

Plants - Botany							Linking Documents Geography		
Informal Pathway	Semi-Formal Pathway			Formal 1 Pathway	Formal 2 Pathway				
P-Levels 1-3 0-11 Months Developmental Stage	P-Levels 4-5 8-20 Months 16-26 Months	P-Levels 5-6 22-36 Months FS1	P-Levels 6-8 FS2 ELG's	NC Year 1	NC Year 2 End of KS1	NC Year 3&4	Year 5&6 End of KS2		
END POINTS	<p><b>By the end of the Informal Pathway Pupil's should be able to;</b></p> <ul style="list-style-type: none"> <li>show confidence to explore materials/plants and objects around them,</li> <li>Notice changes in the immediate environment.</li> </ul> <p>Summary statement taken from Development Matters Stage 1</p>	<p><b>By the end of the Semi Formal Pathway Pupil's should be able to;</b></p> <ul style="list-style-type: none"> <li>explore the natural world around them, making observations and drawing pictures of plants,</li> <li>know and describe changes in the plants around them by noticing differences and similarities,</li> <li>show understanding of changes in the environment,</li> <li>add contributions about what they have learnt and ask questions.</li> </ul> <p>Taken from Early Learning Goals – end of Foundation 2 expectations.</p>			<p><b>By the end of Formal 1 Pathway Pupils should be able to;</b></p> <ul style="list-style-type: none"> <li>explore and compare the differences between things that are living, dead and things that have never been alive,</li> <li>describe habitats and food chains,</li> <li>describe how each habitat is specific for certain plants and their coexistence with animals,</li> <li>identify and name a variety of common wild and garden plants, including deciduous and evergreen trees</li> <li>identify and describe the basic structure of a variety of common flowering plants, including trees.</li> <li>observe and describe how seeds and bulbs grow into plants,</li> <li>find out and describe what plants need to grow and stay healthy,</li> <li>observe changes across the 4 seasons,</li> <li>observe and describe weather associated with the seasons and how day length varies.</li> </ul> <p>Taken from National Curriculum End of key stage 1 Expectations. (Plants, Seasonal changes, and Living things and their habitats)</p>		<p><b>By the end of Formal Pathway 2 should be able to;</b></p> <ul style="list-style-type: none"> <li>identify and describe the functions of different parts of plants (roots, stem/trunk, leaves and flowers),</li> <li>explore the requirements of plants for life and growth (air, light, water, nutrients from soil and room to grow) and how they vary,</li> <li>investigate the way in which water is transported within plants,</li> <li>explore the life cycle of flowering plants, including pollination, seed formation and seed dispersal,</li> <li>explain the life processes of reproduction in some plants,</li> <li>describe and explain how plants are classified into groups according to observed characteristics,</li> <li>identify adaptation of plants and how that adaptation may lead to evolution.</li> </ul> <p>Taken from National Curriculum End of Key Stage 2 Expectations. (Plants, Evolution and inheritance, and Living things and their habitats)</p>		
	I can...	show an interest in objects including plants and explore them using senses.	Explores plants and their textures by handling.	Explores plants independently, paying attention to cause and effect.	communicate about some of the things they have observed in plants, such as growth, decay and changes over time.	identify common garden or wild plants/flowers trees.	Identify various fruit and recognise Seeds.	Recognise and describe garden plants and fruit.	Identify and name a variety of common wild plants around the school and in parks
		engage with objects using senses and repeat an action that has an effect.	Observe changes in plants (leaves and trees moving in the wind.	notice some features and changes in plants.	Beginning to develop an understanding of growth, decay and changes over time.	explain the changes that happen with plants, including the	To know the difference between things that are living, dead, and things		

