



## Science Class Curriculum Plan Whole School 2021 – 2022

<b>Intent</b>	Our aim for Science is to give all children a strong understanding of the world around them whilst acquiring specific skills and knowledge to help them to think scientifically, to gain an understanding of scientific processes and also an understanding of the uses and implications of Science today and for the future. For our pupils to achieve well in science, they need to acquire the necessary scientific knowledge and also be able to enjoy the experience of engaging and purposeful scientific enquiry in order to help them to answer scientific questions about the world around them. Scientific enquiry skills are embedded in each topic the children study and these topics are revisited and developed throughout their time at school. This allows children to build upon their prior knowledge and increases their enthusiasm for the topics, embedding the knowledge into their long-term memory. All children are encouraged to develop and use a range of skills including observations, planning and investigations, as well as being encouraged to question the world around them and become independent learners in exploring possible answers for their scientific based questions. Vocabulary is built up for each topic and effective questioning to communicate ideas is encouraged.			
<b>EYFS</b>	The Statutory Framework for the Early Years and Foundation Stage sets out the learning opportunities relating to Understanding the World. Within the children's guided provision, children are encouraged to make sense of their physical world and their community through opportunities to explore, observe and find out about people, places, technology and the environment. The children will be encouraged to make observations, ask questions about why things happen and how they work. They will be given the opportunity to manipulate different things and observe the effects.			
	<b>Animals</b> Explore animal changes overtime (babies- adults, caterpillars-butterfly) To explore the senses outdoors (what can they hear/see/smell?)	<b>Materials:</b> To explore floating and sinking	<b>Seasons and weather:</b> <ul style="list-style-type: none"> <li>To explore signs of the four seasons.</li> </ul>	<b>Plants:</b> Explore growing a plant/flower Explore how you keep a plant alive
<b>Types of enquiry</b>	Changes overtime Observations Grouping			
<b>Key Vocabulary</b>	Grow, baby, caterpillar, butterfly, hear, see, smell	Float, sink, bottom, top	Spring, Winter, seasons, rain, hot, cold	plant, flower, water, grow, soil
<b>Sticky Knowledge</b>	<ul style="list-style-type: none"> <li>We start as a baby then we grow to an adult.</li> <li>To know the song heads shoulders knees and toes.</li> </ul>	<ul style="list-style-type: none"> <li>Floating is when something stays at the top of the water.</li> <li>Sinking is when something goes to the bottom of the water.</li> </ul>	<ul style="list-style-type: none"> <li>It is hot in the summer.</li> <li>It is cold in the winter.</li> </ul>	<ul style="list-style-type: none"> <li>Plants need water and sun to grow.</li> </ul>
<b>Character and value</b>	Acceptance – accepting that the butterfly must fly away and that we cannot keep it forever.	Curiosity and enquiry – Finding items to investigate whether they float/sink. Articulation – verbalising whether the objects float or sink.	Adaptability – looking at changes due to different weather conditions (big coat, rain jacket, summer hat etc).	Structure and routine – watering flowers everyday so they grow. Pride in work – looking after the flower so it grows.



<p><b>Year 1 Retrieval</b></p>	<p><u>Animals from EYFS.</u></p> <ul style="list-style-type: none"> <li>Basic understanding of what they can see, smell and hear.</li> </ul>	<p><u>Materials from EYFS</u></p> <ul style="list-style-type: none"> <li>Floating is when something stays at the top and sinking is when something goes to the bottom of the water.</li> </ul>	<p><u>Animals from EYFS.</u></p> <ul style="list-style-type: none"> <li>We start as a baby then we grow to an adult.</li> </ul>	<p><u>Seasons EYFS</u></p> <ul style="list-style-type: none"> <li>There are 4 seasons.</li> <li>It is hot in summer and cold in winter.</li> </ul>	<p><u>Plants EYFS</u></p> <ul style="list-style-type: none"> <li>Plants need water and sun to grow.</li> </ul>	
<p><b>Year 1</b></p>	<p><b>Home is Where the heart is?</b>  <b>Humans - senses</b>  <u>Line of Enquiry?</u>          Which sense can you identify food better with?</p> <p><u>Knowledge:</u></p> <ul style="list-style-type: none"> <li>Identify, name, draw and label basic parts of the body.</li> <li>To know what the skeleton is and why we have it.</li> <li>To name the 5 senses.</li> <li>To know which part of the body is linked to which sense.</li> </ul> <p><u>Investigation skills:</u>          Ask simple questions. Use observations and ideas to answer questions. Gather and record data. Create a whole class investigation plan</p>	<p><b>Old and New Everyday materials</b>  <u>Enquiry Question?</u>          Which material would be the best for (Relate to research theme).</p> <p><u>Knowledge:</u></p> <ul style="list-style-type: none"> <li>To identify and name a variety of materials, including wood, plastic, glass, metal, water, and rock.</li> <li>To understand the difference between an object and the material it is made from.</li> <li>Can describe properties of a variety of everyday materials.</li> <li>Can compare and group together materials based on their simple physical properties.</li> </ul> <p><u>Investigation skills:</u></p>	<p><b>What's in a country? India</b>  <b>Animals including humans.</b>  <u>Enquiry Question?</u>          What is the difference between the African and Asian elephant?</p> <p><u>Knowledge:</u></p> <ul style="list-style-type: none"> <li>To identify and name common animals.</li> <li>To know the 5 animal groups including fish, amphibians, mammals, reptiles, birds.</li> <li>To name animals from each of the 5 groups.</li> <li>To know the structure of common animals.</li> <li>To know the meaning of the words carnivore, herbivore and omnivore.</li> <li>To identify and name carnivores, herbivores and omnivores.</li> </ul>	<p><b>What's in a country? India</b>  <b>Seasonal Changes</b>  <u>Enquiry Question?</u>          Are the seasons the same in England and India?</p> <p><u>Knowledge:</u></p> <ul style="list-style-type: none"> <li>To know the different types of weather.</li> <li>To observe changes across the 4 seasons.</li> <li>To understand the weather associated with that season.</li> <li>To understand how day length varies.</li> </ul> <p><u>Investigation skills:</u></p> <ul style="list-style-type: none"> <li>Ask simple questions.</li> <li>Use observations and ideas to answer questions.</li> <li>To identify and classify.</li> </ul>	<p><b>Queen Victoria and Queen Elizabeth</b>  <b>Plants</b>  <u>Enquiry Question?</u>          What is Queen Elizabeth's favourite plant?</p> <p><u>Knowledge:</u></p> <ul style="list-style-type: none"> <li>To identify and name a variety of common wild and garden plants.</li> <li>To know the meaning of deciduous and evergreen trees.</li> <li>To identify and name some deciduous and evergreen trees.</li> <li>To identify and describe the basic structure of a variety of plants.</li> </ul> <p>To know the basic structure of trees.</p> <p><u>Planting</u>  <b>Cycle 1:</b> Cress seed  <b>Cycle 2:</b> Lettuce seed</p>	<p><b>Super Scientists</b></p> <p><u>Child led investigations.</u></p> <p><u>Investigation skills:</u>          Ask simple questions. Use observations and ideas to answer questions. Gather and record data. Create a whole class investigation plan</p>



