
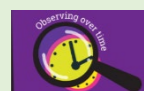

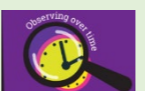

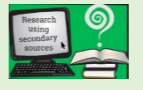
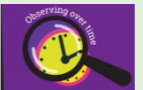

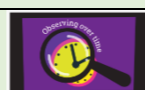
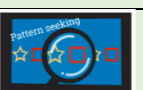


Science Learning Map

Year	Autumn	Spring	Summer
Nursery	Learn about how to take care of themselves as a human – links to oral hygiene. Halloween experiments: making green slime. Magical mud using cornflour. Santas magnetic parcels.	Explore a range of simple materials suitable for making a roof – The Three little pigs. Happy land people in ice experiment – What happens when the ice melts. Observing caterpillars. Planting beans and observing growth. Outdoor bug hunt - What are they? Learn about farm animals and name them.	Sorting animals into hot an cold places of where they live Take part in science experiments: trains move slower on the carpet, faster on wood. What items in nursery float and sink.
Reception	Linking to Peace at Last, explore light/dark, night/day. Name some animals that are awake in the day/night. Be aware that we float in space but not on the earth.	Explore differences between land and water animals – Here We Are. Plant a sunflower. Why are sunflowers called sunflowers what do you think they need? Making observations of the world around them. Comparing different plants, how they grow, including the different shapes, colours of leaves.	To understand that animals have babies like humans. Does a frog always look like a frog? – Oi frog Exploring floating and sinking linked to The Night Pirates – What floats your boat?
Year1	 Everyday Materials <ul style="list-style-type: none"> Distinguish between an object and the material from which it is made Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock Describe the simple physical properties of a variety of everyday materials Compare and group together a variety of everyday materials on the basis of their simple physical properties.  Seasonal changes <ul style="list-style-type: none"> Observe changes across the 4 seasons Observe and describe weather associated with the seasons and how day length varies. 	 Animals including humans <ul style="list-style-type: none"> Identify and name a variety of common animals including, fish, amphibians, reptiles, birds and mammals  Seasonal changes <ul style="list-style-type: none"> Observe changes across the 4 seasons Observe and describe weather associated with the seasons and how day length varies. 	 Animals including humans <ul style="list-style-type: none"> Identify and name a variety of common animals that are carnivores, herbivores and omnivores describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.  Plants <ul style="list-style-type: none"> Identify and describe the basic structure of a variety of common flowering plants, including trees identify and name a variety of common wild and garden plants, including deciduous and evergreen trees  Seasonal changes <ul style="list-style-type: none"> Observe changes across the 4 seasons Observe and describe weather associated with the seasons and how day length varies.
Year2	 Everyday Materials <ul style="list-style-type: none"> Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for different uses 	 Plants <ul style="list-style-type: none"> Observe and describe how seeds and bulbs grow into mature plants Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. 	 Living things and their habitats <ul style="list-style-type: none"> Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other

	<ul style="list-style-type: none"> Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching  <p>Animals including humans</p> <ul style="list-style-type: none"> Notice that animals, including humans, have offspring which grow into adults Find out about and describe the basic needs of animals, including humans, for survival (water, food and air) <p>Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</p>	 <p>Living things and their habitats</p> <ul style="list-style-type: none"> Explore and compare the differences between things that are living, dead, and things that have never been alive <p>Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.</p>	<ul style="list-style-type: none"> Identify and name a variety of plants and animals in their habitats, including microhabitats
<p>Year 3</p>	 <p>Rocks</p> <ul style="list-style-type: none"> Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties Describe in simple terms how fossils are formed when things that have lived are trapped within rock Recognise that soils are made from rocks and organic matter.  <p>Animals including Humans</p> <ul style="list-style-type: none"> Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat Identify that humans and some other animals have skeletons and muscles for support, protection and movement. 	 <p>Light</p> <ul style="list-style-type: none"> Recognise that they need light in order to see things and that dark is the absence of light. Notice that light is reflected from surfaces. Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. Recognise that shadows are formed when the light from a light source is blocked by a solid object. Find patterns in the way that the size of shadows change.  <p>Plants</p> <ul style="list-style-type: none"> Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers. Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant. Investigate the way in which water is transported within plants. <p>Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p>	 <p>Forces and Magnets</p> <ul style="list-style-type: none"> Compare how things move on different surfaces. Notice that some forces need contact between 2 objects, but magnetic forces can act at a distance. Observe how magnets attract or repel each other and attract some materials and not others. Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials. Describe magnets as having 2 poles. <p>Predict whether 2 magnets will attract or repel each other, depending on which poles are facing.</p>
<p>Year 4</p>	  <p>Sound</p> <ul style="list-style-type: none"> Identify how sounds are made, associating some of them with something vibrating. Recognise that vibrations from sounds travel through a medium to the ear. Find patterns between the pitch of a sound and features of the object that produced it. Find patterns between the volume of a sound and the strength of the vibrations that produced it. Recognise that sounds get fainter as the distance from the sound source increases.    <p>Electricity</p> <ul style="list-style-type: none"> Identify common appliances that run on electricity. Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery. 	  <p>All Living things</p> <ul style="list-style-type: none"> Recognise that living things can be grouped in a variety of ways. Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. Recognise that environments can change and that this can sometimes pose dangers to living things.   <p>States of Matter</p> <ul style="list-style-type: none"> Compare and group materials together, according to whether they are solids, liquids or gases. Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C). Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature 	  <p>Animals including humans</p> <ul style="list-style-type: none"> Describe the simple functions of the basic parts of the digestive system in humans. Identify the different types of teeth in humans and their simple functions. Construct and interpret a variety of food chains, identifying producers, predators and prey.