					life cycle, leaves changing.	that have never been alive, using some of the life processes. o begin to understand some of the life processes, including movement, reproduction, sensitivity, growth, excretion and nutrition.		
watches closely as an adult explore the object..	Explores a variety of different textures on plants.	Begins to notice changes in plants.	Demonstrate an understanding of the natural world e.g. leaves grow on trees.	Can use pictures to explain the life cycle of a plant.	Share observations of the plant growth.	Explain how plants grow using key words e.g. photosynthesis, oxygen, carbon dioxide etc.	Observe, record and comment on germination of various plants.	
reach out for an object with a purpose. touches and begins to hold objects firmly.	plant a seed/plant and show awareness of how to look after plants e.g. watering, re-planting and digging.	Notices detailed features of plants.	Demonstrate an understanding of key concepts e.g. wet/dry and cold and hot.	check a plant and decide if it needs watering.	Observe changes in decay e.g. making compost	Notice similarities and differences between looking after seeds/bulbs and plants.	Explain the ways of seed dispersal.	
show when I am hungry using sounds, facial expressions or my body.	imitates and improvises actions they have observed e.g. watering the plants.	Demonstrate of how to look after plants; watering and using garden tools with help. Is able to water plants with care.	show care and concern for plants and the environment.	identify the signs of summer and winter the 4 seasons.	Identify the requirements of plants for growth while looking after them.	Identify the basic structure of a variety of common flowering plants.	Name and locate the main parts of plants, describe their functions, including those involved in reproduction.	
notice changes in number of objects / changes in quantity.	Begins to know the use of some objects e.g. spade for digging.	Handles gardening tools with adult support.	ask questions about plants.	name the differences between plants and animals.	Describe differences and similarities between the 4 seasons.	Explain what happens to plants during the different seasons and how environmental changes impact on plants.	Recognise deciduous and evergreen trees around them.	
Expresses hunger – vocal sounds, facial expressions, change in behaviour.	watch a toy being hidden and try to find it and look for dropped objects.	Know the plants uses and is aware of a sequence of actions (e.g. wash, chop and then eat) in role play uses plants/vegetables and knows the sequence in which to use them e.g. chop then eat.	Looks closely at investigate similarities, differences, patterns and change.	Describe plants describe plants (including leaves, flowers (blossom), petals, fruit, roots, bulb, seed, trunk, branches, stem) of a variety of common plants, including flowering plants and trees.	Describe when parts of the plants are eaten as food. Design his/her own tea using herbs.  know that a habitat is the environment where an animal or plant lives/ grows, because it provides what they need to survive.	Research other uses of plants.	Prepare a plant project and share the findings with others.	
	know that plants can be used in different ways; e.g. eating, chopping, cooking and grating.	sort plants by one category.	Show some understanding of dangers in DT Room e.g. sharp objects, hot hobs.	Name the main external parts of flowering plants.	Name different environments where plants grow name and describe a variety of habitats, including woodland, ocean, rainforest and seashore.	Locate and describe the roots and how they transport water and nutrients.	Use the observable features of plants to classify, group and identify them.	

		try a range of food with different consistency and texture. and begin to show food preferences.	move around the school to the DT Room.		Identify what plants need to make their own food.?	Explain how water moves through a plant from roots to stem.	Explain and understand omnivores, herbivores and carnivores and their relationships and interactions.	
			follow routines in DT Room and dinner hall.			Explain or show a simple food chain.	Show a simple food web and understand how changes in a food chain affect each other.	
					Describe			

**ECO Schools Link: Biodiversity and School Grounds**

- Nature conservation
- Eco garden and Pollination
- Deforestation and Saving Tropical Forests.
- Research and trial of other materials used to replace furniture.
- RHS Campaign for School Gardening
- Countryside Classroom, Woodland Trust

I can...		We plant	Look after the eco-garden	Getting involved in nature conservation	Pollination and bees	Design an eco-garden	Deforestation - Research on other materials used to replace wood.	Save the woods and tropical forests
						To know that seeds and bulbs grow into seedlings by producing roots and shoots. To know that seedlings grow into mature plants by developing parts, that may include stems/trunks, leaves, flowers and fruits. To know that seeds need water to germinate. To know that plants need water, light and a suitable temperature for growth and health.		

**Materials Engineering & Chemistry**

*Grouping, classifying, knowing about the properties and the changes that can happen, know the materials objects are made from, choose a suitable material for an object.*

