

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn						
<p><b>Let's Explore</b> Children explore their local environment to find out about living things and places in which they live. They are introduced to language relating to their senses.</p> <p><b>Build it up</b> Children explore, name and sort materials according to their properties. They are introduced to vocabulary such as hard, soft, smooth, rough, light and heavy.</p> <p><b>Marvellous machines</b> Children explore battery operated toys and how to make simple circuits. They learn about the properties of materials, including magnetism. They conduct tests and explain the results using language such as because, then and next. They are supported to use equipment to measure how far toy vehicles travel down a ramp.</p>	<p><b>Every day materials</b> Children revisit learning about everyday materials from EYFS.</p> <ul style="list-style-type: none"> <li>learn what materials are and identifying and classifying</li> <li>natural materials and their sources and identify products made from natural materials</li> <li>human made materials, asking questions about how they are made and begin to look for patterns in their common properties.</li> <li>Explore the properties of materials, identifying and classifying materials based on their properties.</li> <li>Perform a simple comparative test, testing materials for properties, organising and interpreting their results.</li> </ul> <p><b>Human Senses</b></p> <ul style="list-style-type: none"> <li>Humans are living things belonging to a group of animals called mammals</li> <li>All animals, including humans, use senses, breathe, sleep, feed, get rid of waste, grow and move to stay alive.</li> <li>Humans are the same because they have the same body parts</li> <li>Identify common body parts</li> <li>Humans are different</li> <li>Observe and compare themselves to others – identify and record</li> <li>Five senses – hearing, sight, smell, taste, touch</li> <li>Identify body parts associated with each sense</li> <li>Conduct simple investigations to explore their senses focussed on</li> </ul>	<p><b>Human survival</b> Builds on Yr1 projects Human Senses, Animal Parts and Childhood (human timelines).</p> <ul style="list-style-type: none"> <li>Human lifecycle, identifying stages.</li> <li>Identify needs of humans for survival, collating data</li> <li>What constitutes a good diet, how this helps humans stay healthy</li> <li>The importance of exercise in a healthy lifestyle</li> <li>Good hygiene practice including a comparative test to identify the importance of soap when washing hands.</li> </ul> <p><b>Habitats</b> Builds Human Senses, Plant Parts and animal parts by identifying animals and plants and the things they do to stay alive, and using the terms carnivore, herbivore and omnivore.</p> <ul style="list-style-type: none"> <li>What a habitat is</li> <li>Habitats contain living and non living things, providing for the plants and animals that live there including food, water, shelter and space.</li> <li>Identify living things using life processes including growth, nutrition and movement.</li> <li>Sort non-living things into those that have lived and those that never lived.</li> <li>Identify plants and animals by observing physical characteristics.</li> <li>Research where woodland animals shelter and what they eat.</li> <li>food chains</li> </ul>	<p><b>Animal nutrition and skeletal system</b> Revisit learning about living things, including how animals can be carnivores, herbivores or omnivores, needing food, water, air, shelter and space to reproduce and survive from Animal Parts, Animal Survival and Human Survival.</p> <ul style="list-style-type: none"> <li>Humans are omnivores, ask questions about human diets and research the answers.</li> <li>Importance of food and a balanced diet</li> <li>Identify different food groups and what they provide for the human body, sorting and grouping foods</li> <li>Investigate fattiness of foods – make predictions, record findings in a table and rank results.</li> <li>Compare and contrast the diets of different animals, revisit how this changes with the seasons.</li> <li>Major bones of the human skeleton</li> <li>Function of the skeleton</li> <li>Type and function of joints</li> <li>Function of muscles and explore how their body moves, recording observations.</li> <li>Different skeleton types – including endo and exoskeletons</li> </ul>	<p><b>Food and the digestive system</b> Revisit learning about carnivores, herbivores and omnivores and what they eat, and food chains, producers and consumers from Animal Parts and Animal Survival.</p> <ul style="list-style-type: none"> <li>Features of eco systems</li> <li>Food webs and interdependence</li> <li>Changes different ecosystems face from human activities and natural events</li> <li>Digestive system of humans – naming digestive organs, functions and identifying what happens to the food they eat.</li> <li>Names and functions of the four types of human teeth</li> <li>Identify the differences between the teeth of carnivores, herbivores and omnivores.</li> <li>Research by asking dental health professionals scientific questions to discover the importance of oral hygiene.</li> </ul> <p><b>Sound</b></p> <ul style="list-style-type: none"> <li>Sound is vibrations that travel in waves from a sound source through a medium to the ears.</li> <li>Investigate environmental sounds, vibrations, making sounds using different instruments – changing volume and pitch.