St Mary's Hampton School Progression Grids

Subject: Science

Scheme of Work: National Curriculum

Half term	Colour code
Autumn 1	
Autumn 2	
Spring 1	
Spring 2	
Summer 1	
Summer 2	

Area of Science	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Animals including humans	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**
Prior learning		*Reception: The Natural World:* *Explore the natural world around them, making observations and drawing pictures of animals.*	*Reception: Develop an understanding of growth, decay and changes over time. PSED - Manage their own basic hygiene and personal needs, including dressing, going to the toilet, and understanding the importance of healthy food choices.* *Year 1 Autumn 1: Animals including humans (animal groups)* *identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals* *identify and name a variety of common animals that are*	*Year 2 Autumn 1: Animals including humans* *Notice that animals, including humans, have offspring which grow into adults* *find out about and describe the basic needs of animals, including humans, for survival (water, food and air)* *describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene*	*Year 2 Autumn 2 / Summer 2: Living things and their habitats* *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* *Year 3 Spring 2: Animals including humans (nutrition)* *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.* *Year 3 Summer 1: Animals including humans (skeletons and muscles)*	*Year 2 Autumn 1: Animals including humans* *Notice that animals, including humans, have offspring which grow into adults.* *Year 4 Spring 1: Animals including humans (digestion)* *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.* *Construct and interpret a variety of food chains, identifying producers, predators and prey.*	*Year 5 Autumn 1 and Summer 2: Animals, including humans* *Describe the changes as humans develop to old age.*

			carnivores, herbivores and omnivores *describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)* *Year 1 Autumn 2: Animals including humans (human body and 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.*		*Identify that humans and some other animals have skeletons and muscles for support, protection and movement.*		
	The Natural World: Explore the natural world around them, making observations and drawing pictures of animals. • Develop an understanding of growth, decay and changes over time. **PSED (Managing Self):** Manage their own basic hygiene and personal needs, including dressing, going to the toilet, and understanding the importance of healthy food choices.	**Autumn 1: Animals including humans (animal groups)** Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals identify and name a variety of common animals that are carnivores, herbivores and omnivores describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets) **Autumn 2: Animals including humans (human body and 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	**Autumn 1: Animals including humans** Notice that animals, including humans, have offspring which grow into adults find out about and describe the basic needs of animals, including humans, for survival (water, food and air) describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene	**Spring 2: Animals including humans (nutrition)** 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. **Summer 1: Animals including humans (skeletons and muscles)** Identify that humans and some other animals have skeletons and muscles for support, protection and movement.	**Spring 1: Animals including humans (digestion)** 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. Construct and interpret a variety of food chains, identifying producers, predators and prey.	**Autumn 1 and Summer 2: Animals, including humans** Describe the changes as humans develop to old age.	**Autumn 1: Animals including humans** Identify and name the main parts of the human circulatory system, and describe 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
Key vocabulary		**Fish, amphibians, reptiles, birds, mammals, carnivore, herbivore, omnivore,**	**Offspring, adult, growth, survival (water, food, air), exercise, hygiene,** nutrition,	**Food, nutrition, skeleton, muscle, support, protection, movement.**	**Digestion, digestive system, teeth (incisors, canines, premolars, molars), food chain,**	Growth, development, puberty, gestation.	**Circulation, circulatory system, heart, blood, blood vessels, diet, exercise,**

		head, neck, arms, elbows, legs, knees, face, ears, eyes, mouth, teeth.	reproduction, growth, egg – chick - chicken, egg – caterpillar – pupa – butterfly, spawn – tadpole – frog, lamb – sheep, baby – toddler – child – teenager – adult.		**producer, predator, prey,** mouth, tongue, oesophagus, stomach, small intestine, large intestine, carnivore, herbivore.		**drugs, lifestyle, health, nutrients, transport.**
Living things and their habitats **Evolution and inheritance**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**
Prior Learning			*Reception: The Natural World:* *Explore the natural world around them, making observations and drawing pictures of animals and plants.* *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.* *Year 1 Autumn 1: Animal groups and structure* *identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals* *identify and name a variety of common animals that are carnivores, herbivores and omnivores* *describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)*		*Year 2 Autumn 2, Summer 2:* *Explore and compare the differences between things that are living, dead, and things that have never been alive.* *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.* *Identify and name a variety of plants and animals in their habitats, including microhabitats.* *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.*	*Year 4 Spring 2: Living things and their habitats* *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* *Year 4 Summer 1: Living things and their habitats* *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*	*Year 5 Spring 2: Living things and their habitats* *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.*

