

KEY STAGE ONE

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| Science Y1 | <p>AUTUMN</p> <p><u>How are animals different?</u></p> <ul style="list-style-type: none"> - Children can identify, describe and compare a variety of living creatures. - Children can name the basic parts of different creatures, including humans and the senses. <p>PSHE Link - body safety</p> | <p>Common animals</p> <p>Fish</p> <p>Bird</p> <p>Pet</p> <p>Basic body parts</p> | <p>Mammal</p> <p>Amphibian</p> <p>Reptile</p> <p>Carnivore</p> <p>Herbivore</p> | |
| | <p>SPRING</p> <p><u>How do materials differ?</u></p> <ul style="list-style-type: none"> - Children can identify and compare a range of materials. - Children can describe their properties, making suggestions about their suitability for particular uses. | <p>Material, wood, metal, plastic, water, rock, brick, paper, fabric, Properties, hard, soft, stiff, stretchy, shiny, dull, rough, smooth, bendy</p> | <p>Absorbent</p> <p>Waterproof</p> | <p>Elastic</p> <p>Rigid</p> |
| | <p>SUMMER</p> <p><u>How do plants grow?</u></p> <ul style="list-style-type: none"> - Children can identify a range of common plants and describe their basic structure. - Children can explain what plants need to grow and stay healthy. - Children can describe typical weather for each season. | <p>Common wild plants</p> <p>Common garden plants</p> <p>Trunk, branch, root, leaf, flower, petal, stem</p> <p>Fruit, vegetable, seed</p> | <p>Evergreen</p> <p>Blossom</p> <p>Bud</p> <p>Bulb</p> | <p>Deciduous</p> |

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| Science Y2 | <p>AUTUMN</p> <p><u>Are all materials suitable for the same purpose?</u></p> <ul style="list-style-type: none"> -To be able to suggest suitable uses for a given material. | <p>Squash</p> <p>Bend</p> <p>Twist</p> <p>Absorbent, waterproof</p> | <p>Elastic</p> <p>Rigid</p> | <p>John Dunlop – rubber</p> <p>Charles Macintosh</p> |
| | <p>SPRING</p> <p><u>What produces light and sound?</u></p> <ul style="list-style-type: none"> -To identify a variety of light and sound sources | <p>Light, dark</p> <p>Source</p> <p>Sun, star, flame</p> <p>Sound</p> | <p>Natural</p> <p>Man-made</p> | <p>Reflect</p> <p>Artificial</p> |
| | <p>SUMMER</p> <p><u>Why do creatures live where they do?</u></p> <ul style="list-style-type: none"> - To be able to explain what a living creature needs to survive - To be able to identify and create food chains - To know that animals have offspring that grow into adult versions | <p>Dead</p> <p>Near alive</p> <p>Habitat</p> <p>Food chain</p> <p>Shelter, log</p> | <p>Conditions</p> <p>Micro-habitat</p> | |

KEY STAGE TWO (Lower)

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| Science Y3 | <p>AUTUMN</p> <p><u>How do we hear?</u></p> <p><u>What are our teeth for?</u></p> <ul style="list-style-type: none"> - Children can explain the function of different types of teeth. - Children can relate sound to vibration and how it travels to the ear. | <p>Teeth</p> <p>Incisor – cut/slice</p> <p>Canine – rip/tear</p> <p>Molar – chew/grind</p> <p>Sound</p> <p>Vibrate (-tion)</p> | <p>Enamel</p> <p>Soundwave</p> | |
| | <p>SPRING</p> <p><u>What does a plant need to survive?</u></p> <ul style="list-style-type: none"> - Children can use classification keys to group living things, including plants. – - Children can link the functions of the parts of a plant to the requirements for life and growth, and explain the process of water transportation. - Children are able to recognise the importance of the flower in the life cycle. - Children recognise that living things can be grouped in a variety of ways, using classification keys. - Children recognise that environments can change and that this can sometimes pose dangers to specific habitats. | <p>Research</p> <p>Comparative – fair test</p> <p>Systematic</p> <p>Accurate</p> <p>Classify</p> <p>Record – keys - tables</p> | <p>Evidence</p> <p>Secondary source</p> <p>Prediction</p> <p>Construct</p> <p>Interpret</p> | |
| | <p>SUMMER</p> <p><u>What makes a shadow?</u></p> <ul style="list-style-type: none"> - Children can explain the reflection and absence of light. - Children can link this understanding to the formation of shadows. - Children can find patterns in changing shadows. | <p>Reflect (-tion)</p> <p>Absence</p> <p>Shadow</p> <p>Blocked</p> <p>Solid</p> <p>Natural/man-made</p> <p>Change</p> | <p>Artificial</p> | <p>Opaque</p> <p>Transparent</p> |