		<p>To identify and classify. To use observations and ideas to suggest answers to questions. To perform simple tests.</p>	<p><u>Investigation skills:</u></p> <ul style="list-style-type: none"> <li>Ask simple questions</li> <li>Identify and classify</li> </ul>	<ul style="list-style-type: none"> <li>Gather and record data to help answer questions.</li> </ul>	<p><u>Investigation skills:</u></p> <ul style="list-style-type: none"> <li>Ask simple questions.</li> <li>Use observations and ideas to answer questions.</li> <li>To perform simple tests.</li> <li>To identify and classify.</li> <li>Gather and record data to help answer questions.</li> </ul>	
<p><b>Types of enquiry</b> See working scientifically progression</p>	<p>Comparison tests. Pattern seeking research</p>	<p>Comparison tests Fair tests Identifying and classifying</p>	<p>Identifying and classifying Pattern seeking research</p>	<p>Changes overtime research</p>	<p>Identifying and classifying Comparative/fair testing Changes overtime</p>	<p>Comparative/fair testing</p>
<p><b>Key Vocabulary</b></p>	<p>Sense, sight, hearing, smell, touch, taste, skeleton.</p>	<p>Wood, metal, plastic, material, rock, glass, solid, soft, bendy, hard, shiny</p>	<p>Humans, amphibians, reptiles, mammals, birds, fish, carnivore, herbivore, omnivore.</p>	<p>Autumn, spring, summer, winter, weather, temperature, clouds, rain</p>	<p>Flower, leaf, stem, roots, wild, garden, petal, soil, bark, tree, branches.</p>	
<p><b>Sticky Knowledge</b></p>	<ul style="list-style-type: none"> <li>A skeleton is the bones inside our body that keep us standing up.</li> <li>The 5 senses are smell, taste, hearing, touch and sight.</li> <li>Eyes are used for sight, nose is for smell, ears are for hearing, mouth is for taste and fingers are for touch.</li> </ul>	<ul style="list-style-type: none"> <li>A material is what an object is made from.</li> <li>Wood, metal, plastic, cloth and rubber are all materials.</li> <li>A material can be described using adjectives such as hard, shiny, soft, bendy etc.</li> </ul>	<ul style="list-style-type: none"> <li>We are humans.</li> <li>The 5 animal groups are mammals, amphibians, reptiles, birds and fish.</li> <li>Carnivores eat meat.</li> <li>Herbivores eat plants.</li> <li>Omnivores eat plants and meat.</li> </ul>	<ul style="list-style-type: none"> <li>Rain, sun, snow, wind are types of weather.</li> <li>There are four seasons: Spring, Summer, Autumn, Winter</li> </ul>	<ul style="list-style-type: none"> <li>Plants grow from seeds/bulbs.</li> <li>Plants need light and water to grow and survive.</li> <li>We can eat some plants.</li> <li>Plants have roots, a stem, leaves and a flower.</li> <li>Evergreen trees keep their leaves all year around.</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>



<b>Character and value</b>	Learning to be gracious in defeat – guessing the wrong food/item from a senses investigation.	Curiosity – questioning the material choices for certain objects. Creativity – creating an object to investigate.	Acceptance – understanding that animals eat other animals.	Adaptability – adapting to different types of weather.	Responsibility - routine and structure – following routine to keep the plant growing.	Curiosity and enquiry – questioning how and why? Expression – creating own child-led investigations.
<b>Year 2 Retrieval</b>	-	<u>Materials</u> <ul style="list-style-type: none"> <li>A material is what an object is made from.</li> <li>Wood, metal, plastic, cloth and rubber are all materials.</li> <li>A material can be described using adjectives such as hard, shiny, soft, bendy etc.</li> </ul>	<u>Animals</u> <ul style="list-style-type: none"> <li>We are humans.</li> <li>The 5 animal groups are mammals, amphibians, reptiles, birds and fish.</li> <li>Carnivores eat meat.</li> <li>Herbivores eat plants.</li> <li>Omnivores eat plants and meat.</li> </ul>	<u>Plants</u> <ul style="list-style-type: none"> <li>Plants grow from seeds/bulbs.</li> <li>Plants need light and water to grow and survive.</li> <li>Plants have roots, a stem, leaves and a flower.</li> </ul>	<u>Humans</u> <ul style="list-style-type: none"> <li>The main parts of the body are the head, neck, arms, legs, elbows, knees and shoulders.</li> <li>The 5 senses are smell, taste, hearing, touch and sight.</li> </ul>	
<b>Year 2</b>	<b>Passport to the world Living thing and their habitats.</b> <u>Enquiry Question?</u> How do plants and animals survive in different climates?  <u>Knowledge:</u> <ul style="list-style-type: none"> <li>To sort and classify things that are living, dead, and things that have never been alive.</li> <li>To compare the differences between things that are living, dead, and things that have never been alive.</li> </ul>	<b>Great Fire of London Uses of everyday Materials</b> <u>Enquiry Question?</u> Why did the fire spread so quickly?  <u>Knowledge:</u> <ul style="list-style-type: none"> <li>To identify everyday materials including wood, metal, plastic, glass, brick, rock, paper, cardboard.</li> <li>To know what is a solid and what is a liquid.</li> <li>To compare the sustainability of</li> </ul>	<b>Villages, towns, cities, routes &amp; journeys Animals</b> <u>Enquiry Question?</u> Are wild animals more likely to survive in a village or a city?  <u>Knowledge:</u> <ul style="list-style-type: none"> <li>To know that animals have offspring which grow to adults.</li> <li>To know the basic needs of animals.</li> <li>To describe basic needs of animals for survival.</li> </ul>	<b>Villages, towns, cities, routes &amp; journeys Plants</b> <u>Enquiry Question?</u> Is there a difference in plant growth in villages vs cities?  <u>Knowledge:</u> <ul style="list-style-type: none"> <li>To observe and describe how bulbs grow into mature plants.</li> <li>To know plants need water, light and warmth to grow.</li> <li>To know what happens to plants</li> </ul>	<b>Victorian schools Humans</b> <u>Enquiry Question?</u> Did hand hygiene expectations differ in Victorian classrooms to now?  <u>Knowledge:</u> <ul style="list-style-type: none"> <li>To know that humans have offspring which grow to adults.</li> <li>To know and describe basic needs of humans for survival.</li> <li>To describe the importance of exercise, food and hygiene.</li> </ul>	<b>Super Scientists</b>  <u>Child led investigations.</u>  <u>Investigation skills:</u> <ul style="list-style-type: none"> <li>Ask simple questions.</li> <li>Performing simple tests</li> <li>Use observations and ideas to answer questions.</li> <li>Identify and classify materials</li> <li>Gather and record data.</li> <li>Complete independent class plans for an investigation.</li> </ul>



