



Stottesdon C of E Primary School Science Assessment Progression

<p>EYFS Cycle 1 Amazing Me Learn about our five senses Name Our Body Parts Lifecycle of Humans - baby to adult Learning about how to take care of themselves. (Wash, sleep, exercise, diet, oral hygiene, well-being) Children will identify typical weather in Autumn Children will know that this time of year is Autumn and the signs and changes of Autumn Planned Field Work: Listen to sounds outside in the local area and identify the source. Why sounds are in particular areas?</p>	<p>Weather and Celebrations Different types of Weather Explore the changes in the seasons – Autumn & Winter Waterproof materials Observe, measure and record changes to materials by heating and cooling (water to steam) (water to ice) Compare how materials change over time and in different conditions eg leaves in different places Shine light on or through different materials Explore rainbows Explore how the wind can move objects Planned Field Work: Observing changes of physical features e.g trees</p>	<p>People who help us Children will know that this time of year is Spring and the signs and changes of Spring. Exploring scientific roles – doctors, dentist, farmer, vets</p>	<p>Down on the Farm Science Harvest – crops to shops Where do foods come from....milk, eggs, cheese, pork, beef, ham etc Farming around Stottesdon Animals & their babies and how baby animals change over time. Life cycle of a Chick Observe, measure and record changes to materials by heating and cooling in cooking (milk, eggs, butter, cheese, cake) Planned Field Work: Visit a local farm, creating a map of a farm.</p>	<p>Minibeasts Know that during the life cycle of a plant or living thing, change takes place. Know that I have grown and will continue to grow. Notice changes in the seasons. Lifecycle of a frog/ butterfly, explore minibeasts in their habitats Identify minibeasts and go on a minibeast hunt Name and describe animals that live in different habitats (ponds, grass, tree and underground) Describe different habitats. Planned Field Work: Bug Hunt, Where would we find different bugs. Where would be best to build a bug hotel?</p>	<p>Homes and Buildings Explore a range of materials and natural objects from the surrounding environments Building – what needs to be considered (pattern of bricks, materials used, shape and join materials) Different types of homes around the world. Light and dark. Making shadows. Different places to find light. Torches/dark tent/puppets (observing). Children will know that this time of year is Summer and the signs and changes of Summer. Planned Field Work: Recycling Points on a school grounds map. Where to build a new house?</p>
<p>EYFS Cycle 2 Once Upon a Time Children will identify typical weather in Autumn Children will know that this time of year is Autumn and the signs and changes of Autumn Children will explore a range of materials for floating and sinking (DT Project: Explore how the objects move in water) Explore natural objects from the surrounding environments (FF) Planned Field Work: Listen to sounds outside in the local area and identify the source Why sounds are in particular areas?</p>	<p>Transport Shine light on or through different materials Explore how to change how things work Feel forces Explore how objects/ materials are affected by forces Learn about our five senses (FF) Listen to sounds outside and identify the source (FF) Planned Field Work: Observing changes of physical features e.g., trees (ICT)</p>	<p>Being Healthy Learning about how to take care of themselves. (Wash, sleep, exercise, diet, oral hygiene, well-being) Children will know the names of body parts. Children will melt and solidify different substances and combine and mix (Pancake Day/Gingerbread Man) Observe, measure and record changes to materials by heating and cooling in cooking (e.g., toast, ice lollies, eggs) Children will know that this time of year is Winter and the signs and changes of Winter.</p>	<p>Animals Around the World Children will know that we don't have certain animals in England and will compare with another country. Name and describe animals that live in different habitats (desert, arctic, rainforest, oceans, grasslands) Describe different habitats Lifecycle of an animal Children will know that this time of year is Spring and the signs and changes of Spring. Planned Field Work: Visit a zoo/ safari park.</p>	<p>Plants Lifecycle of a sunflower Explore plants in the surrounding environments Plant seeds, and care for growing plants Observe living things throughout the year (seasons) Compare how materials change over time and in different conditions e.g., plants in different places Explore rainbows Planned Field Work: Bug Hunt, Where would we find different bugs. Where would be best to build a bug hotel?</p>	<p>Journeys Explore light sources / shadows Learn about the solar system and stars Learn about space travel Children will know that this time of year is Summer and the signs and changes of Summer.</p>

<p>KS1 Cycle 1 Seasonal Changes</p> <ul style="list-style-type: none"> - Observe and explain the seasonal changes in autumn (tree leaves, weather & light). <p>Plants</p> <ul style="list-style-type: none"> - Observe and describe how seeds and bulbs grow into mature plants. <p>Everyday materials</p> <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. - Identify and compare the suitability of a variety of everyday materials, including wood, plastic, glass, metal, water and rock. 	<p>Seasonal Changes</p> <ul style="list-style-type: none"> - Observe and explain the seasonal changes from winter to spring (tree leaves, weather & light). <p>Animals, including humans</p> <ul style="list-style-type: none"> - Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. - Identify and name a variety of common animals that are carnivores, herbivores and omnivores. - Describe and compare the structure of a variety of common animals (fish, amphibians pets etc.) - Identify, name and draw (with labels) basic parts of the human body and say which part is associated with each sense. - Describe how animals obtain their food and can show this using food chains. 	<p>Seasonal Changes</p> <ul style="list-style-type: none"> - Observe and explain the seasonal changes from spring to summer (tree leaves, weather & light). <p>Plants</p> <ul style="list-style-type: none"> - Identify and name a variety of deciduous and evergreen trees. - Identify and describe the basic structure of trees. <p>Living things and their habitats</p> <ul style="list-style-type: none"> - Explore and compare the difference between things that are living, dead and things that have never been alive. - Identify that most living things live in habitats to which they are suited and how different habitats provide for the basic needs of different kinds of plants and animals, and how they depend on each other. - Identify and name a variety of plants and animals in their habitats, including microhabitats. - Describe how animals obtain their food from plants and other animals using a simple food chain.