			Year 1 Summer 2: Plants identify and name a variety of common wild and garden plants, including deciduous and evergreen trees *identify and describe the basic structure of a variety of common flowering plants, including trees*				
	The Natural World: Explore the natural world around them, making observations and drawing pictures of animals and plants. 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. • Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world • Shows care and concern for living things and the environment • Begin to understand the effect their behaviour can have on the environment.		**Autumn 2: Living things and their habitats** Explore and compare the differences between things that are living, dead, and things that have never been alive 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 Identify and name a variety of plants and animals in their habitats, including microhabitats 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 **Summer 2: Living things and their habitats** Explore and compare the differences between things that are living, dead, and things that have never been alive identify that most living things live in habitats to which they are suited and describe how different		**Spring 2: Living things and their habitats** 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 **Summer 1: Living things and their habitats** 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	**Spring 2: Living things and their habitats** 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.	**Spring 1: Living things and their habitats** 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 classifying plants and animals based on specific characteristics. **Spring 2: Evolution and inheritance** 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.

			habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other identify and name a variety of plants and animals in their habitats, including microhabitats 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				
Key vocabulary			**Living, dead, habitat, microhabitat, food chain,** seashore, woodland, ocean, rainforest.		**Classification keys, habitat, environment,** flowering/non-flowering, grass, fern, moss, vertebrate (fish, amphibians, reptiles, birds, mammals)/invertebrate (snails, slugs, worms, spiders, insects), human impact (nature, ecology, population, development, litter, deforestation).	**Life cycle, mammal, amphibian, insect, bird, reproduction,** sexual reproduction, asexual reproduction, seed, stem, root, tuber, bulb.	***Living things and their habitats:*** **Characteristics, micro-organisms, plants, animals, classify, classification,** invertebrates, vertebrates, classification system. ***Evolution and inheritance:*** **Fossil, offspring, environment, adaptation, survival, evolution, variation,** characteristics.
Plants	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**
Prior learning		*Reception: The Natural World:* *Explore the natural world around them, making observations and drawing pictures of plants.*	*Year 1 Summer 2: Plants identify and name a variety of common wild and garden plants, including deciduous and evergreen trees* *identify and describe the basic structure of a variety of common flowering plants, including trees*	*Year 2 Spring 2, Summer 1: observe and describe how seeds and bulbs grow into mature plants* *find out and describe how plants need water, light and a suitable temperature to grow and stay healthy*			

	The Natural World: Explore the natural world around them, making observations and drawing pictures of plants. • Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world • Developing an understanding of growth, decay and changes over time • Shows care and concern for living things and the environment • Begin to understand the effect their behaviour can have on the environment.	**Summer 2: Plants** Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees identify and describe the basic structure of a variety of common flowering plants, including trees	**Spring 2: Plants** observe and describe how seeds and bulbs grow into mature plants find out and describe how plants need water, light and a suitable temperature to grow and stay healthy **Summer 1: Plants** observe and describe how seeds and bulbs grow into mature plants find out and describe how plants need water, light and a suitable temperature to grow and stay healthy	**Autumn 1: Plants** Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, 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 way in which water is transported within plants. Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.			
Key vocabulary		**Deciduous, evergreen, trees, plants, flowering plants,** leaves, flowers, blossom, petals, buds, fruit, roots, bulb, seed, trunk, branches, stem.	**Seed, bulb, water, light, temperature,** germination, growth, survival, reproduction.	**Roots, stem, trunk, leaves, flowers, air, light, water, nutrients, soil, transport, life cycle, pollination, seed formation, seed dispersal,** structure, function, nutrition, support, reproduction, fertiliser, fruit, seed.			
Seasons	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**
Prior Learning		*Reception: The Natural World* *Understand some important processes and changes in the natural world around them, including the seasons.*					
	The Natural World	**Spring 1, Spring 2, Summer 1: Seasonal**					

	Understand some important processes and changes in the natural world around them, including the seasons. • Developing an understanding of growth, decay and changes over time.	**changes** observe changes across the 4 seasons Observe and describe weather associated with the seasons and how day length varies (light comes from the sun).					
Key vocabulary		**Spring, summer, autumn, winter, season, weather, day, night, day length.**					
Everyday materials **Properties and changes of materials** **Rocks** **States of Matter**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**
Prior Learning			*Year 1 Spring 2: Everyday materials distinguish between an object and the material from which it is made. Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. 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.*	*Year 2 Spring 1, Spring 2, Summer 1: Uses of everyday materials identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching*	*Reception: The Natural World Understand some important processes and changes in the natural world around them, including changing states of matter.*	*Year 3 Spring 1: Forces and Magnets 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. Year 4 Summer 2: Electricity …recognise some common conductors and insulators, and associate metals with being good conductors*	

						Year 4 Autumn 2: *States of matter* *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.*	
	• Talks about why things happen and how things work • Developing an understanding of growth, decay and changes over time.	**Spring 2: Everyday materials** distinguish between an object and the material from which it is made identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock 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	**Spring 1: Uses of everyday materials** identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching **Spring 2: Uses of everyday materials** identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching	**Autumn 2: Rocks** Compare and group together different kinds of rocks on the basis 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.	**Autumn 2: States of matter** 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.	**Summer 1: Properties and changes of materials** 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 know that some materials will dissolve in liquid to form a solution, and describe how to recover a 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	