</li> <li>Learn about how sound waves travel from source to the ears.</li> <li>Investigate most effective ways to muffle sound/ change volume or pitch.</li> </ul>	<p><b>Forces and mechanisms</b> Revisit learning about contact and non-contact forces from Forces and Magnets. Recap knowledge of friction from Yr3.</p> <ul style="list-style-type: none"> <li>Gravity is a non-contact force of attraction</li> <li>Mass and weight and their units of measurement</li> <li>Record mass and weight using a force meter</li> <li>Research scientists who built understanding of gravity</li> <li>Identify where friction can be helpful or where we need to minimise its effects</li> <li>Carry out comparative tests to investigate friction on different surfaces</li> <li>Investigate air resistance – make and launch parachutes, observing and recording.</li> <li>Conduct comparative test to identify how reduce water resistance.</li> <li>Investigate how mechanisms, including gears, pulleys and levers use forces to make tasks easier.</li> </ul> <p><b>Earth and Space</b></p> <ul style="list-style-type: none"> <li>Identify planets in the Solar System, create a model outdoors to describe its scale</li> <li>Research how scientists used different methods to study the Solar System</li> <li>Describe the orbits of the Moon around the Earth and the Earth around the Sun</li> <li>Research evidence that the Earth is a sphere.</li> <li>Earth's rotation creates day and night</li> </ul>	<p><b>Circulatory system</b> Revisit learning about systems in the human body – skeletal, muscular, digestive and life processes from Human Senses, Animal Nutrition and the Skeletal System, Food and the Digestive System.</p> <ul style="list-style-type: none"> <li>Role of the circulatory system and its main parts</li> <li>Identify parts of the heart, its function and structure</li> <li>Ask scientific questions about components and functions of blood</li> <li>Test resting heart rate and record data</li> <li>Investigate hypothesis through comparative test</li> </ul> <p><b>Human health and Exercise</b> Revisit healthy eating and the Eatwell guide.</p> <ul style="list-style-type: none"> <li>Explore nutritional labels, grouping and sorting healthy and unhealthy food</li> <li>Research effects of smoking, alcohol and drugs on the human body.</li> </ul>

	<p>how senses help them to understand their environment.</p>	<ul style="list-style-type: none"> <li>Learn how prey animals are adapted to avoid being eaten. Group animals.</li> </ul>			<ul style="list-style-type: none"> <li>The Earth's tilt and its rotation as it orbits the Sun creates seasons and day lengths</li> </ul>	
Spring						
<p><b>Long Ago</b> Children continue to explore and describe the properties of materials.</p> <p><b>Ready steady grow</b> Children collect and record data in simple pictograms. They plant seeds and learn what seeds and plants need to grow and survive. They learn to name and describe parts of plants. Children learn about farm animals and match them to their babies.</p> <p><b>Signs of spring</b> Children learn how the weather changes with the seasons. They explore the life cycles of animals including frogs and chickens.</p>	<p><b>Seasonal changes</b> Revisit learning from EYFS about the four seasons and typical weather.</p> <ul style="list-style-type: none"> <li>Identify and classify different trees including evergreen and deciduous.</li> <li>How animals respond to seasonal changes looking for patterns in typical seasonal behaviours.</li> <li>Different types of weather and observe changes over time.</li> <li>Why we have day and night</li> <li>There are seasonal differences in daylight hours – interpreting simple charts</li> <li>Record the outside temperature at different times over several days – interpret and look for patterns</li> <li>Measure volume of rainfall in rain gauges.</li> </ul>	<p><b>Uses of everyday materials</b> Builds on Yr1 – <b>Everyday Materials</b></p> <ul style="list-style-type: none"> <li>Identify and classify materials and describe the properties that make them suitable or unsuitable for a specific use.</li> <li>Materials can be shaped by bending, stretching, twisting and squashing – carry out comparative test.</li> <li>Investigate different paper types comparing strength, texture and absorbency.</li> </ul> <p><b>Plants: survival and growth</b> Revisit the <b>parts of plants</b> and trees from <b>Seasonal Changes and Plant Parts</b>.</p> <ul style="list-style-type: none"> <li>Observe seasonal changes in plants</li> <li>Identify and classify the plants in their locality, identifying features.</li> <li>Conduct a simple comparative test to determine what seeds need to germinate and observe changes over time.</li> <li>Compare and look for patterns in where plants grow outdoors, using observations to predict needs of plants.</li> <li>Conduct comparative test into what plants need to grow.</li> </ul>	<p><b>Rocks, relics and Rumbles</b> Linked to geography project;</p> <ul style="list-style-type: none"> <li>Properties of rock types and how this defines uses</li> <li>How different rock types are formed</li> <li>Investigate, classify and name rocks</li> <li>Describe how fossils form</li> <li>What soil is made from and how it supports life.</li> <li>Use classification key to investigate soil from locality.