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<p>KS1 Working Scientifically Asks simple questions and recognising that they can be answered in different ways Observes closely, using simple equipment Performs simple tests to compare Can identify, classify and group Uses observations and ideas to suggest answers to questions Gathers and records data to help in answering questions Displays results using simple diagrams and writing Finds out information using secondary sources Uses appropriate scientific vocabulary in their explanations.</p>		
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<p>Seasonal Changes</p> <ul style="list-style-type: none"> - Observe and explain the seasonal changes in autumn (tree leaves, weather & light). <p>Everyday materials</p> <ul style="list-style-type: none"> - Describe the physical properties of everyday materials (wood, metal, plastic, glass, brick, rock, paper, cardboard, fabric). - Compare and group materials based on their physical properties. - Observe and explain how the shape of solid objects can be changed by squashing, bending, twisting and stretching. 	<p>Seasonal Changes</p> <ul style="list-style-type: none"> - Observe and explain the seasonal changes in winter & spring (tree leaves, weather & light). <p>Animals, including humans</p> <ul style="list-style-type: none"> - Notice that animals, including humans, have offspring, which grow into adults. - Explore and describe the basic needs of animals, including humans, for survival (water, food & air). - Describe the importance for humans to exercise, eating the right amounts of different types of food and hygiene. 	<p>Seasonal Changes</p> <ul style="list-style-type: none"> - Observe and explain the seasonal changes in Summer (tree leaves, weather & light). <p>Plants</p> <ul style="list-style-type: none"> - Identify and describe the basic structure of a variety of common flowering plants. - Identify and name a variety of common wild and garden plants (dandelion, poppies, daisies, roses, daffodils, tulips,) - Observe and describe how seeds and bulbs grow to mature plants.
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<p>LK2 Cycle 1</p> <p>Electricity:</p> <ul style="list-style-type: none"> - Identify common appliances that run on electricity. - Understand that electricity can be generated from renewable and non-renewable sources. - Construct a simple series electrical circuit, identifying and naming its basic parts, including cell, wires, bulbs, switches and buzzers. - Identify whether a bulb will light in a complete or incomplete circuit. - Recognise that a switch opens and closes a circuit and the effect this has on the bulb. - Recognise some common conductors (understand metals are good conductors) and insulators. - Understands how to use electricity safely. <p>Rocks:</p> <ul style="list-style-type: none"> - Compare and group together different kinds of rocks, based their appearance and simple physical properties. - Describe in simple terms how fossils are formed when things that have lived are trapped within a rock. - Recognise that soils are made from rocks and organic matter. 	<p>Sound:</p> <p>Identifies how sounds are made, associating them with something vibrating.</p> <p>Recognises that vibrations from sounds travel through the medium to the ear.</p> <p>Finds patterns between the pitch of a sound and the features of the object that produced it.</p> <p>Finds patterns between the volume of a sound and the strength of the vibrations that produced it.</p> <p>Recognise that sound gets fainter as the distance from the sound source increases.</p> <p>Forces and magnets:</p> <p>Compare how objects move on different surfaces (friction).</p> <p>Notice that some forces need contact between 2 objects, but magnetic forces can act at a distance.</p> <p>Observe how magnets attract and repel each other and attract some materials and not others.</p> <p>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.</p> <p>Describe magnets as having 2 poles.</p> <p>Predict whether 2 magnets will attract or repel each other, depending on which poles are facing.</p>	<p>Plants:</p> <p>Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.</p> <p>Understand what plants need for life and growth (air, light, water, nutrients and room to grow) and how they vary from plant to plant and how environmental factors can affect this.</p> <p>Understand how water is transported within plants.</p> <p>Understand the role of flowers in the life cycle of a flowering plant, including pollination, seed formation and seed dispersal.</p> <p>To explore how plants can be classified into different categories (flowering, non-flowering, ferns, mosses)</p> <p>Animals (including humans)</p> <p>Identify that humans and some other animals have skeletons and muscles for support, protection and movement.</p> <p>Construct and interpret a variety of food chains, identifying producers, predators and prey.</p> <p>Recognise that living things can be grouped in a variety of ways (amphibians, birds, fish, mammals, reptiles, vertebrates and invertebrates).</p>
<p>Asks relevant questions and uses different types of scientific enquiry to answer questions.</p> <p>Sets up simple practical enquiries, comparative and fair tests.</p> <p>Makes systematic and careful observations and, where appropriate, takes accurate measurements using standard units, using a range of equipment, including thermometers & data loggers</p> <p>Gathers, records, classifies and presents data in a variety of ways to help in answering questions.</p> <p>Records findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.</p> <p>Reports on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p>Uses results to draw simple conclusions, make predictions, suggest improvements and raise questions.</p> <p>Identifies differences, similarities or changes related to simple scientific ideas and processes</p> <p>Uses straightforward scientific evidence to answer questions or to support their findings.</p> <p>Uses appropriate scientific vocabulary in their explanations.</p>		