**Linking Documents**  
*DT - Materials*

<b>WHY</b>	<b>Explorers:</b> The confidence to explore new textures, notice differences and changes and learn how to manipulate materials.	<b>Independent Learners:</b> The knowledge to recycle in their own home, make crafts as a hobby, upcycle objects, to use tools purposefully, ask questions	<b>Career Seekers:</b> The skills to become clothing designers, builders, cleaners, engineers, eco warrior, retail workers
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<p><b>By the end of the Informal Pathway Pupil's should be able to;</b></p> <ul style="list-style-type: none"> <li>explore objects in close proximity using senses,</li> <li>notice if an object has been removed</li> </ul> <p>Summary statement taken from Development Matters Stage 1</p>	<p><b>By the end of the Semi Formal Pathway Pupil's should be able to;</b></p> <ul style="list-style-type: none"> <li>explore the natural world around them, making observations and feeling materials,</li> <li>know some similarities and differences between the every day materials</li> <li>show understanding of changes when using materials, including changing states of matter.</li> </ul> <p>Taken from Early Learning Goals – end of Foundation 2 expectations.</p>				<p><b>By the end of Formal 1 Pathway Pupils should be able to;</b></p> <ul style="list-style-type: none"> <li>distinguish between an object and the material from which is made,</li> <li>describe the simple physical properties of everyday materials,</li> <li>organise materials into groups based on their physical properties,</li> <li>identify and name a variety of materials (wood, plastic, glass, metal, water, rock, paper and cardboard),</li> <li>compare and identify materials for particular uses</li> <li>conduct tests how to change solid objects (example by squashing, bending, twisting and stretching,</li> </ul> <p>Taken from National Curriculum End of key stage 1 Expectations. (Everyday materials and Use of everyday materials)</p>		<p><b>By the end of Formal Pathway 2 should be able to;</b></p> <ul style="list-style-type: none"> <li>observe the changes of materials when heated or cooled,</li> <li>compare and group everyday materials on the basis of their properties (hardness, solubility, transparency, conductivity, and response to magnets),</li> <li>identify evaporation and condensation in the water cycle and their roles,</li> <li>know that some materials will dissolve and form a solution and describe how to recover a substance from a solution,</li> <li>use knowledge of solids, liquids and gases to decide how mixtures might be separated (filtering, sieving and evaporating),</li> <li>give reasons based on evidence, for the particular uses of material</li> <li>demonstrate that dissolving, mixing and changes of state are reversible changes,</li> <li>explain that some changes result in the formation on new materials and that the change is not usually reversible,</li> <li>compare and group together different kinds of rocks on the basis of their appearance and simple physical properties</li> <li>describe in simple terms how fossils are formed when things that have lived are trapped within rock</li> <li>recognise that soils are made from rocks and organic matter.</li> </ul> <p>Taken from National Curriculum End of Key Stage 2 Expectations (Properties and changes of materials, States of Matter, Rocks)</p>	
I can... Look at and reach out for familiar objects	Notices changes in tactile materials e.g. lingers on preferred textures, with draws from non-preferred.	Observe what happens next when exploring.	Can communicate about the objects/ materials they have observed/found.	Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	Compare everyday materials according to their properties.	Can make simple predictions about the outcomes of an experiment.	Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper	



								and cardboard for particular uses.
Look at and reaches out for new objects.	Remove and replace objects in a container.	Explores objects by linking different approaches and remembering previous actions.	Communicate about how and why something has happened.	Name parts of the environment that have been damaged by waste disposal.	Identify 4 household and school materials which can be recycled.	Identify why materials have been chosen for their purpose.	Justify the use of every day materials based on their properties.	
React and respond to repeated patterns (lights, movement etc.)	Begin to notice some similarities and differences.	Match object to picture by colour.	Demonstrate understanding of key concepts e.g. rough/ smooth	Show understanding of key concepts of the similarities and differences e.g. waterproof / not waterproof.	Compare and group together objects according to their properties.	Describe physical properties of given materials and classify them into 4 groups.	Distinguish between an object and material from which it was made.	
Explore objects of interest.	Know the use of some familiar objects (e.g. push toy car).	Solve simple problems – empty a bucket to put objects in.	Develop an understanding about changes.	Identify and name variety of materials (glass, plastic, metal, paper, wood etc.) and begin to know their basic properties e.g. smooth, hard	Identify 4 most common hazard symbols, what they mean and how to use them safely.	Experiment with less common materials: foil, fabrics, elastic etc.	Design, carry out and record experiments testing materials.	
Can tolerate adult interaction when exploring objects.	Explore new and different materials with adult support.	Is able to change materials e.g. by adding water.	Look closely at similarities and differences.	Compare objects by their features.	Name 4 natural and man-made materials.	Understand the need to use natural materials sustainably.	Comparing the uses of everyday materials in and around the school with materials found in other places.	
Explores objects by looking, touching and mouthing.	Begin to group and organise.	Beginning to categorise objects according to property e.g. size, colour.	Comments and asks questions about aspects of materials they are familiar with.	Use various equipment to weigh and measure materials / objects.	Record the results using standard and nonstandard units.	Identify and explain whether changes in materials are reversible or not.	identifying and classifying the uses of different materials, and recording their observations	
Reacts with abrupt change when a face or object suddenly appears or disappears from view.	Notices changes in temperature, sound or light.	Can use words, signs or symbol to describe a materials e.g. bumpy.	Is beginning to be interested in and describe the texture of things.	Distinguish between the object and the material it is made from.	Identify methods used to dispose of waste.	Describe how materials change state at different temperatures.	Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and table	
Repeats an action that has an effect.	Explore objects intentionally, by investigating cause and effect.	Is beginning to use more complex actions e.g. twisting, tearing, folding, turning materials.	Understands that different materials and media can be combined to create new effects.	Describe the simple physical properties of a variety of everyday materials.	Explain how materials are changed by heating and cooling.	Identify and describe dissolving and separating mixtures and solutions.	Identify reversible and non-reversible changes.	
			Compares two groups of objects	Name some materials which can be recycled.	Describe their observations using scientific vocabulary.	Record results, create data table and label diagrams or drawings.	Understand and explain solids, liquids and gases.	
			Handles tools and materials safely with increasing control.	Name some familiar reactions when liquids/materials are combined e.g. heat + chocolate = melting chocolate.				