	<ul style="list-style-type: none"> Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. Recognise some common conductors and insulators, and associate metals with being good conductors. 		
Year 5	  <p>Properties and Changes of Materials</p> <ul style="list-style-type: none"> Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets. Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution . Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. Demonstrate that dissolving, mixing and changes of state are reversible changes. <p>Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.</p>	  <p>Earth and Space</p> <ul style="list-style-type: none"> Describe the movement of the Earth, and other planets, relative to the Sun in the solar system. Describe the movement of the Moon relative to the Earth. Describe the Sun, Earth and Moon as approximately spherical bodies. Use the idea of the Earth's rotation to explain day and night, and the apparent movement of the sun across the sky.   <p>Living things and their habitats</p> <ul style="list-style-type: none"> Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. Describe the life process of reproduction in some plants and animals.  <p>Animals including humans</p> <p>Describe the changes as humans develop to old age.</p>	  <p>Forces</p> <ul style="list-style-type: none"> Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. Identify the effects of air resistance, water resistance and friction, that act between moving surfaces. <p>Recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect.</p>
Year 6	  <p>Electricity</p> <ul style="list-style-type: none"> Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. Use recognised symbols when representing a simple circuit in a diagram.    <p>Living things and their habitats</p> <ul style="list-style-type: none"> Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals. Give reasons for classifying plants and animals based on specific characteristics 	   <p>Evolution</p> <ul style="list-style-type: none"> Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. 	  <p>Animals including humans</p> <ul style="list-style-type: none"> Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. Describe the ways in which nutrients and water are transported within animals, including humans.  <p>Light</p> <ul style="list-style-type: none"> Recognise that light appears to travel in straight lines. use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye. Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes. Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.
Year 7	<p>Safety</p> <p>Baseline Assessment</p> <p>The Particulate Nature of Matter</p> <p>Cells and Organisation</p> <p>MAP 1 & Acceleration</p> <p>The Skeletal and Muscular System</p>	<p>Gas Exchange Systems</p> <p>Health</p> <p>MAP 3 & Acceleration</p> <p>Pure and Impure Substances</p> <p>Observed Waves</p> <p>P2S2 Revision and Assessment & Feedback</p>	<p>Cellular Respiration</p> <p>Photosynthesis)</p> <p>MAP 5 & Acceleration</p> <p>Chemical Reactions</p> <p>P2S3 Revision and Assessment & Feedback</p> <p>Calculation of Fuel Uses and Costs in the Domestic Context</p>