- To know that most living things live in habitats where they are suited.
- To describe how different habitats provide the basic needs of different kinds of animals and plants.
- To know that both habitats and the animal/plant depend on each other.
- To identify and name a variety of plants and animals in their habitats, including microhabitats.
- To construct a simple food chain.

Investigation skills:

- Ask simple questions.
- Performing simple tests
- Use observations and ideas to answer questions.
- Identify and classify living things.
- Gather and record data.

Complete whole class plans for an investigation (Y3 independently)

- materials for particular uses.
- To know the shapes of solid objects can be changed by squashing, bending, twisting, stretching.

Investigation skills:

- Ask simple questions.
- Performing simple tests
- Use observations and ideas to answer questions.
- Identify and classify materials
- Gather and record data.
- Complete whole class plans for an investigation (Y3 independently)

- To know how animals, adapt to suit their environment
- To name and identify some animal offspring.

Investigation skills:

- Ask simple questions.
- Performing simple tests
- Use observations and ideas to answer questions.
- Identify and classify materials
- Gather and record data.
- Complete whole class plans for an investigation (work towards all independently at EOY).

- if they lack a vital need.
- To know the parts of a tree and their functions.
  - To know how plants germinate.

Planting

sweet peas (seed),  
hyacinth (bulb)  
Investigate seed germination with/without...

Investigation skills:

- Ask simple questions.
- Performing simple tests
- Use observations and ideas to answer questions.
- Identify and classify materials
- Gather and record data.
- Complete independent class plans for an investigation.

- To name the food groups and to understand what a balanced diet is.
- To know how to keep myself healthy and the importance of hygiene.

Investigation skills:

- Ask simple questions.
- Performing simple tests
- Use observations and ideas to answer questions.
- Gather and record data.
- Complete together whole class plans for an investigation (Y3 independently)



<b>Types of enquiry</b> See working scientifically progression document for ideas.	Identifying and classifying Research Pattern seeking	Comparative/fair testing Identifying and classifying	Identifying and classifying Research Pattern seeking Changes overtime	Identifying and classifying Comparative/fair testing Changes overtime	Identifying and classifying Research	Comparative/fair testing
<b>Vocabulary</b>	Living, dead, alive, habitats, micro-habitats, food chain, ocean, damp, shade, predator, prey	Material, waterproof, solid, liquid, twisting, squashing, bending, stretching,	adapt, environment, predator, prey	trunk, branch, root, seed, bulb, wild, garden, observe, temperature, predict, warmth,	Offspring, needs, survival, exercise, healthy, hygiene.	
<b>Sticky Knowledge:</b>	<ul style="list-style-type: none"> <li>• A living thing is something that is alive.</li> <li>• Living things needs food, water and air.</li> <li>• A habitat is an animal/plants home.</li> <li>• A food chain of a human is (grass, cow, human).</li> <li>• A habitat provides the basic needs – shelter, food and water.</li> </ul>	<ul style="list-style-type: none"> <li>• Materials can be used for more than one thing.</li> <li>• Some materials might be more suitable for a specific job.</li> <li>• You can change the shape of a material by twisting, squashing and bending.</li> <li>• A solid object is (name one).</li> <li>• A liquid is (name one).</li> </ul>	<ul style="list-style-type: none"> <li>• Offspring are animal babies and they grow into adults.</li> <li>• Animals need water, food and air to survive.</li> <li>• The young of some animals do not look like their parents – for example, tadpoles.</li> </ul>	<ul style="list-style-type: none"> <li>• Plants grow from seeds/bulbs.</li> <li>• Plants need water and a suitable temperature to grow.</li> <li>• Germination is when a plant grows from a seed.</li> <li>• Some plants you can eat such as (name plant) and some you can't ( such as (name plant).</li> </ul>	<ul style="list-style-type: none"> <li>• Humans need to exercise to stay healthy.</li> <li>• Humans need food, water and shelter to survive.</li> <li>• It is important to wash your hands to get rid of germs/virus'.</li> <li>• Hygiene is about keeping our bodies clean.</li> </ul>	