**ECO Schools Link: Waste and Litter**  
 -(Re)Love our Staff project: swapping/giving away/selling old school tops and jumpers

- Upcycling clothes and a fashion show
- Upcycling/redecorating furniture and giving away/selling.
- Junk models/crafts
- TerraCycle (recycling no-recyclable products); joining TerraCycle program and earning points for the school
- Local Authority Waste Services?
- Reducing Domestic Waste
- Making and building with Eco-bricks
- Litter picking

**Animals - Veterinary Science & Marine Biology**

**Linking Documents**  
Geography

Know the names of different animals, Know the basic needs an animal needs to survive, changes which happen in different animals as they grow and change, compare different animals, know about the food and food chains of different animals and their habitats and why they are suited to them.

<b>WHY</b>	<b>Explorers:</b> The confidence to tune in to the sounds around us, develop curiosity about the animals we experience & recognise familiar animals.	<b>Independent Learners:</b> The knowledge to know how to care for animals, how to recognise different types and know about animals around the world, look after their own pet.	<b>Career Seekers:</b> The skills to become animal & wild life handler, vets, farmer, RSPCA Officer & zoologist.
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	<p><b>By the end of the Informal Pathway Pupil's should be able to;</b></p> <ul style="list-style-type: none"> <li>show awareness of animals in their environment by smiling, touching or looking,</li> <li>respond to animal sounds.</li> </ul> <p>Summary statement taken from Development Matters Stage 1</p>	<p><b>By the end of the Semi Formal Pathway Pupil's should be able to;</b></p> <ul style="list-style-type: none"> <li>explore the natural world around them, making observations and drawing pictures of animals,</li> <li>know and describe processes, changes in the animals around them by noticing differences and similarities,</li> <li>show understanding of changes in the environment,</li> <li>make comments and ask questions to clarify their understanding.</li> </ul> <p>Taken from Early Learning Goals – end of Foundation 2 expectations.</p>			<p><b>By the end of Formal 1 Pathway Pupils should be able to;</b></p> <ul style="list-style-type: none"> <li>explore and compare the differences between things that are living, dead and things that have never been alive,</li> <li>describe habitats and food chains,</li> <li>describe how each habitat is specific for certain animals and how they depend on each other and on plants,</li> <li>identify, name and describe common animal groups (fish, amphibians, reptiles, birds and mammals),</li> <li>explain what carnivores, herbivores and omnivores are,</li> <li>know life cycles of animals,</li> <li>research and describe the basic needs of animals for survival (water, food and air).</li> </ul> <p>Taken from National Curriculum End of key stage 1 Expectations (Animals, including humans and Living things and their habitats)</p>		<p><b>By the end of Formal Pathway 2 should be able to;</b></p> <ul style="list-style-type: none"> <li>recognise that living things can be grouped in a variety of ways,</li> <li>explore and use classification keys to help group, identify and name a variety of living things locally and in wider environment,</li> <li>describe and explain how animals are classified into groups according to observed characteristics,</li> <li>describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird,</li> <li>describe the life processes of reproduction in some animals,</li> <li>recognise the impact of changed in environment on animals,</li> <li>identify that animals need nutrition and that it is in food and cannot be made,</li> <li>describe how nutrients and water are transported within animals,</li> <li>identify that animals have skeletons and muscles for support, protection and movement,</li> <li>interpret and construct a variety of food chains, identifying producers, predators and prey,</li> </ul>	