	<p>Atoms, Elements and Compounds (Including introduction to The Periodic Table and Symbols)</p> <p>P2S1 Revision and Assessment & Feedback</p> <p>Forces</p> <p>MAP 2 & Acceleration</p> <p>Balanced Forces</p> <p>Working Scientifically (investigation Skills)</p>	<p>Sound Waves</p> <p>Energy and Waves</p> <p>MAP 4 & Acceleration</p> <p>Reproduction</p> <p>Working Scientifically (investigation Skills)</p>	<p>MAP 6 & Acceleration</p> <p>Magnetism</p> <p>Space Physics</p> <p>Working Scientifically (investigation Skills)</p>
Year 8	<p>Fundamental Physics</p> <p>Current Electricity</p> <p>MAP 1 & Acceleration</p> <p>Nutrition and Digestion</p> <p>The Periodic Table</p> <p>P2S1 Revision and Assessment & feedback</p> <p>Particle Model</p> <p>Physical Changes</p> <p>MAP 2 & Acceleration</p> <p>Pressure in Fluids</p> <p>Working Scientifically (investigation Skills)</p>	<p>Fundamental Chemistry</p> <p>Light Waves</p> <p>MAP 3 & Acceleration</p> <p>Chemical Reactions</p> <p>P2S2 Revision and Assessment & Feedback</p> <p>Energy Changes and Transfers</p> <p>Relationships in an Ecosystem</p> <p>MAP 4 & Acceleration</p> <p>Static Electricity</p> <p>Working Scientifically (investigation Skills)</p>	<p>Fundamental Biology</p> <p>Forces and Motion</p> <p>MAP 5 & Acceleration</p> <p>Describing Motion</p> <p>P2S3 Revision and Assessment & Feedback</p> <p>Earth and Atmosphere</p> <p>MAP 6 & Acceleration</p> <p>Inheritance, Chromosomes, DNA and Genes</p> <p>Working Scientifically (investigation Skills)</p>
Year 9	<p>Fundamental Chemistry</p> <p>Gas Exchange Systems</p> <p>MAP 1 & Acceleration</p> <p>Energy in Matter</p> <p>Cellular Respiration</p> <p>P2S1 Revision and Assessment & Feedback</p> <p>Chemical Reactions</p> <p>Atoms, Elements and Compounds</p> <p>Pure and Impure Substances</p> <p>Cells and Organisation</p> <p>MAP 2 & Acceleration</p> <p>Working Scientifically (investigation Skills)</p>	<p>Fundamental Physics</p> <p>Photosynthesis</p> <p>MAP 3 & Acceleration</p> <p>Materials</p> <p>P2S2 Revision and Assessment & Feedback</p> <p>Magnetism</p> <p>Inheritance, Chromosomes, DNA and Genes</p> <p>Calculation of Fuel Uses and Costs in the Domestic Context</p> <p>Energetics</p> <p>MAP 4 & Acceleration</p> <p>Working Scientifically (investigation Skills)</p>	<p>Fundamental Biology</p> <p>Changes in Systems</p> <p>MAP 5 & Acceleration</p> <p>Energetics</p> <p>Current Electricity</p> <p>P2S3 Revision and Assessment & Feedback</p> <p>The Periodic Table</p> <p>Calculation of fuel uses and costs in the domestic context</p> <p>Nutrition and Digestion</p> <p>MAP 6 & Acceleration</p> <p>Working Scientifically (investigation Skills)</p>
Year 10 (Trilogy)	<p>B1: Cell Biology</p> <p>C1: Atomic Structure and the Periodic Table</p> <p>MAP 1 & Acceleration</p> <p>P1: Energy</p> <p>B2: Organisation</p> <p>P2S1 Revision and Assessment & Feedback</p> <p>C2: Structure, Bonding and the Properties of Matter</p> <p>MAP 2 & Acceleration</p> <p>P2: Electricity</p>	<p>B3: Infection and Response</p> <p>MAP 3 & Acceleration</p> <p>C3: Quantitative Chemistry</p> <p>P2S2 Revision and Assessment & Feedback</p> <p>P3: The Particle Model of Matter</p> <p>B4: Bioenergetics</p> <p>C4: Chemical Changes</p> <p>MAP 4 & Acceleration</p> <p>P4: Atomic Structure (pt.1)</p>	<p>P4: Atomic Structure (pt.2)</p> <p>C5: Energy Changes</p> <p>MAP 5 & Acceleration</p> <p>B5: Homeostasis and Response</p> <p>C6: The Rate and Extent of Chemical Change</p> <p>P2S3 Revision and Assessment & Feedback</p> <p>P7: Magnetism and Electromagnetism</p> <p>MAP 6 & Acceleration</p> <p>C8: Chemical Analysis</p> <p>WORK EXPERIENCE</p>
Year 10 (Separate Science)	<p>B1: Cell Biology</p> <p>C1: Atomic Structure and the Periodic Table</p> <p>P1: Energy</p> <p>MAP 1 & Acceleration – Biology / Chemistry / Physics</p> <p>P2S1 Revision and Assessments</p> <p>B2: Organisation</p> <p>C2: Structure, Bonding, and the Properties of Matter</p> <p>P2: Electricity</p> <p>C3: Quantitative Chemistry</p> <p>MAP 2 & Acceleration – Biology / Chemistry / Physics</p>	<p>B3: Infection and Response</p> <p>C4: Chemical Changes</p> <p>P3: Particle Model of Matter</p> <p>MAP 3 & Acceleration – Biology / Chemistry / Physics</p> <p>P2S2 Revision and Assessment & Feedback</p> <p>B4: Bioenergetics</p> <p>C5: Energy Changes</p> <p>P4: Atomic Structure</p> <p>MAP 4 & Acceleration – Biology / Chemistry / Physics</p>	<p>B6: Inheritance, Variation and Evolution</p> <p>MAP 5 & Acceleration – Biology / Chemistry / Physics</p> <p>C6: The Rate and Extent of Chemical Change</p> <p>C7: Organic Chemistry</p> <p>MAP 6 & Acceleration – Biology / Chemistry / Physics</p> <p>P6: Waves</p> <p>P2S3 Revision and Assessment & Feedback</p> <p>WORK EXPERIENCE</p>
Year 11 will continue to follow the previous order of study to make sure they have covered all topics and are fully prepared for their GCSE exams			
Year 11 (Trilogy)	<p>C6: Rate and Exchange of Chemical Reactions</p> <p>MAP 1 & Acceleration Lesson</p> <p>C9: Chemistry of the Atmosphere</p> <p>P2S1 Revision and Assessments</p> <p>P5: Forces</p>	<p>B6: Inheritance, Variation, and Evolution</p> <p>C7: Organic Chemistry</p> <p>MAP 3 & Acceleration Lesson</p> <p>P6: Waves</p> <p>MAP 4 & Acceleration Lesson</p>	<p><u>Paper 1 Revision Topics</u></p> <p>B1: Cell Biology</p> <p>C1: Atomic Structure & The Periodic Table</p> <p>P1: Energy</p> <p>B2: Organisation</p>