			Summer 1: Uses of everyday materials identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching			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	
Key vocabulary		**Wood, plastic, glass, metal, water, rock, physical properties,** hard, soft, stretchy, stiff, shiny, dull, rough, smooth, bendy, waterproof, absorbent, opaque, transparent.	**Wood, metal, plastic, glass, brick, rock, paper, cardboard, squash, bend, twist, stretch.**	**Rock, appearance, physical properties, fossils, soil, organic matter,** grains, crystals, sedimentary rock.	**Solid, liquid, gas, state, heat, cool, temperature, water cycle, evaporation, condensation, rate, degrees Celsius (°C).**	(Some of…) **Hardness, solubility, transparency, electrical conductivity, thermal conductivity, magnet, dissolve, solution, mixture, solid, liquid, gas, separation, filtering, sieving, evaporation, melting, burning, rusting, metal, wood, plastic, reversible, irreversible,** chemical change, polymer.	
Forces/ forces and magnets	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**
Prior Learning				*Year 1 Spring 2: Everyday materials distinguish between an object and the material from which it is made identify and name a variety of everyday materials, including*		*Year 3 Spring 1: Forces and Magnets Compare how things move on different surfaces. Notice that some forces need contact between 2 objects, but magnetic*	

				wood, plastic, glass, metal, water, and rock 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* *Year 2 Spring 1, Spring 2, Summer 1: Uses of everyday materials* *identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses* *find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching*		*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 2 poles.* *Predict whether 2 magnets will attract or repel each other, depending on which poles are facing.*	
	• Talks about why things happen and how things work.			**Spring 1: Forces and Magnets** Compare how things move on different surfaces. Notice that some forces need contact between 2 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 2 poles. Predict whether 2 magnets will attract or		**Autumn 2: Forces** 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.	

				repel each other, depending on which poles are facing.			
Key vocabulary				**Force, magnet, magnetic, attract, repel, pole,** bar magnet, ring magnet, button magnet, horseshoe magnet, push, pull.		**Gravity, air resistance, water resistance, friction, mechanism, lever, pulley, gear.**	
Sound	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**
Prior Learning					*Year 1 Autumn 2: Animals including humans (human body and 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.*		
	• Talks about why things happen and how things work.				**Autumn 1: Sound** Identify how sounds are made, associating some of them with something vibrating. Recognise that vibrations from sounds 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.		
Key vocabulary					**Vibration, medium, ear, pitch, volume,** insulation.		

Electricity	National Curriculum breakdown Skills/ Knowledge Progression stems Working scientifically/ Investigations Focus	National Curriculum breakdown Skills/ Knowledge Progression stems Working scientifically/ Investigations Focus	National Curriculum breakdown Skills/ Knowledge Progression stems Working scientifically/ Investigations Focus	National Curriculum breakdown Skills/ Knowledge Progression stems Working scientifically/ Investigations Focus	National Curriculum breakdown Skills/ Knowledge Progression stems Working scientifically/ Investigations Focus	National Curriculum breakdown Skills/ Knowledge Progression stems Working scientifically/ Investigations Focus	National Curriculum breakdown Skills/ Knowledge Progression stems Working scientifically/ Investigations Focus
Prior Learning							*Year 4 Summer 2: Electricity* *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.*
	• Talks about why things happen and how things work.				**Summer 2: Electricity** 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,		**Summer 1: Electricity** 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.

					and associate metals with being good conductors.		
Key vocabulary					**Electricity, electrical circuit, series circuit, cell, wire, bulb, switch, buzzer, lamp, battery, conductor, insulator, metal,** motor.		**Lamp, buzzer, voltage, cell, circuit, component, brightness, loudness, volume, symbol, diagram.**
Earth and space	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**
Prior Learning						*Year 1 Spring 1, Spring 2, Summer 1: Seasonal changes* *Observe changes across the 4 seasons* *Observe and describe weather associated with the seasons and how day length varies (light comes from the sun).*	
						Spring 1: Earth and space 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.	
Key vocabulary						**Earth, solar system, moon, sun, spherical bodies, rotation, day, night,** star, Mercury,	

						Venus, Mars, Jupiter, Saturn, Uranus, Neptune, Pluto, planet, dwarf planet, celestial, orbit, geocentric, heliocentric.	
Light	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**	**National Curriculum breakdown** **Skills/ Knowledge Progression stems** **Working scientifically/ Investigations Focus**
Prior Learning				*Year 1 Spring 1, Spring 2, Summer 1: Seasonal changes* *Observe changes across the 4 seasons* *Observe and describe weather associated with the seasons and how day length varies (light comes from the sun).* *Year 1 Autumn 2: Animals including humans (human body and 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*			*Year 3 Summer 2: Light* *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 an opaque object.* *Find patterns in the way that the size of shadows change.*
	• Talks about why things happen and how things work.			**Summer 2: Light** 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			**Autumn 2: Light** 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.

				light from a light source is blocked by an opaque object. Find patterns in the way that the size of shadows change.			Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.
Key vocabulary				**Light, dark, reflect, shadow, opaque,** mirror, light source.			**Travel, reflect, light source, object, eye, shadow.**