<b>Character and value</b>	Acceptance – food chain, accepting that animals eat other animals.	Curiosity – questioning the material choices for certain objects. Creativity – creating a house that uses more suitable materials.	Adaptability – animals adapt to suit their environment.	Routine and structure – following routine to keep the plant growing.	Responsibility – pride in appearance and self. Keeping themselves healthy and having good hygiene. Adaptability – Adapting to change. COVID.	Curiosity and enquiry – questioning how and why? Expression – creating own child-led investigations.
<b>Y3/4 Retrieval</b>	<u>Plants</u> <ul style="list-style-type: none"> <li>Plants grow from seeds/bulbs.</li> <li>Plants need water and a suitable temperature to grow.</li> <li>Not all plants need light, some have a store inside them.</li> <li>Germination is when a plant grows from a seed.</li> </ul>	<u>Materials</u> <ul style="list-style-type: none"> <li>Some materials might be more suitable for a specific job.</li> <li>You can change the shape of a material by twisting, squashing and bending.</li> <li>A property of a material is how you describe it.</li> </ul>	<u>Animals including humans</u> <ul style="list-style-type: none"> <li>Offspring are animal babies and they grow into adults.</li> <li>Animals need water, food and air to survive.</li> <li>Some animals give birth to live young, others lay eggs.</li> <li>The young of some animals do not look like their parents – for example, tadpoles.</li> </ul>	<u>Materials</u> <ul style="list-style-type: none"> <li>A solid object is (name one).</li> <li>A liquid is (name one).</li> </ul>		<u>Materials</u> <ul style="list-style-type: none"> <li>Materials – magnetic.</li> </ul>
<b>Year 3/4</b>	<b>Passport to Europe Plants</b> <u>Enquiry Question:</u> Does the temperature of the place effect the growth of a flower?  <u>Knowledge:</u> <ul style="list-style-type: none"> <li>To know the functions of different parts of flowering plants.</li> <li>To understand the need for air, light, water, nutrients from</li> </ul>	<b>Stone-Age Rocks</b> <u>Enquiry Question:</u> Which rock would make the best hunting tool in the stone-age?  <u>Knowledge:</u> <ul style="list-style-type: none"> <li>To compare different types of rock.</li> <li>To be able to compare rocks based on their appearance and properties.</li> </ul>	<b>North West V Italy Animals including humans</b> <u>Enquiry Question:</u> How does the Sardinian long eared bat differ to bats in the North West?  <u>Knowledge:</u> <ul style="list-style-type: none"> <li>To know that animals need food, water, shelter and space to survive. (3)</li> </ul>	<b>North West V Italy States of Matter. (Y4)</b> <u>Enquiry Question:</u> What temperature does chocolate melt?  <u>Knowledge:</u> <ul style="list-style-type: none"> <li>To understand the 3 states of matter, solids, liquids and gases.</li> <li>To be able to compare and group</li> </ul>	<b>North West V Italy Light</b> <u>Enquiry Question:</u> How are reflections created?  <u>Knowledge:</u> <ul style="list-style-type: none"> <li>To know that we need light in order to see things.</li> <li>To know that dark is the absence of light.</li> </ul>	<b>Forces and Magnets</b> <u>Enquiry Question:</u> Which objects are magnetic in water? Which shoe tread moves the quickest on which surface?  <u>Knowledge:</u> <ul style="list-style-type: none"> <li>To know a surface can affect how an object moves.</li> </ul>



- soil and room of plants for life and growth.
- To understand that different plants have different requirements.
- To investigate the way in which water is transported around the plant.
- To understand the life cycle of flowers, including pollination, seed formation and dispersal.

Planting  
**Cycle 1:** rocket (seed), tulip (bulb)  
**Cycle 2:** raddish (seed), crocus (bulb)  
**Possible investigation:** Investigate requirements comparing 2 types of plant. Which grows better in which condition.

- Investigation skills:
- Plan an investigation
  - Identify variable to change and measure
  - Make a simple prediction
  - Make observations
  - Take measurements
  - Gather and record data

- To know that fossils are formed when things that have lived are trapped within rock.
- To know that soils are made from rocks and organic matter.
- To know the type of rock and to look at the layers within the rocks at Castle View Primary.

- Investigation skills:
- Asking relevant questions
  - Plan an investigation
  - Identify variable to change and measure
  - Make a simple prediction
  - Take measurements using equipment
  - Gather, record, classify and present data
  - Record findings using simple language, diagrams, bar charts and tables.
  - Report on findings/oral and written explanations
  - Use results to draw simple conclusions

- To know that animals do not make their own food. (3)
- To know that animals including humans need the right types and amount of nutrition and they get this from what they eat. (3)
- To know the main food groups (3)
- To know that humans and some other animals have a skeleton to support and protect muscles and gives the body its shape. (3)
- To know that we have a heart, bowls, lungs and a brain.
- To know that we have muscles for movements. (3)
- To know that there are different types of teeth and they have different functions. (4)

- Investigation skills:
- Asking relevant questions
  - Make a simple prediction

- together solids, liquids and gases.
- To know that materials can change state.
- To understand that a change of state can happen through heating/cooling.
- To know the temperature for evaporation and condensation.
- To identify evaporation and condensation in the water cycle.
- To associate the rate of evaporation with temperature.

- Investigation skills:
- Asking relevant questions
  - Plan an investigation
  - Identify variable to change/measure
  - Make prediction
  - Make observations
  - Take measurement
  - Gather and record data
  - Record findings using simple

- To know what opaque and transparent mean.
- To understand that light from the sun can be dangerous and we can protect our eyes.
- To know that shadows are formed when light is blocked by an opaque object.
- To find patterns in the way that the size of shadows can change.
- To know that light can be reflected from surfaces.

- Investigation skills:
- Asking relevant questions
  - Plan an investigation
  - Identify variable to change and measure
  - Make a simple prediction
  - Make observations/take accurate measurements using a range of equipment
  - Gather, record, classify and present data

- To know that some forces need contact between two objects.
- To know that magnetic forces can act at a distance.
- To identify and sort materials that are magnetic.
- To know that magnets have two poles.
- To know that magnets will attract or repel each other, depending on which poles are facing.

- Investigation skills:
- Asking relevant questions
  - Plan an investigation
  - Identify variable to change and measure
  - Make a simple prediction
  - Make observations/take accurate measurements using a range of equipment
  - Gather, record, classify and present data
  - Record findings using simple language, diagrams, bar charts and tables.