</li> </ul> <p><b>Forces and magnets</b> Build on learning about materials in KS1</p> <ul style="list-style-type: none"> <li>Pushing and pulling forces, identify and classify pushes and pulls</li> <li>Identify contact forces, focus on frictional forces</li> <li>Carry out comparative tests to measure frictional forces using force meters, display results in bar charts, interpreting them and look for patterns.</li> <li>Non contact force of magnetism</li> <li>Explore magnetic attraction, repulsion and magnetic fields, drawing diagrams to explain observations.</li> <li>Identify magnetic materials and their similarities.</li> </ul>	<p><b>States of matter</b></p> <ul style="list-style-type: none"> <li>Identify solids, liquids and gases</li> <li>Learn about the characteristic properties of solids, liquids and gases</li> <li>Learn how some materials can change state, how heating and cooling drives these changes</li> <li>Processes of melting, freezing, evaporation and condensation</li> <li>Observe changes over time, measuring the temperature of ice as it melts, displaying data on a line graph.</li> <li>Research some common materials melting and boiling points, looking for patterns in the data.</li> </ul> <p><b>Grouping and classifying</b></p> <ul style="list-style-type: none"> <li>Essential classification skills of observing and questioning</li> <li>Explore classification keys</li> <li>Revisit characteristics of five vertebrate groups</li> <li>Understand characteristics of six invertebrate groups</li> <li>Classify animals and look for patterns in their observable characteristics</li> </ul>	<p><b>Human reproduction and aging</b> Revisit the lifecycles of vertebrates and invertebrates. Build on learning about mammals and their characteristic from <b>Grouping and classifying</b>.</p> <ul style="list-style-type: none"> <li>Explore mammalian lifecycles looking for patterns in the stages and processes</li> <li>Investigate the relationship between animal mass and gestation period using research to find and interpret data.</li> <li>Stages and process of the human life cycle</li> <li>Observe changes over time – human gestation from embryo to birth</li> <li>Research how humans change and develop from infant to adolescence</li> <li>Interpret human growth data, looking for patterns and relationships</li> <li>Human reproductive systems and sexual reproduction</li> <li>Ask scientific questions about human aging, research and write scientific reports.</li> </ul>	<p><b>Electrical circuits and components</b> Revisit and consolidate understanding of circuits from Yr4 <b>Electrical circuits and conductors</b>.</p> <ul style="list-style-type: none"> <li>Identify circuit components and learn symbols using them to draw circuit diagrams.</li> <li>Investigate how circuit components function, looking for patterns in their results.</li> <li>Measure and record the voltage of cells and batteries</li> <li>Conduct a comparative test into the effects of changing voltage on a lamp's intensity within a series circuit.</li> </ul>
Summer						
<p><b>Animal Safari</b> Children build on their knowledge of animals from <b>Ready Steady Grow</b>. They explore how animals survive in the wild and understand what all animals need to survive. They observe the features of animals and learn about the similarities and differences between</p>	<p><b>Plant Parts</b> Build on learning from EYFS about plants as living things.</p> <ul style="list-style-type: none"> <li>Difference between garden and wild plants</li> <li>Revisit seasonal changes and observe and identify changes over time from winter to spring.</li> </ul>	<p><b>Animal survival</b> Builds on learning from Autumn – <b>Habitats</b> (what they are and what they provide).</p> <ul style="list-style-type: none"> <li>Examine local micro habitats, identify and classify living things, including invertebrates.</li> <li>Record data using tally charts and block graphs.</li> </ul>	<p><b>Plant nutrition and reproduction</b> Revisit what plants need to grow, plant parts and their primary functions from <b>Plant Parts and Plant Survival</b>. Build on learning from yr2 <b>Animal Survival</b>.</p>	<p><b>Electrical circuits and conductors</b></p> <ul style="list-style-type: none"> <li>Identify sources of electricity</li> <li>Compare how electrical devices are powered</li> <li>Create a simple series circuit, identify and classify how circuit components work and their function.</li> </ul>	<p><b>Properties and changes of materials</b> Revisit learning about the properties of materials, including magnetism and electrical conductivity. Recap reversible changes explored in <b>States of Matter</b>.</p>	<p><b>Light theory</b> Revisit learning about light from <b>Light and Shadows and Earth and Space</b> including light sources, reflectors, day and night, shadows, space.</p> <ul style="list-style-type: none"> <li>Observe how light travels in straight lines</li> <li>Understand how light enters the eye and helps us to see</li> </ul>