							<ul style="list-style-type: none"> <li>recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago,</li> <li>identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</li> </ul> <p>Taken from National Curriculum End of Key Stage 2 Expectations (Animals, including humans, Evolution and inheritance, and Living things and their habitats)</p>	
I can...	Move eyes and then head to follow a moving animal.	Closely observes what animals do.	Notices detailed features about animals.	Comments on aspects of the natural world.	Explore living and non-living	Identify differences between living and non-living.	Make observations and with some degree of detail make measurements using appropriate apparatus.	Explain adaptation, variation and evolution.
	Smiles at recognisable pets/animals.	Is able to recognise familiar places related to animals e.g. the farm.	Is developing an understanding of simple concepts e.g. big/little.	Demonstrates an understanding of the changes over time in the natural world e.g. animals have babies.	Explain what animals need to live.	Identify forest/water habitats and match the animals living in them.	Identify and name animals in a given habitat.	Describe how animals are found and survive in different habitats.
	Repeats an action that has an effect.	Remembers that some actions are important e.g. stroking an animal gently.	Copies adults actions using small world animals.	Shows care and concern for living things.	Recognise the main body parts across various animals.	Describe functions of the main body parts.	Explain what more specific body parts are for.	Describe and compare the reproductive and life cycles of different animals.
	Tracks animals as they move and make a sound.	Recognises familiar songs about animals.	Enjoys playing with small world animals.	Notices what adults do, imitates what has been observed then does it spontaneously when adult is not there.	Identify common animals that are carnivores, herbivores and omnivores.	Describe what animals need to survive.	Construct a food chain.	Explain the classification groups of animals and group them.
	Responds to what the familiar adult is paying attention to e.g. following their gaze.	Begins to know / recognise the names of familiar animals.	Pretends that one object represents another e.g. stuffed toy.	Asks questions about the natural world.	Identify whether things are alive, dead or have never lived.	Observe and compare different animals.	Explain how environmental changes have an impact on living things.	Identify most animals.
	Looks at books and pictures about animals.	Can copy others – actions, noises, facial expressions	Responds to a few boundaries in relation to animals and the farm.	Looks closely at similarities, differences, patterns and change.	Describe a living thing.	Describe their observations using scientific vocabulary.	Explain how fossils are formed.	Explain predator / prey relationships.
	Reaches out for and touches animals.	Accepts interaction with a familiar adult e.g. stroking an animal.	Demonstrates use and function of a familiar object e.g. feed bucket, animal food.	Follows an instruction with 3 key words for caring for animals on the farm.	Group animals according to what they eat.	Can suggest a simple experiment involving plants and suggest how to collect data.	Can make simple predictions about the outcomes of an experiment.	
	Tries to locate a familiar animal sound.	Responds to the familiar sound of an animal	Identifies the correct animal by sound e.g. can select 'dog' when an adult says 'woof'.	Asks questions about animals using signs or question word symbols.	Identify common animals including fish, amphibians, reptiles, birds and mammals.	Describe and compare the structure of a variety of common animals.	Carry out fair testing and make observations about their results.	
	Responds to hands being washed.	Accepts hand washing as a part of the farm routine.	Attempts to wash hands without adult support.	Rubs hands with soap and puts under the water to rinse			Record results, create data table and label diagrams or drawings.	