<p>Animals(including humans)</p> <ul style="list-style-type: none"> - Describes the simple parts of the basic parts of the human digestive system. - Identifies the different types of teeth in humans and their simple functions. - Understand who to keep our teeth healthy - Identifies that animals, including humans, need the right types and amount of nutrition (Healthy plate) from the food that they eat, because they do not make their own food. <ul style="list-style-type: none"> - Use classification keys to help group, identify and name a variety of living things in their local and wider environment (herbivore, omnivore, carnivore) <p>Living Things:</p> <ul style="list-style-type: none"> - Identify and name a variety of living things in their local and wider environment (herbivore, omnivore, carnivore) - Construct and interpret a variety of food chains, identifying producers, predators and prey. - Recognise that living things can be grouped in a variety of ways. - 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 this can pose dangers to living things. 	<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. - Understand what plants need for life and growth (air, light, water, nutrients and room to grow) and how they vary from plant to plant and how environmental factors can affect this. - Understand the role of flowers in the life cycle of a flowering plant, including pollination, seed formation and seed dispersal. - 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"> - Identify and explain the difference between solids, liquids and gases. - Compare and group materials based on whether they are solids, liquids or gases. - Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. - 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) 	<p>Light:</p> <ul style="list-style-type: none"> - Understand that light from the sun can be dangerous and that there are ways to protect their eyes and skin. - Understands that light is reflected from surfaces. - Understands the difference between opaque, translucent and transparent materials and can explain how much light each material lets through. - Shadows are formed when light from a light source is blocked by an opaque object. <p>Living things:</p> <ul style="list-style-type: none"> - Identify and name a variety of living things in their local and wider environment (mammal, amphibian, reptile, fish, bird) - Recognise that environments can change and this can pose dangers to living things. - Recognise that living things can be grouped in a variety of ways (mammal, amphibian, reptile, fish, bird) - Use classification keys to help group, identify and name a variety of living things in their local and wider environment.

<p>UPKS2 Cycle 1</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 body. - Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky. <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>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. - 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>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>Evolution and inheritance:</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>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. - Comparing the life cycles of plants and animals in their local environment with other plants and animals around the world.
<p>Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</p> <p>Takes measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.</p> <p>Records data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</p> <p>Uses test results to make predictions to set up further comparative and fair tests.</p> <p>Reports and presents findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</p> <p>Identifies scientific evidence that has been used to support or refute ideas or arguments.</p> <p>Uses appropriate scientific vocabulary in their explanations.</p>		
<p>Light:</p> <p>Recognise that light appears to travel in straight lines.</p> <p>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.</p> <p>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.</p> <p>Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.</p>	<p>Forces and levers:</p> <ul style="list-style-type: none"> - Can explain the effects of levers, pulleys and simple machines on movement. - Recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect. - Explain the effects of friction on movement and find out how it slows or stops moving objects, for example, by observing the effects of a brake on a bicycle wheel. <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 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. - Recognise the impact of diet, exercise, drugs and lifestyle on the way human bodies function. 	<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. - Understand different types of circuits and real life uses e.g. parallel, series, alarms (sensors and switches). <p>Animals including humans:</p> <ul style="list-style-type: none"> - Describe the life process of reproduction in some plants and animals. - Describe the changes as humans develop to old age. - Can explain the changes experienced in puberty. - Describe the life process of reproduction of some animals (compare their gestation and life process to humans)