<p>different animal groups. They learn about unfamiliar animals worldwide and understand the term habitat.</p> <p><b>Creep, crawl and wriggle</b></p> <p>Children develop their knowledge of animal features in Animal Safari as they compare the features of invertebrates. They explore their local environment to learn about the animals that live there and learn about invertebrate life cycles.</p> <p><b>On the Beach</b></p> <p>Children learn about the plants and animals that live at the seaside. It also explores the importance of keeping safe in the Sun.</p>	<ul style="list-style-type: none"> <li>Identify and classify wild plants, choose one to study over the project (how new plants are produced and leaf features).</li> <li>Parts of plants, identifying differences and similarities.</li> <li>Seeds and bulbs grow new plants</li> <li>Ask questions about the importance of plants for animals</li> </ul> <p><b>Animal Parts</b></p> <p>Builds on learning from Human Senses.</p> <ul style="list-style-type: none"> <li>Name and identify features of 6 (animal groups (amphibians, birds, fish, invertebrates, mammals, reptiles)).</li> <li>Revisit human body parts and identify analogous body parts and specialised body parts eg tails, gills, shells.</li> <li>Identify and classify animals into 6 groups.</li> <li>Understand that animals eat different food stuffs and can be carnivores, herbivores and omnivores.</li> <li>Sort and classify animals by diet – present.</li> </ul>	<ul style="list-style-type: none"> <li>Apply understanding of food chains to microhabitat studied</li> <li>Learn how humans can positively and negatively impact on habitats.</li> <li>Understand the role of reproduction in all living things</li> <li>Explore the six animal groups' offspring, pattern seek within and between groups.</li> <li>Observe the lifecycle of an insect first hand, ask questions and answer them by making observations over time.</li> </ul>	<ul style="list-style-type: none"> <li>Identify and observe root types, learn how water and nutrients enter the roots.</li> <li>Identify and observe the function of stems eg celery. Conduct comparative tests and observe changes over time.</li> <li>Function of leaves and investigate how leaves vary in size depending on where they grow.</li> <li>Stages and processes of a flowering plant's life cycle.</li> <li>Explore real flowers, identifying the parts and functions. Look for patterns in the number of flower parts.</li> <li>Understand the role of flowers in plant reproduction – pollination, seed formation and dispersal.</li> <li>Ask questions about pollination and pollinators and research to answer the questions.</li> <li>Identify and classify seeds according to dispersal method.</li> </ul> <p><b>Light and shadows</b></p> <ul style="list-style-type: none"> <li>Identify and classify light sources and reflectors</li> <li>Conduct a simple comparative test to identify reflective materials, look for patterns in their properties.</li> <li>Learn how shadows are created</li> <li>Understand how shadows change throughout the day</li> <li>Investigate how to change the shape, size and direction of a shadow, looking for patterns in results.</li> <li>To explore opaque, transparent and translucent materials and how they differ.</li> </ul>	<ul style="list-style-type: none"> <li>Observe a range of series circuits and predict whether they will work before testing.</li> <li>Learn about electrical conductivity as a property of materials</li> <li>Identify and classify conductive and non-conductive materials by conducting a comparative test.</li> <li>Generate research questions about parts and materials of three pin plugs, using information to write a scientific report.</li> </ul>	<ul style="list-style-type: none"> <li>Plan and carry out a range of simple comparative tests on a range of materials</li> <li>Thermal conductivity, identify and classify materials with this property</li> <li>Apply understanding of thermal insulators to conduct comparative test, observing changes over time.</li> <li>Identify patterns between thermal and electrical insulators</li> <li>Identify a range of soluble materials and understand the process of dissolving</li> <li>Define a mixture</li> <li>Explore separation by grouping, sieving or filtering</li> <li>Explore how evaporation can be used to recover dissolved solutes, observe process over time.</li> <li>Identify and classify reversible and irreversible changes caused by heating</li> <li>Explore irreversible changes first-hand</li> </ul>	<ul style="list-style-type: none"> <li>Research the spectrum of visible light</li> <li>Investigate colour perception within the class, seeking patterns and relationship in data.</li> <li>Explore shadow making, identifying patterns in how shadows change</li> <li>Conduct comparative tests to measure reflected light from different coloured paper using data loggers</li> </ul> <p><b>Evolution and inheritance</b></p> <p>Revisit learning about classification from Grouping and Classifying.</p> <ul style="list-style-type: none"> <li>Extend knowledge of kingdoms beyond plants and animal to include fungi and micro-organisms.</li> </ul> <p>Revisit learning from Food for Life about the uses of micro-organisms and how pathogenic micro-organisms can cause disease. Revisit learning about fossil formation from Rocks, Relics and Rumbles.</p> <ul style="list-style-type: none"> <li>Use classification skills to classify fossils</li> </ul> <p>Build on learning about sexual reproduction and inheritance from Human Reproduction and Aging.</p> <ul style="list-style-type: none"> <li>Identify characteristics inherited from parents and understand variation between species.</li> <li>Collect discontinuous and continuous data from the class's inherited features, using it to draw graphs and identify patterns</li> <li>Learn how variation within species can lead to adaptations, which over a long time can lead to the evolution of a species via natural selection.</li> <li>Explore plant adaptations eg holly</li> </ul>
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