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| <p>AUTUMN <u>Can we make a light bulb work?</u></p> <ul style="list-style-type: none"> - Children can identify common appliances that run on electricity. - Children can construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. - Children can 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>Children recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.</p> <ul style="list-style-type: none"> - Children recognise some common conductors and insulators, and associate metals with being good conductors. | <p>Electricity Circuit Battery/wire/bulb/buzzer Motor – crocodile clip Switch – open/closed Wood/rubber/plastic/glass Metal/water Safety</p> | <p>Appliance Cell Insulator Conductor Component Mains</p> | <p>Hazardous</p> |
| <p>SPRING <u>How are soil and fossils formed?</u> <u>How does a change in temperature affect different materials?</u></p> <ul style="list-style-type: none"> - Children can compare and group together different kinds of rocks on the basis of their physical properties. - Children can relate the physical properties of some rocks to their formation (igneous or sedimentary). - Children recognise that soils are made from rocks and organic matter. - Children can compare and group materials together according to whether they are solid, liquids or gases. - Children can observe that some materials change state when they are heated or cool, and measure the temperature at which this happens (°C). | <p>Research Comparative – fair test Systematic Accurate Classify/record/keys/tables Rock Extinct Body fossil / Cast fossil Top soil - sub soil Solid – liquid – gas Evaporate – condense State of matter Freeze – cool Heat – melt</p> | <p>Evidence Secondary source Prediction Construct Interpret Igneous Metamorphic Sedimentary Organic matter Celsius Vapour Process</p> | <p>Anthropic Permeable Impermeable Particle</p> |
| <p>SUMMER <u>Why do living things have different diets?</u></p> <ul style="list-style-type: none"> - Children can create complex food chains, showing the nutritional requirements of different creatures, including humans. - Children can describe the function of the human digestive system. - Children can explain the importance of the skeleton and muscles, for support, movement and protection. | <p>Food chain Producer – prey – predator Nutrition – nutrients Digestion – digestive system Transports Stomach Skeleton – support/protection Skull – ribs – joint Muscle – movement/pull</p> | <p>Acid Enzymes Small intestine – absorb Large intestine – compacts Contract - expand</p> | <p>Oesophagus</p> |

KEY STAGE TWO (Upper)

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| Science Y5 | <p>AUTUMN</p> <p><u>How do forces affect us?</u></p> <p><u>How do the earth and moon move?</u></p> <ul style="list-style-type: none"> To explain forces, such as gravity, air resistance, water resistance and friction. To describe the earth, sun and moon as being approximately spherical. To describe the movements of the earth and the moon in relation to the sun and each other. To understand that day and night is caused by the earth's movement. | <p>Force – push/pull</p> <p>Air/water resistance</p> <p>Friction Gravity</p> <p>Newton</p> <p>Earth/sun/moon/star</p> <p>Axis/tilt/rotate (-tion)</p> <p>Day - night</p> <p>Phases of the Moon</p> <p>Names of planets - solar system</p> | <p>Opposing</p> <p>Active – reactive</p> <p>Spherical</p> <p>Constellation</p> <p>Waxing/waning</p> <p>Crescent – gibbous</p> | <p>Geocentric</p> <p>Heliocentric</p> |
| | <p>SPRING</p> <p><u>Can we predict and justify the use of materials, based on the properties?</u></p> <ul style="list-style-type: none"> To use comparative and fair testing to group everyday materials based on properties such as hardness, solubility, conductivity and magnetic response. To identify uses of materials (metals, woods and plastic) and justify with evidence. | <p>Properties</p> <p>Hard(ness),</p> <p>Conductor/insulator</p> <p>Transparency</p> <p>Magnetic</p> | <p>Conductivity</p> | |
| | <p>SUMMER</p> <p><u>How can materials be changed?</u></p> <ul style="list-style-type: none"> To decide effectively how to separate a mixture. To predict if materials will dissolve and make suggestions for how to recover it. To gain an understanding of reversible and irreversible changes associated with burning, oxidisations and chemical reactions – looking at making glass. | <p>Evaporation</p> <p>Dissolve – solution – mix – filter</p> <p>Reversible/irreversible</p> <p>Burning - rusting</p> <p>Chemical reaction</p> | <p>Soluble (-ity)</p> <p>Insoluble – suspension</p> <p>Permeable</p> <p>Oxidisation</p> | |

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| Science Y6 | <p>AUTUMN</p> <p><u>Can I modify shadows?</u></p> <ul style="list-style-type: none"> To explain how they see light, using the concept of straight lines and reflection. To predict what a shadow will look like, based on the casting object, To be able to manipulate the size and shape by moving the light source. | <p>Travel Straight line</p> <p>Source Object</p> <p>Shadow Cast</p> <p>Opaque - transparent</p> | <p>Filter</p> <p>Translucent</p> | <p>incidence</p> |
| | <p>SPRING</p> <p><u>Why is a healthy lifestyle important?</u></p> <p>PSHE Link - body safety</p> <ul style="list-style-type: none"> To explain the importance of exercise and a balanced diet. To understand how lifestyle choices, including the use of drugs, impact on their health. To explain how the heart, blood vessels and the blood are vital parts of their circulatory system, and can explain their function. <p><u>How can I create and vary a circuit?</u></p> <ul style="list-style-type: none"> To associate bulb brightness with the number of cells in a circuit. To predict and cause component variations, including brightness, volume, and switches. To recognise and use appropriate symbols to represent a circuit. | <p>Impact – exercise/diet/drugs</p> <p>Lifestyle – damage</p> <p>Circulatory system</p> <p>Heart – blood vessels</p> <p>Voltage</p> <p>Series – parallel</p> <p>Symbol</p> | <p>Capillary</p> <p>Artery</p> <p>Vein</p> <p>Current</p> | <p>Ventricle</p> <p>Aorta</p> |
| | <p>SUMMER</p> <p><u>How have living things adapted over time?</u></p> <ul style="list-style-type: none"> To explain how humans change over time. To explain how offspring resemble aspects of their parents. To identify how certain creatures have adapted to their environment, making links to evolution. To recall how fossils are formed, and explain how they provide information about historical creatures. | <p>Offspring</p> <p>Characteristics/genetics</p> <p>Inherited – variation</p> <p>Environmental</p> <p>Adaptation Evolution</p> <p>Fossil</p> <p>Formation</p> | <p>Mutation</p> <p>Survival of the fittest</p> | <p>Organism</p> <p>Biodiversity</p> |