ECO Schools Link: Biodiversity and Marine								
<ul style="list-style-type: none"> <li>-looking after school animals</li> <li>-RSPB'S Wild Challenge</li> <li>-BLUE Campaign (allocating a small area for a wild garden and studying animals and insects living there)</li> <li>-Become Plastic Clever! Charity</li> <li>-Marine Stewardship Council</li> <li>-WWF'S adopt a marine animal</li> </ul>								
Our Bodies – Biology & Anatomy							Linking Documents	
Names and locate parts of the body, know about and experiences different senses, knows the importance of exercise, balanced diet and hygiene for humans, knows what humans need to survive and how we grow into adults.							Motor Skills RHE	
WHY	Explorers: The confidence to recognise parts of their bodies, learn what their bodies can do and begin to understand what their bodies are telling them.		Independent Learners: The knowledge to look after themselves, maintain their own personal hygiene, know how to stay healthy through diet and exercise and understand their bodies.			Career Seekers: The skills to become a nurse, care worker, dietician, play worker and a personal trainer		
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	<p><b>By the end of the Informal Pathway Pupil's should be able to:</b></p> <ul style="list-style-type: none"> <li>Show awareness of cause and effect with their own body,</li> <li>use body to communicate</li> </ul> <p>Summary statement taken from Development Matters Stage 1</p>	<p><b>By the end of Semi-Formal Pathway Pupils should be able to:</b></p> <ul style="list-style-type: none"> <li>explore the natural world around them, making observations and drawing pictures of themselves,</li> <li>know and describe processes, changes around them by noticing differences and similarities,</li> <li>show understanding of changes in the environment,</li> <li>make comments and ask questions to clarify their understanding.</li> </ul> <p>Taken from Early Learning Goals – end of Foundation 2 expectations.</p>			<p><b>By the end of Formal 1 Pathway Pupils should be able to:</b></p> <ul style="list-style-type: none"> <li>humans' life cycle,</li> <li>identify, name and label the basic body parts</li> <li>match body parts to senses</li> <li>research and describe the basic needs of humans for survival (water, food and air).</li> <li>describe the importance for humans of exercise, hygiene and eating healthy food.</li> </ul> <p>Taken from National Curriculum End of key stage 1 Expectations (Animals, including humans)</p>		<p><b>By the end of Formal Pathway 2 should be able to:</b></p> <ul style="list-style-type: none"> <li>explain why humans need nutrition and where can it be found,</li> <li>know the types of teeth and their functions,</li> <li>describe the functions of digestive system,</li> <li>identify that humans have skeletons and muscles for support, protection and movement,</li> <li>recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.</li> </ul> <p>Taken from National Curriculum End of Key Stage 2 Expectations (Animals, including humans and Evolution and inheritance)</p>	
I can...	Reaches out for, touches and begins to hold objects.	Tolerates / participates in hygiene routines.	Washes hands with adult support.	Observes the effects of activity on their bodies.	Can talk about the changes over time from babies to adults, by looking at photographs.	Describe the importance of exercise and hygiene for humans	Name the main muscles, where they are and know exercises to strengthen them.	Explain a balanced diet and the need for it.
	To explore sensory or objects of interest.	Enjoys finding own nose, eyes and tummy as part of a naming game.	Points to more complex body parts	Accurately point to/ identify the main parts of the human body.	Can name and locate parts of the human body including those related to senses.	Describe the basic needs for a human and the changes as they grow to an adult.	Describe the physical and emotional changes during puberty.	To describe the life cycle of a human, including reproduction.
	Expresses discomfort, hunger or thirst.	Notices changes in temperature.		Can talk about some of the things they have observed.	Draw and label the basic parts of the human body.	Begin to understand some of the tests and	Know and name 4 of the major organs in the body and their function.	Describe the main functions of the organs



						symptoms when someone is ill.		in the body and where the organs are found.
Anticipates food routines.	Is able to make sounds using the body.	Holds cup and drinks without spilling.	Looks closely at similarities, patterns and change.	Ask simple questions about their body.	Describe their observations using scientific vocabulary.	Identify the main nutrient groups, their simple function and what makes balance diet.		Explain about some microorganisms and that they can be useful or harmful and how they affect the body.
Moves eyes and head to follow a moving object.	Closely observes what people do.	Recognises familiar songs and copies actions from an adult.	Initiates new combinations of movements to respond to a feeling or experience.	Look closely at our bodies and collect information about eye and hair colour, foot size etc.	Begin to name the medicines used to treat some illnesses.	Record results, create data table and label diagrams or drawings.		Explain the importance of hygiene and what measure we can take too protect the body.
Repeats actions that have an effect e.g. kicking/pushing/ throwing and object.	Shows awareness of cause and effect.	Is able to push and pull objects.	Name 5 senses.	Use their senses to explore texture, noise, smell etc and comment on what they have experienced.	Identify cell types in the body.	Can make simple predictions about the outcomes of an experiment.		Explain the impact of drugs/familiar medications and misuse of drugs on the body.
Is able to make their feelings known using their body.	Tries a range of food consistency and texture.	Is willing to try new foods.	Some understanding that good exercise, sleeping, eating and hygiene contribute to good health.	Explore different foods using different senses and classify into groups.	Describe the importance of a balanced diet for humans.	Name and describe the main parts of the digestive system.		Explain the similarities of the organs that both humans and animals share.
Gazes at faces and copies facial movements.	Gazes at mirror image of self and recognises self.	Copies actions of other children.	Sequence a life cycle of a human with at least three pictures.	Understand how the human body reproduces and name the external parts of the reproductive system	Understand how the human body reproduces with knowledge of the internal reproductive features.	Describe the menstrual cycle and pregnancy.		
Use face and body to react spontaneously to lights and patterns	Imitates and improvises actions they have observed. E.g. clapping	Understands the sequence of clothes when helping to dress.	Name some of the bones in the human body.	Understand what is important in maintaining a healthy body.	Understand how to maintain a healthy body and identify things that have an impact on health.	Describe lifestyle and environmental factors which affect health and their effect on the body.		
	Is able to explore different ways of moving.			Understand what happens when you become ill.		Explain the role of the skeleton and recognise the main bones in the body.		