	<ul style="list-style-type: none"> <li>Record findings using diagrams, bar charts and tables.</li> <li>Report on findings/oral and written explanations</li> <li>Use results to draw simple conclusions</li> <li>Use scientific evidence to answer questions.</li> </ul>	<ul style="list-style-type: none"> <li>Make further predictions/raise further questions</li> <li>Use scientific evidence to answer questions</li> </ul>	<ul style="list-style-type: none"> <li>Make observations</li> <li>Gather, record, classify and present data</li> <li>Record findings using simple language, diagrams, bar charts and tables.</li> <li>Report on findings/oral and written explanations</li> <li>Use results to draw simple conclusions</li> <li>Make further predictions/raise further questions</li> <li>Use scientific evidence to answer questions</li> </ul>	<p>language, diagrams, bar charts and tables.</p> <ul style="list-style-type: none"> <li>Report on findings/oral and written explanations</li> <li>Use results to draw simple conclusions</li> <li>Make further predictions/raise further questions</li> <li>Use scientific evidence to answer questions</li> </ul>	<ul style="list-style-type: none"> <li>Record findings using simple language, diagrams, bar charts and tables.</li> <li>Report on findings/oral and written explanations</li> <li>Use results to draw simple conclusions</li> <li>Make further predictions/raise further questions</li> <li>Use scientific evidence to answer questions</li> </ul>	<ul style="list-style-type: none"> <li>Report on findings/oral and written explanations</li> <li>Use results to draw simple conclusions</li> <li>Make further predictions/raise further questions</li> </ul> <p>Use scientific evidence to answer questions</p>
<p><b>Types of enquiry</b> See working scientifically progression document for ideas.</p>	<p>Identifying and classifying fair testing Changes overtime Pattern seeking</p>	<p>Identifying and classifying Pattern seeking Research Changes overtime</p>	<p>Identifying and classifying Research Pattern seeking</p>	<p>Pattern seeking fair testing research</p>	<p>Identifying and classifying fair testing Changes overtime</p>	<p>Comparative/fair testing Identifying and classifying</p>
<p><b>Vocabulary</b></p>	<p>Nutrients, pollination, dispersal, transportation, energy, growth, oxygen,</p>	<p>Rocks, igneous, metamorphic, sedimentary, permeable, fossil, extinct, soil</p>	<p>canine, incisor, molar, premolar, carbohydrates, bones, joints, vertebrates, invertebrates, muscles,</p>	<p>energy, Solid, liquid, gas, particles, materials, condensation, evaporation,</p>	<p>Light source, reflect, visible, beam, opaque, shadow, block, transparent, translucent</p>	<p>Force, push, pull, friction, magnet, magnetic, pole, north, south, attract, repel,</p>



<b>Sticky Knowledge</b>	<ul style="list-style-type: none"> <li>Plants make their own food.</li> <li>Leaves absorb sunlight and carbon dioxide.</li> <li>The life cycle of a flower includes germination, growing and flowering, pollination, fertilisation and seed formation and seed dispersal.</li> <li>Germination is when a seed starts to grow.</li> </ul>	<ul style="list-style-type: none"> <li>Fossils are formed when bones have been trapped within rocks.</li> <li>Soil is a mixture of rock, dead plants and animals, air and water.</li> <li>Palaeontologists use fossils to learn how living things have changed over time.</li> <li>Igneous, metamorphic and sedimentary are the three different types of rock.</li> </ul>	<ul style="list-style-type: none"> <li>Muscles are connected to bones and are for movement.</li> <li>The main food groups are carbohydrates, proteins, fruit and vegetables, dairy, oils and spreads.</li> <li>A skeleton is for support and protection.</li> <li>Incisors help you bite and chew, Canines are for tearing and ripping, Molars help you crush and grind food.</li> </ul>	<ul style="list-style-type: none"> <li>Solids have a fixed shape and volume.</li> <li>Liquids fill the shape of a container and have a fixed volume.</li> <li>Gases fill the shape and the volume of a container.</li> <li>Evaporation is when water is heated and turns into gas.</li> </ul>	<ul style="list-style-type: none"> <li>We need light so that we can see.</li> <li>Dark is the absence of light.</li> <li>Light from the sun can be dangerous and you should never look directly at it.</li> <li>A shadow is when a light is blocked by an opaque object.</li> </ul>	<ul style="list-style-type: none"> <li>A textured surface allows an object to move slower, a smoother surface allows an object to move faster.</li> <li>A force is a push or a pull on an object.</li> <li>Magnets have two poles – a north pole and a south pole.</li> <li>When a magnet attracts, the poles stick together. When a magnet repels, the poles push apart.</li> </ul>
<b>Character and value</b>	Pride in appearance – Looking after the plant.	Enquiry – considering different rocks and why? Learning from mistakes – accepting that their first idea may not have been the best and being willing to try something different.	Enquiry and curiosity – lots of questioning	Curiosity and adaptability – Investigating boiling point – trying again and making changes.	Enquiry and curiosity – lots of questioning and investigating.	Creativity – testing forces Learning to be gracious in defeat – If their designs do not win. Enquiry – testing the poles.
<b>Y4/5 Retrieval</b>	<u>Music knowledge from</u> <ul style="list-style-type: none"> <li>Songs focusing on pitch and dynamics.</li> </ul>	<u>Geography</u> <ul style="list-style-type: none"> <li>We live on Earth</li> <li>A globe is a representation of the Earth.</li> <li>A map is a pictorial representation of the Earth/the globe.</li> </ul>	<u>Living things and their habitat</u> <ul style="list-style-type: none"> <li>To sort and classify living things, dead things, and things that have never been alive.</li> <li>To know a variety of plants and animals in their habitats,</li> </ul>	<u>History skills</u> <ul style="list-style-type: none"> <li>No electricity in the past.</li> <li>To be able to explain why a particular mode of transport is from a particular time period. I.e. a steam train is older</li> </ul>	<u>States of matter</u> <ul style="list-style-type: none"> <li>Solids have a fixed shape and volume.</li> <li>Liquids fill the shape of a container and have a fixed volume.</li> <li>Gases fill the shape and the volume of a container.</li> </ul>	<u>Animals including humans</u> <ul style="list-style-type: none"> <li>Animals need food, water, shelter and space to survive.</li> <li>The food groups are: carbohydrates, proteins, fruit and vegetables, dairy, oils and spreads.</li> </ul>



