, water, nutrients from soil). To be able to identify and describe the function of the flower. To be able to set up a simple practical enquiry. To be able to make systematic and careful observations. To be able to gather and record data. To be able to use results to draw simple conclusions. To be able to use straightforward scientific evidence to answer questions or to support their findings.	
Forces and magnets **Y3** Compare how things move on different surfaces · Notice that some forces need contact between two objects, but magnetic forces can act at a distance · Observe how magnets attract or repel each other and attract some materials and not others · Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials · Describe magnets as having two poles · Predict whether two magnets will attract or repel each other,	To be able to compare how things move on different surfaces. To be able to compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials. To be able to notice that some forces need contact between two objects, but magnetic forces can act at a distance. To be able to predict whether two magnets will attract or repel each other, depending on which poles are facing. To be able to observe how magnets attract or repel each other and attract some materials and not others. To be able to describe magnets as having two poles. To be able to set up a simple fair-test. To be able to record findings in a bar chart. To be able to identify changes related to scientific ideas. To be able to use results to draw simple conclusions. To be able to provide an oral explanation of findings. To be able to make systematic and careful observations.	

depending on which poles are facing.		
Living things and their habitats **Y4** Recognise that living things can be grouped in a variety of ways · Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment · Recognise that environments can change and that this can sometimes pose dangers to living things		To be able to recognise that living things can be grouped in a variety of ways. To be able to explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. To be able to recognise that environments can change and that this can sometimes pose dangers to living things. To be able to gather, record, classify and present data in a variety of ways to help in answering questions. To be able to report on findings from enquiries, including oral and written explanations.
Sound **Y4** Identify how sounds are made, associating some of them with something vibrating · Recognise that vibrations from a sound travel through a medium to the ear. · Find patterns between the pitch of a sound and features of the object that produced it · Find patterns between the volume of a sound and the strength of the vibrations that produced it. · Recognise that sounds get fainter as the distance from the sound source increases.		To be able to identify how sounds are made, associating some of them with something vibrating. To be able to recognise that vibrations from a sound travel through a medium to the ear. To be able to find patterns between the pitch of a sound and features of the object that produced it. To be able to find patterns between the volume of a sound and the strength of the vibrations that produced it. To be able to recognise that sounds get fainter as the distance from the sound source increases. To be able to use a scientific enquiry to answer a question. To be able to set up a simple practical enquiry. To be able to make systematic and careful measurements with a data logger. To be able to report on findings from an enquiry. To be able to identify differences, similarities or changes related to simple scientific ideas. To be able to set up simple fair tests.
States of matter/ Rocks **Y3** Compare and group together different kinds of rocks on the basis	To be able to compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.	To be able to compare and group materials together, according to whether they are solids, liquids or gases. To be able to observe that some materials change state when they are heated or cooled, and measure or research

of their appearance and simple physical properties · Describe in simple terms how fossils are formed when things that have lived are trapped within rock · Recognise that soils are made from rocks and organic matter. **Y4** Compare and group materials together, according to whether they are solids, liquids or gases · Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C) · Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.	To be able to recognise that soils are made from rocks and organic matter. To describe in simple terms how fossils are formed when things that have lived are trapped within rock. To be able to make careful observations. To be able to set up simple comparative tests. To be able to measure using beakers and syringes. To be able to present information in a branching key.	the temperature at which this happens in degrees Celsius (°C). To be able to identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. To be able to set up a fair test. To be able to set up a simple test. To be able to use results to draw simple conclusions. To be able to use a data logger to take accurate measurements. To be able to use a thermometer to take accurate measurements. To be able to provide a written explanation. To be able to use straightforward scientific evidence to answer questions or to support their findings.
	YEAR 5	**YEAR 6**
Learning to be repeated due to Lockdown **Year 5 need to repeat States of matter Y4** Compare and group materials together, according to whether they are solids, liquids or gases · Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C) · Identify the part	To be able to compare and group materials together, according to whether they are solids, liquids or gases. To be able to observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C). To be able to identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. To be able to set up a fair test. To be able to set up a simple test. To be able to use results to draw simple conclusions.	To be able to explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. To be able to identify the effects of air resistance, water resistance and friction, that act between moving surfaces. To be able to recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. To be able to identify scientific evidence that has been used to support or refute ideas or arguments. To be able to take repeated accurate measurements using a stopwatch. To be able to explain the degree of trust in results.

played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. **Year 6 need to repeat Forces and Magnets** **Y5** Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object · Identify the effects of air resistance, water resistance and friction, that act between moving surfaces · Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect	To be able to use a data logger to take accurate measurements. To be able to use a thermometer to take accurate measurements. To be able to provide a written explanation. To be able to use straightforward scientific evidence to answer questions or to support their findings.	To be able to use test results to make predictions to set up further fair-tests. To be able to plan a fair-test; identifying the control variables.
Animals including Humans **Y5** Describe the changes as humans develop from birth to old age. **Y6** Identify and name the main parts of the human circulatory system, and explain the functions of the heart, blood vessels and blood · Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function · Describe the ways in which nutrients and water are transported within animals, including humans.	To be able to describe the changes as humans develop from birth to old age. To describe a human at birth and how their birth weight might affect how they grow. To describe the stages of human life To compare the stages of human life with other animals. To identify developmental steps and changes. To describe what happens to the body as it gets older. To identify changes as a human goes through puberty. To be able to raise different types of questions (non-statutory). To be able to communicate data using a scatter graph. To be able to present conclusions. To be able to use evidence to refute or support an idea. To be able to record data within tables. To be able to record data using line graphs.	To be able to Identify and name the main parts of the human circulatory system. To explain the functions of the heart. To explain the functions of blood vessels and blood. To be able to describe the ways in which nutrients and water are transported within animals. To be able to describe the ways in which nutrients and water are transported within humans. To explain the functions of blood vessels and blood. To be able to describe the ways in which nutrients and water are transported within animals. To be able to describe the ways in which nutrients and water are transported within humans. To recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. To be able to plan pattern-seeking enquiry. To be able to report causal relationships.