**ECO Schools Link: Water, Healthy Living and Global Citizenship**

- Mindfulness Minutes National Call to Action
- Big Soup Share/ Meat Free Tuesday/ Bake off with vegetables
- Toilet Twinning <https://www.toilettwinning.org/group/schools/>
- Water Aid and Yorkshire Water
- Send a Cow ( a program that trains rural African communities to help them to grow plants and earn money)
- UN Sustainable Development Goals
- Fair Trade School, Fairtrade Fortnight

<b>Forces - Physics</b> <i>Movement, Sound vibrations, magnetic forces, gravity, pushes &amp; pulls, electronics</i>								<b>Linking Documents</b> <i>Music ICT</i>		
<b>WHY</b>	<b>Explorers:</b> <i>The confidence to explore objects, show curiosity in the way things move and gain enjoyment from playing with technological toys.</i>			<b>Independent Learners:</b> <i>The knowledge to recognise changes and know why they have happened, know how the items at home work and how to use and repair them, be interested in the stars and beyond the world.</i>		<b>Career Seekers:</b> <i>The skills to become a mechanic, electrician, musician, construction worker, astronomer, weather watcher and an engineer.</i>				
<b>Informal Pathway</b>	<b>Semi-Formal Pathway</b>			<b>Formal 1 Pathway</b>		<b>Formal 2 Pathway</b>				
P-Levels 1-3 0-11 Months Developmental Stage	P-Levels 4-5 8-20 Months 16-26 Months	P-Levels 5-6 22-36 Months FS1	P-Levels 6-8 FS2 ELG's	NC Year 1	NC Year 2 End of KS1	NC Year 3&4	Year 5&6 End of KS2			
<b>End Points</b>	<p><b>By the end of the Informal Pathway Pupil's should be able to;</b></p> <ul style="list-style-type: none"> <li>show awareness of cause and effect when using objects and their own bodies.</li> </ul> <p>Summary statement taken from Development Matters Stage 1</p>			<p><b>By the end of the Semi Formal Pathway Pupil's should be able to;</b></p> <ul style="list-style-type: none"> <li>explore the natural world around them, making observations and drawing pictures of themselves,</li> <li>know and describe processes, changes around them by noticing differences and similarities,</li> <li>show understanding of changes in the environment,</li> <li>make comments and ask questions to clarify their understanding</li> </ul> <p>Taken from Early Learning Goals – end of Foundation 2 expectations.</p>		<p><b>By the end of Formal 1 Pathway Pupils should be able to;</b></p> <ul style="list-style-type: none"> <li>observe changes across the four seasons</li> <li>observe and describe weather associated with the seasons and how day length varies.</li> </ul> <p>Taken from National Curriculum End of key stage 1 Expectations. (Seasonal changes)</p>		<p><b>By the end of Formal Pathway 2 should be able to;</b></p> <ul style="list-style-type: none"> <li>compare how things move on different surfaces,</li> <li>know that some forces are a result of contact between two surfaces, but some forces can act at a distance</li> <li>observe how magnets attract or repel each other and attract some materials and not others</li> <li>compare and group together of everyday materials based if they are magnetic,</li> <li>describe magnets as having two poles</li> <li>predict whether two magnets will attract or repel each other, depending on which poles are facing</li> <li>describe the movement of the Earth, and other planets, relative to the Sun in the solar system</li> <li>describe the movement of the Moon relative to the Earth</li> <li>describe the Sun, Earth and Moon as approximately spherical bodies</li> <li>use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky</li> </ul> <p>Taken from National Curriculum End of Key Stage 2 Expectations (Forces and magnets, Earth and space)</p>		