			including microhabitats. <ul style="list-style-type: none"> <li>To construct a simple food chain.</li> </ul>	because it does not run on electricity. <ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Boiling point is 100 degrees.</li> <li>Freezing point is 0 degrees.</li> </ul>	<ul style="list-style-type: none"> <li>Incisors help you bite and chew, Canines are for tearing and ripping, Molars help you crush and grind food.</li> </ul>
<b>Year 4/5</b>	<b>Natural Disasters Sound (4)</b> <u>Enquiry question:</u> What causes the sound of thunder?  <u>Knowledge:</u> <ul style="list-style-type: none"> <li>To find patterns between the pitch of a sound and features of the object that produced it.</li> <li>To find patterns between the volume of a sound and the strength of the vibrations that produced it.</li> <li>To know that sounds are made through vibrations.</li> <li>To know that vibrations from sounds travel through a medium to the ear.</li> <li>To know that sounds get fainter with distance.</li> </ul> <u>Investigation skills:</u>	<b>Roman Impact Earth and Space (Y5)</b> <u>Enquiry question:</u> What would happen if the earth stopped moving?  <u>Knowledge:</u> <ul style="list-style-type: none"> <li>To know that the sun is a star in the centre of the solar system.</li> <li>To know that there are 8 planets and to know their order from the sun.</li> <li>To know that the Earth and other planets orbit the sun in the solar system.</li> <li>To know that the moon orbits the Earth in about 28 days.</li> <li>To know that the sun, Earth and moon are approximately spherical bodies.</li> <li>To use the idea of the Earth's rotation to explain day and night and the apparent</li> </ul>	<b>North West V Italy V Alaska Living things and their habitats 4</b> <u>Enquiry question:</u> How do habitats differ in the North West, Italy and Alaska?  <u>Knowledge:</u> <ul style="list-style-type: none"> <li>To recognise that living things can be grouped in a variety of ways. (4)</li> <li>To explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. (4)</li> <li>To recognise that environments can change and this can sometimes pose dangers to living things. (4)</li> </ul> <u>Investigation skills:</u>	<b>Electricity</b> <u>Enquiry question:</u> Do you need a battery to make electricity work?  <u>Knowledge:</u> <ul style="list-style-type: none"> <li>To identify common appliances that run on electricity</li> <li>To be able to construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.</li> <li>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.</li> </ul>	<b>Anglo Saxons V Vikings Property and change of materials (Y5)</b> <u>Enquiry question:</u> Vikings made glue out of milk. Can we find out how they did it and see how well it sticks things?  <u>Knowledge:</u> <ul style="list-style-type: none"> <li>To compare and group together everyday materials on the basis of their properties.</li> <li>To know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution</li> <li>To know the uses and give reasons based on fair tests for the uses of everyday materials.</li> <li>To demonstrate that dissolving, mixing and changes of state are reversible changes</li> </ul>	<b>North West V Italy V Alaska Animals including humans 4/5</b> <u>Enquiry question:</u> Does an elephant calf take the same length of time to develop in the womb as a human?  <u>Knowledge:</u> <ul style="list-style-type: none"> <li>To know the basic parts of the digestive system. (4)</li> <li>To describe the simple functions of the basic parts of the digestive system in humans. (4)</li> <li>To construct and interpret a variety of food chains identifying producers, predators and prey. (4)</li> <li>To describe the changes as human's develop to old age. (5)</li> </ul> <u>Investigation skills:</u>



- Ask and generate relevant questions
- Plan an investigation
- Identify variables to change and measure
- Identify equipment
- Make a simple prediction and observations
- take accurate measurements using a range of equipment
- Gather, record, classify and present data
- Record findings using simple language, diagrams, bar charts and tables.
- Use results to draw simple conclusions
- Make further predictions/raise further questions
- Use scientific evidence to answer questions

movement of the sun across the sky.

Investigation skills:

- Ask and generate relevant questions
- Make observations/take accurate measurements using a range of equipment
- Record findings using simple language, diagrams, bar charts and tables.
- Make further predictions/raise further questions
- Use scientific evidence to answer questions

- Ask and generate relevant questions
- Identify equipment
- Make a simple prediction
- Make observations/take accurate measurements using a range of equipment
- Classify living things
- Record findings using simple language, diagrams, bar charts and tables.
- Report on findings/oral and written explanations
- Use results to draw simple conclusions
- Make further predictions/raise further questions
- Use scientific evidence to answer questions

- 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 recognise some common conductors and insulators, and associate metals with being good conductors.

Investigation skills:

- Ask and generate relevant questions
- Plan an investigation
- Identify variables to change and measure
- Identify equipment
- Make a simple prediction
- Make observations/take accurate measurements using a range of equipment
- Report on findings/oral and written explanations

- To use their knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating
- To know that some changes result in the formation of new materials and that the change is not usually reversible (burning).

Investigation skills:

- Plan scientific enquiries
- Answer questions
- Identify with independence variables to measure and change
- Take measurements and use repeat readings
- Record results/construct tables
- Use results to make further predictions and comparative fair tests.

- Ask and generate relevant questions
- Identify equipment
- Make a simple prediction
- Make observations
- Record findings using simple language, diagrams, bar charts and tables.
- Use results to draw simple conclusions
- Make further predictions/raise further questions
- Use scientific evidence to answer questions
- Use results to draw simple conclusions
- Make further predictions/raise further questions
- Use scientific evidence to answer questions
- To make a series circuit that works and name the components in it.
- To use lines to draw a circuit



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<b>Types of enquiry</b> See working scientifically progression document	Identifying and classifying Research Fair testing	Identifying and classifying fair testing Changes overtime	Pattern seeking fair testing research Identifying and classifying	Comparative/fair testing Identifying and classifying	Identifying and classifying fair testing Changes overtime	Identifying and classifying Pattern seeking Research Changes overtime
<b>Vocabulary</b>	Amplitude, volume, pitch, instruments, wave, strength, vibrations	Axis, Rotation, constellation, Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune, planets, solar system, rotate, orbit,	Classification, habitat, Environment, hibernate, flowering, nonflowering, invertebrate,	electric current, crocodile clips, wires, bulb, cell, battery holder, motor, buzzer, switch, conductor, electrical insulator, component.	Transparent, Evaporation, Dissolving, sediment, conductor, irreversible, reversible, insulator, permeable, soluble	Foetus, Embryo, Womb, Growth, Development, Dispersal, cell, pollination, metamorphosis,
<b>Sticky Knowledge</b>	<ul style="list-style-type: none"> <li>• Sound is produced when an object vibrates.</li> <li>• Sound travel can be blocked.</li> <li>• Changing the shape, size and material of an object will change the sound it produces.</li> <li>• Bigger vibrations produce louder sounds and smaller vibrations produce quieter sounds.</li> </ul>	<ul style="list-style-type: none"> <li>• The Moon orbits the Earth. It takes about 28 days to complete its orbit.</li> <li>• Earth takes 365¼ days to complete its orbit around the Sun.</li> <li>• The Earth rotates (spins) on its axis every 24 hours</li> <li>• The planets in order - Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune.</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental change affects different habitats in different ways</li> <li>• An organism is a living thing.</li> <li>• Different organisms are affected by environmental change.</li> <li>• Humans can cause the environment to change. This can be positive or negative human impact.</li> </ul>	<ul style="list-style-type: none"> <li>• A source of electricity (mains or battery) is needed for electrical devices to work.</li> <li>• Metals are good conductors.</li> <li>• Conductors allow electricity to pass through them, whereas insulators do not.</li> <li>• A complete circuit is needed for electricity to flow</li> </ul>	<ul style="list-style-type: none"> <li>• Mixtures can be separated by filtering, sieving and evaporation.</li> <li>• Some changes to materials such as dissolving, mixing and changes of state are reversible.</li> <li>• Some changes such as burning wood, rusting and mixing vinegar with bicarbonate of soda result in the formation of new</li> </ul>	<ul style="list-style-type: none"> <li>• Metamorphosis is when some young animals undergo a change before becoming adults (caterpillars and tadpoles).</li> <li>• Living things can be classified as producers, predators and prey according to their place in the food chain.</li> <li>• Puberty prepares our bodies for being</li> </ul>