		To be able to record results using a line graph. To be able to present findings from enquiries.
Electricity **Y6** Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit · 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 · Use recognised symbols when representing a simple circuit in a diagram.		To be able to use recognised symbols when representing a simple circuit in a diagram. To be able to associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. To be able to compare how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. To be able to give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. To be able to take repeat measurements of data with precision using a data-logger. To be able to explain the degree of trust can be had in results. To be able to plan a fair-test by recognising the control variables. To be able to use predictions to set up fair tests.
Light **Y6** Recognise that light appears to travel in straight lines · 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 · 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 · Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them		To recognise that light appears to travel in straight lines. To be able 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. To be able 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. To be able to use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. To be able to use scientific evidence to support or refute on idea. To be able to use test results to make predictions to set up further comparative tests.

		To be able to plan a fair-test; recognising and controlling variables. To be able to plan a scientific enquiry to answer a questions. To be able to report as to the degrees of trust in results.
Forces and Magnets **Y5** Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object · Identify the effects of air resistance, water resistance and friction, that act between moving surfaces · Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.	To be able to explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. To be able to identify the effects of air resistance, water resistance and friction, that act between moving surfaces. To be able to recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. To be able to identify scientific evidence that has been used to support or refute ideas or arguments. To be able to take repeated accurate measurements using a stopwatch. To be able to explain the degree of trust in results. To be able to use test results to make predictions to set up further fair-tests. To be able to plan a fair-test; identifying the control variables.	
States of matter/ Rocks/properties of materials **Y5** Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets · Understand that some materials will dissolve in liquid to form a solution, and describe how to recover a	To be able to compare and group together everyday materials based on evidence from comparative and fair tests, including their conductivity of heat. To be able to understand that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution. To be able to use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. To be able to give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. To be able to demonstrate that dissolving, mixing and	

substance from a solution · Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating · Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic · Demonstrate that dissolving, mixing and changes of state are reversible changes · Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.	changes of state are reversible changes. To be able to explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. To take accurate measurements using a data-logger. To be able to measure accurately using a thermometer. To be able to record data in a line graph. To be able to use test results to make predictions to set up further comparative and fair tests. To be able to report and present findings from enquiries, including conclusions, causal relationships and explanations. To be able to plan a scientific enquiry that will answer a question. To be able to recognise control variables when planning a fair-test. To be able to evaluate an enquiry in terms of the amount of trust one can have in it.	
Living things and their habitats **Y5** · Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird · Describe the life process of reproduction in some plants and animals. **Y6** Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals · Give reasons for	To be able to explain the differences in the life cycles of a mammal, an amphibian, an insect and a bird. To be able to describe the life process of reproduction in some plants and animals. To be able to plan the correct enquiry to answer a question. To be able to recognise which secondary sources will be most useful to their research (non-statutory). To be able to use scientific diagrams and labels. To be able to explain findings.	To be able to describe how living things are classified into broad groups according to common observable characteristics. To be able to describe how living things are classified into broad groups based on similarities and differences. To be able to describe how living things are classified into broad groups including micro- organisms, plants and animals. To be able to give reasons for classifying plants and animals based on specific characteristics. To be able to make a key to classify plants. To be able to identify scientific evidence that has been used to support or refute ideas or arguments.

classifying plants and animals based on specific characteristic		
Earth and Space **Y5** Describe the movement of the Earth, and other planets, relative to the Sun in the solar system · Describe the movement of the Moon relative to the Earth · Describe the Sun, Earth and Moon as approximately spherical bodies · Use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky	To be able to describe the movement of the Earth, and other planets, relative to the Sun in the solar system. To be able to describe the Sun, Earth and Moon as approximately spherical bodies. To be able to describe the movement of the Moon relative to the Earth. To be able to use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky. To be able to plan a scientific enquiry to answer a question. To be able to report a presentation of an explanation.	
Evolution and inheritance **Y6** Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. · Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents · Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.		To be able to recognise that living things have changed over time. To be able to recognise that fossils provide information about living things that inhabited the Earth millions of years ago. To be able to recognise that living things produce offspring of the same kind. To recognise that living things offspring vary and are not identical to their parents. To be able to identify how animals and plants are adapted to suit their environment in different ways. To identify that adaptation may lead to evolution. To be able to identify scientific evidence that has been used to support or refute ideas or arguments. To be able to plan an enquiry that will answer a question. To be able to record data in a table. To be able to measure with a data logger. To be able to present findings from an enquiry. To be able to recognise which secondary sources will be most useful to research ideas (non-statutory).

SUGGESTED ACTIVITY IDEAS LINKED TO TOPIC