I can...	Repeats an action that has an effect.	Remembers that some actions are important and exciting e.g. tipping balls from a basket.	Explores objects by linking together different approaches	Looks closely at similarities, differences, patterns or change.	Understand that light travels in straight lines and that some objects reflect, some create light, others let light through.	Describe their observations using scientific vocabulary.	Make an electric circuit and make changes to it to alter the light, sound etc	Can design and create a variety of different electrical circuits.
	Reaches out for, touches and begins to hold objects.	Pushes a ball to an adult. Pushes tower of bricks over. Pulls a toy on a string.	Is able to push and pull objects.	Demonstrates an understanding of key concepts such as push/pull.	Explore a variety of magnets and objects, observing what happens,	Understand that forces are pushes and pulls, which can move things, change and stop.	Describe magnetic forces.	Explain magnetism, magnetic force and repel.
	Tolerate exploration of an object with a familiar adult.	Refuses objects by pushing them away.	Pushes cars and trains along the floor. Manipulates magnetic letters.	Shows skill in making toys work by pressing parts or lifting flaps to achieve an effect.	Group and sort objects which can be pushed/pulled.	Know how to use electrical equipment safely.	Explain why using electricity is hazardous and how to stay safe.	Draw a circuit using symbols.
	Tolerates passive touch.	Tolerates and interacts with others e.g. enjoying a hand or foot massage	Can request for 'more' by pushing an object to an adult.		Explain 2 electrical appliances at home.	Recognise that electrical appliances use different amounts of electricity.	Describe the advantages of using renewable energy.	Describe forces that involve contact e.g. air and water resistance.
	Show an awareness of my own hands.	Is able to press a switch repeatedly to show an awareness of cause and effect.	Operates mechanical toys e.g. turning the knob on a wind up toy or pull back a friction car.	Shows an interest in technological toys, with knobs pulleys.	Name types of fossil fuels and two types of renewable energy.	Make a simple circuit.	Begin to understand about friction.	Identify simple mechanisms e.g. gears, levers and pulleys that increase the effect of a force.
	Explores objects of varying sizes, weights and shapes, using a range of senses.	Intentionally explores objects with hands e.g. banging, dropping, squeezing. Look for dropped objects.	Initiates the exploration of technology e.g. reaching for a bubble tube, activating a sound beam etc.	Talks about why things happen and why things work.	Name some sound and light sources.	Knows how to change batteries in familiar objects and toys.	Explain cause and effect of physical phenomena e.g. the amount of electrical energy a device transfers depends on its power and how long it's switched on for.	Explain Gravity in simple terms.
	Can use face or body to react to light patterns e.g. on/off.	Anticipates repeated sounds, sights or action.	Listen to music and watches lights and responds when it is turned off.	Describe recent events in sequence related to lights.	Explore shadows and how they change.	Experiments with creating shadows using different light sources.	Explain how shadows are formed. Discover how light travels and that light is made up of a spectrum of colour.	Explain that light travels in straight lines how it then enters our eyes.
	Can experience activities and resources e.g. lights, sounds or vibration.	Shows an interest in a toy with buttons, flaps or simple mechanism and engages for upto 3 mins.	Understands what objects are used for.	Uses objects and resources purposefully.	Show awareness of switches and what they are used for.	Explain how we get electricity from fossil and renewable sources.	Understand that we need light to see in the dark and some colours light up better. Discover reflective objects.	Explain light, where it comes from, how it travels and enters our eyes.
	Can track sounds by moving head.	Notices changes in temperature, sound or light.	Recognises and responds to many familiar sounds.	Shows awareness of the differences between loud and quiet sounds.	Knows and can explain similarities and differences in sounds.	Know that sound waves are made from an object vibrating and that they have different volumes and pitch.	Described how sounds vibrate and what can change those vibrations	Describe how sound is made and how to alter the loudness of a sound.
Shows reflex to sudden sound.	Holds an object in each hand and bangs them together in the middle.	Creates sounds by banging, shaking, tapping or blowing.	Explores and learns how sounds can be changed.			Explain how sounds are made and heard and that sounds that are too		

							loud can damage hearing.	
	Is able to react to a variety of weights, volumes, speeds.	Becomes absorbed combining two objects.	Is beginning to understand that some things can be dangerous.	Questions why things happen.	Observe and describe the weather.	Knows where rain, hail and snow	Can make simple predictions about the outcomes of an experiment.	
	Can tolerate interacting with an adult to play e.g. filling and emptying, fibre optic lights or massagers.	Enjoys filling and emptying containers.	Shows control in holding and using objects – hammer, jugs etc.	Can order up to 3 objects by capacity and can recognise, full, empty and half full.	Collect information about the weather, collect data about rainfall and wind.	Knows what happens to water in different states – vapour, freeze and evaporate.	Explain the water cycle.	Use the terms condensation and evaporation when describing the water cycle.
	Explores objects, by looking, touching and mouthing.	Throws toys or objects deliberately.  Looks for dropped objects.	Throws in an intended direction.	Notices differences when different objects are dropped – balls bounce, feathers float etc.	Begin to know about the sun, earth, moon and some other planets.	Identify the key parts of the solar system and begin to explain gravity.	Describe the solar system	Describe the shapes and movements of the planets in our solar system and how the sun seems to move across the sky.
<b>Eco Schools Link: Energy, Transport</b>								
<ul style="list-style-type: none"> <li>-STEM Learning activities</li> <li>-Think! and Road Safety</li> <li>-Modeshift Stars supported by Department for Transport</li> <li>-Earth Hour and WWF</li> <li>-The Big Battery Hunt</li> <li>-Ways to reduce energy at school and home</li> </ul>								