				<ul style="list-style-type: none"> <li>and devices to work.</li> </ul>	materials and these are irreversible.	adults, and reproduction.
<b>Character and values</b>	Curiosity and enquiry – raising questions, how and why?	Curiosity and enquiry – raising questions, how and why?	Adaptation – understanding that living things adapt due to the environment.	Willingness to try – creating numerous circuits until they get the results that they want. Adaptability – adapting their circuits.	Curiosity – What if... Raising investigative questions. Learning from mistakes and adaptability – building on mistakes and making changes to their ideas/plans.	Empathy – for the prey. Acceptance – that is the cycle of life and the importance of that.
<b>Y5/6 Retrieval</b>	<u>Forces</u> <ul style="list-style-type: none"> <li>To be able to compare how things move on different surfaces.</li> <li>Notice that some forces need contact between two objects, but magnetic forces can act at a distance.</li> <li>Magnets attract and repel some materials and not others.</li> <li>Know that magnets have two poles and which ones will attract or repel.</li> </ul>	<u>Light</u> <ul style="list-style-type: none"> <li>We need light to see things.</li> <li>Dark is when there is no light.</li> <li>Opaque - cannot see through it, transparent – see through.</li> <li>Light from the sun can be dangerous and we can protect our eyes by...</li> <li>Shadows are formed when light is blocked by an opaque object.</li> </ul>	<u>Electricity</u> <ul style="list-style-type: none"> <li>Can name and identify common appliances that run on electricity.</li> <li>Can construct a simple series electrical circuit.</li> <li>A switch opens and closes a circuit.</li> <li>Metals are good conductors.</li> </ul>	<u>Living things and their habitat</u> <ul style="list-style-type: none"> <li>Living things can be grouped in a variety of ways.</li> <li>Can use classification keys to identify living things in their environment.</li> <li>Environments can change and this can affect living things.</li> </ul>	<u>Animals including humans</u> <ul style="list-style-type: none"> <li>Know and describe the functions of the basic parts of the digestive system.</li> <li>Can construct and interpret a variety of food chains identifying producers, predators and prey.</li> <li>Can describe the changes as human's develop to old age.</li> </ul>	<u>Animals including humans</u> <ul style="list-style-type: none"> <li>Animals need food, water, shelter and space to survive.</li> <li>Animals do not make their own food.</li> <li>Animals/humans need the right types and amount of nutrition and they get this from what they eat.</li> <li>We have muscles for movements.</li> <li>Humans and some other animals have a skeleton to support and protect muscles and gives the body its shape.</li> </ul>
<b>Year 5/6</b>	North West v Italy v Alaska v Rainforest Forces Yr 5:	Crime and Punishment Light (Yr 6) <u>Enquiry question:</u>	Runcorn through the years Electricity	Runcorn through the years Living things and their habitat Y5/6	World War 2 Animals, including humans (Y6) + Puberty for Y5	Evolution and inheritance



Enquiry Question: Which shaped parachute slows down the sky diver the most?

Knowledge:

- Explain that unsupported objects fall towards Earth because of gravity
- Identify the effects of air, water and friction as a resistance that act between moving surfaces
- Recognise that levers/gears and pulleys allow a small force to have a greater effect.

Investigation Skills:

- Plan scientific enquiries
- Answer questions
- Identify with independence variables to measure and change
- Take measurements and use repeat readings
- Record results/construct tables

How can police officers use light to solve a crime?

Knowledge:

- To know that light appears to travel in straight lines.
- To know how rainbows are formed.
- To know why shadows are formed.
- To explain why shadows have the same shape as the objects that cast them using the idea light travels in straight lines.
- To know that we see things because light travels from light sources to our eyes.
- To know that light can travel from light sources to objects and then to our eyes.

Investigation skills:

- Plan scientific enquiries
- Answer questions
- Identify with independence variables to measure and change

Enquiry question: How and why has the electricity form at Daresbury laboratories changed over the years?

Knowledge:

- To know how to construct a simple series circuit (building on yr 4/5).
- To understand that the number and voltage of cells in a circuit can affect the components such as brightness of a lamp or volume of a buzzer.
- To compare and give reasons for variations in how components function, Inc. the brightness of a bulb, the loudness of buzzers and the on/off switches.
- To know and use recognised symbols when representing a simple circuit in a diagram.
- To understand how to stay safe when

Enquiry question: Have the wildlife animals in Halton changed over time?

Knowledge:

- To know the differences in the life cycles of a mammal, amphibian, insect and a bird. (5)
- To describe the life process of reproduction in some plants and animals including humans. (5) PSHE/RSE
- To understand that we can classify things into groups based on similarities and differences. (6)
- To describe how living things are classified including, micro-organisms, plants and animals. (6)
- To be able to classify plants and animals based on specific

Enquiry question: How can exercise, diet and drugs affect our bodies?

Knowledge:

- To know the changes experienced in puberty. **(School nurse talk)**
- To identify and name the main parts of the human circulatory system (the heart, blood vessels and the blood.
- To know the functions of the heart, blood vessels and blood.
- To recognise what makes a healthy lifestyle.
- To understand the impact of diet, exercise, drugs and lifestyle on the way their bodies function. **(PSHE Links)**
- To understand that blood transports nutrients and water around the body through capillaries.

Investigation skills:

- Answer questions

Enquiry question: How have humans evolved?