	<p>MAP 2 & Acceleration Lesson P2S2 Revision and Assessment</p>	<p>B7: Ecology P2S3 Revision & Assessment</p>	<p>C2: Structure, Bonding, and the Properties of Matter P2: Electricity B3: Infection and Response C3: Quantitative Chemistry P3: The Particle Model of Matter B4: Bioenergetics C4: Chemical Changes C5: Energy Changes P4: Atomic Structure Paper 2 Revision Topics B5: Homeostasis C6: Rate and Exchange of Chemical Reactions P5: Forces B6: Inheritance, Variation, and Evolution C7: Organic Chemistry C8: Chemistry of the Atmosphere P6: Waves B7: Ecology C9: Chemical Analysis C10: Using Resources P7: Magnetism and Electromagnetism</p>
<p>Year 11 <i>(Separate Science)</i></p>	<p>C5: Homeostasis and Response C7: Organic Chemistry P6: Waves C8: Chemical Analysis MAP 1 & Acceleration – Biology / Chemistry / Physics P2S1 Revision, Assessment & Feedback B6: Inheritance, Variation and Evolution C9: Chemistry of the Atmosphere P5: Forces P7: Ecology C10: Using Resources MAP 2 & Acceleration – Biology / Chemistry / Physics P2S2 Revision, Assessment & Feedback (Paper 2)</p>	<p>Revision B1: Cell Biology Revision C1: Atomic Structure and the Periodic Table Revision P1: Energy MAP 3 & Acceleration Revision B2: Organisation & B3: Infection & Response Revision C2: Structure and Bonding & C3: Quantitative Chemistry Revision P2: Electricity Revision C4: Chemical Changes & C5: Energy Changes Revision P3: Particle Model of Matter & P4: Atomic Structure P2S2 Revision and Assessment & Feedback (Paper 1) Revision B4: Bioenergetics & B5: Homeostasis and Response Revision C6: The Rate and Extent of Chemical Change Revision P5: Forces MAP 4 & Acceleration</p>	<p>Revision B6: Inheritance, Variation and Evolution Revision C7: Organic Chemistry & C8: Chemical Analysis Revision P6: Waves MAP 5 & Acceleration Revision B7: Ecology Revision C9: Chemistry of the Atmosphere & C10: Using Resources Revision P7: Magnetism and Electromagnetism MAP 6 & Acceleration P2S3 Revision and Assessment & Feedback Revision for External GCSE Exams (Paper 1) Revision for External GCSE Exams (paper 2)</p>

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