Knowledge:

- To know that characteristics are passed from parents.
- To know that fossils provide information about living things that inhabited the Earth millions of years ago.
- To recognise that living things have changed over time.
- To recognise that living things produce offspring of the same kind.
- To know that normally offspring vary and are not identical to their parents.
- To know that animals have adapted to suit their environment.
- To know that adaptation may lead to evolution.
- To know that characteristics may be different to how they were originally and a



	<ul style="list-style-type: none"> <li>• Use results to make further predictions and comparative fair tests.</li> <li>• Write a conclusion using the results to prove outcomes</li> <li>• Use scientific evidence to support or refute ideas.</li> <li>• Line drawing – draw arrows to show how a force may affect an object</li> </ul>	<ul style="list-style-type: none"> <li>• Take measurements and use repeat readings</li> <li>• Record results/construct tables</li> <li>• Use results to make further predictions and comparative fair tests.</li> <li>• Write a conclusion using the results to prove outcomes</li> <li>• Use scientific evidence to support or refute ideas.</li> <li>• Give a presentation of findings.</li> <li>• Line drawing – show how light travels</li> </ul>	<p>working with electricity.</p> <p><u>Investigation skills:</u></p> <ul style="list-style-type: none"> <li>• Plan scientific enquiries</li> <li>• Answer questions</li> <li>• Identify with independence variables to measure and change</li> <li>• Take measurements and use repeat readings</li> <li>• Record results/construct tables</li> <li>• Use results to make further predictions and comparative fair tests.</li> <li>• Write a conclusion using the results to prove outcomes</li> <li>• To use lines to draw circuits and the symbols accurately (cell).</li> </ul>	<p>characteristics and give reasons. (6)</p> <p><u>Investigation skills:</u></p> <ul style="list-style-type: none"> <li>• Plan scientific enquiries</li> <li>• Answer questions</li> <li>• Identify variables to measure and change with independence</li> <li>• Take measures and use repeat readings</li> <li>• Record results/tables/classification keys</li> <li>• Use results to make further predictions and comparative fair tests.</li> <li>• Write a conclusion using the results to prove outcomes</li> <li>• Use scientific evidence to support or refute ideas.</li> </ul>	<ul style="list-style-type: none"> <li>• Record results/construct tables</li> <li>• evidence to support or refute ideas.</li> <li>• Research</li> </ul> <p>Take measurements and use repeat reading.</p>	<p>new species is created.</p> <ul style="list-style-type: none"> <li>• To know that variation in offspring can make animals more or less able to survive in particular environments, e.g. giraffes or the arctic fox.</li> <li>• To know about the work of palaeontologists such as Mary Anning and how Charles Darwin.</li> </ul> <p><u>Investigation skills:</u></p> <ul style="list-style-type: none"> <li>• Answer questions</li> <li>• Record results/construct tables</li> <li>• evidence to support or refute ideas.</li> </ul>
<p><b>Types of enquiry</b> See working scientifically progression document for ideas.</p>	<p>Identifying and classifying Pattern seeking Research Changes overtime</p>	<p>Pattern seeking fair testing research</p>	<p>Comparative/fair testing Identifying and classifying</p>	<p>Identifying and classifying fair testing Changes overtime</p>	<p>Identifying and classifying Research Pattern seeking</p>	<p>Identifying and classifying fair testing Changes overtime</p>



<b>Vocabulary</b>	air resistance, water resistance, friction, streamline, mechanism,	translucent, surface, reflect, mirror, sunlight, light rays, pupil, lens, eyelid, reflection, refraction, Rainbow Prism,	Electricity, electric current, appliances, mains, amps, voltage, circuit diagram, symbol, parallel circuit,	Variation, Classification deforestation. bacteria, microorganism, organism, reproduction	Oxygenated, Deoxygenated, respiration Circulatory system, heart, lungs, blood vessels, artery, vein, capillary,	Adaptation, Evolution, Characteristics, , Genetics, Variation, Inherited, Mutation,
<b>Sticky Knowledge</b>	<ul style="list-style-type: none"> <li>• A force causes an object to start/stop moving, speed up, slow down or change direction.</li> <li>• Air resistance, water resistance and friction are contact forces – they act between moving surfaces.</li> <li>• Gravity acts without contact - acts at a distance. Everything is pulled to the Earth by gravity.</li> </ul>	<ul style="list-style-type: none"> <li>• Light appears to travel in straight lines.</li> <li>• Light that allows us to see can come directly from a light source or can be reflected from another object and into our eyes.</li> <li>• A rainbow is formed when the sun shines through the water particles and the water particles act like prisms.</li> <li>• A prism is transparent and when light passes through it, it gets 'bent' or spread out into a bunch of different colours.</li> </ul>	<ul style="list-style-type: none"> <li>• Current is how much electricity is flowing round a circuit.</li> <li>• Using more motors/ buzzers/bulbs, will make each motor spin slower/buzzer will be quieter/bulb less bright.</li> <li>• Adding more cells to a complete circuit will make a bulb brighter, a motor spin faster or a buzzer make a louder sound.</li> <li>• Turning a switch off (open) breaks a circuit so the circuit is not complete.</li> </ul>	<ul style="list-style-type: none"> <li>• Reproduction is the production of offspring by sexual or asexual process.</li> <li>• Organisms best suited to their environment are more likely to survive long enough to reproduce.</li> </ul>	<ul style="list-style-type: none"> <li>• The circulatory system is made up of the heart, blood vessels and blood.</li> <li>• Blood circulates around the body carrying food, water, oxygen and waste products.</li> <li>• The heart pumps blood around the body. Arteries take the blood away from the heart. Veins carry the blood to the heart.</li> <li>• Puberty prepares our bodies for being adults, and reproduction.</li> </ul>	<ul style="list-style-type: none"> <li>• Plants and animals have characteristics that make them adapt to their environment.</li> <li>• Fossils give us evidence of what lived on the Earth millions of year ago and provide evidence to support the theory of evolution.</li> <li>• Offspring often vary are not identical to their parents.</li> <li>• Evolution is when inherited characteristics become more dominant within the population over time.</li> </ul>
<b>Character and value</b>	Creativity – Designing their parachute. Learning to be gracious in defeat – If their design does not win.	Teamwork – working together to solve clues. Curiosity – creating rainbows. How and why?	Willingness to try – creating numerous circuits until they get the results that they want. Adaptability – adapting their circuits.	Enquiry – questioning to classify.	Curiosity – looking at the heart and questioning what they see.	Adaptability – Humans and animals adapting to suit their environment.

