



Woodlands Park Primary and Nursery School Science Curriculum Map



Term	Early Years Not limited to terms	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
Autumn 1	<p><u>Understanding the World</u></p> <p><u>Animals and Habitats:</u> Life cycles, bug hunts, habitats (animals/plants)</p> <p><u>Living Things</u> Planting/growing, change and decay over time – rotting logs</p> <p><u>Changing states</u> Ice, cooking, egg (in vinegar)</p> <p><u>Everyday Materials</u> Malleable materials – playdough, ooblik, shaving foam, clay, junk modelling/building.</p> <p><u>Forces</u> Water Tray (floating, gravity, sinking) – Magnets, Ball Run</p> <p><u>Bodies</u> Healthy lifestyles</p> <p><u>Seasonal Change</u> Scavenger change Trees/plants Light and dark</p>	<p><u>My Body</u> Identify and name several body parts and identify their location on their own bodies. Describe how body parts are used, or how they move. Conduct tasks to use their own sense of sight. Feel and describe a variety of objects Conduct a smell investigation. Sort and describe foods</p>	<p><u>Uses of Everyday Materials</u> Identify and sort according to criteria Recognise natural and man-made materials Identify that some materials can change shape temporarily and others cannot change shape at all. Explain why a particular material is chosen to make into an object Different products/materials made from same source material eg wood Understand purpose of product affect material that is used. Identify material inventions</p>	<p><u>Rocks</u> Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.</p> <p>Learn how to describe in simple terms how fossils are formed when things that have lived are trapped within rock.</p> <p>Learn how to recognise that soils are made from rocks and organic matter.</p>	<p><u>Animals (including humans)</u> Describe the simple functions of the basic parts of the digestive system in humans;</p> <p>Identify the different types of teeth in humans and their simple functions;</p> <p>Construct and interpret a variety of food chains, identifying producers, predators and prey.</p>	<p><u>Properties of Materials</u> 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, Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating; Learn how to give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.</p>	<p><u>Evolution and Inheritance</u> Understand living things produce offspring of the same kind but they normally vary and are not identical to parents. Identify how animals and plants adapt to suit environment in different ways Understand adaptation of plants and animals may lead to evolution Evolution and Inheritance: Darwin Recognise living things have changed over time and a number of factors can affect a species' evolution Understand how humans have evolved over time, and how human behaviour can affect change in species over time.</p>

<p>Autumn 2</p>		<p><u>Seasonal Changes</u> Describe the weather. Know that weather affects human activity Explain the terms 'adapt' and 'hibernate' Identify which season has the shortest/longest days Gather weather data over a period of time.</p>	<p><u>Animals including Humans 1 - Growth</u> Describe the needs of animals for survival Describe the needs of humans, for survival. Explore the importance of eating the right food Understand the importance of a balanced diet. Investigate the impact of exercise on our bodies.</p>	<p><u>Forces and Magnets</u> 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, Identify some magnetic materials; describe magnets as</p>	<p><u>Electricity</u> 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; 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</p>	<p><u>Earth and Space</u> Learning more about the Earth and the celestial bodies in our solar system. Explore each planet - from Mercury to Neptune Explore how scientific ideas surrounding Earth's movement and placement have changed and developed over time. Complete an assortment of fascinating Mission Assignments - such as making a papier-mache model of the solar system - to deepen their understanding of the Moon, time zones and the night and day cycle.</p>	<p><u>Living things and their habitats</u> Describe how to classify a range of living animals and plants. Understand MRS GREN and how a living organism follows these rules. Understand how an animal can be classified depending on its characteristics. Know and explain that microorganisms are both helpful and harmful. Explain the differences between fungi and other organisms. Describe, represent and present data about a living organism</p>

				having 2 poles and they learn how to predict whether 2 magnets will attract or repel each other, depending on which poles are facing.	associate metals with being good conductors.		
Spring 1		<u>Identifying Animals</u> Identify, name and describe a variety of common animals kept as pets. Identify a variety of mammals and compare and describe features. Compare the characteristics of a variety of birds and reptiles Consider similarities and differences between some fish and amphibians Collect, present and interpret data about pets or mini beasts.	<u>Animals, including humans 2 - Life cycles</u> Order the stages of a human life cycle Identify features inherited from a parent Compare the life cycle of a chicken and human Explain the life cycle of a butterfly and the process of metamorphosis Compare some similarities and differences between the life cycle of a frog and other animals	<u>Light</u> 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 ; and 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 an opaque object ; Find patterns in the way that the size of shadows change .	<u>Living Things and Their Environments</u> 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.	<u>Forces</u> 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; Learn how to recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect.	<u>Light</u> 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; Learn how to use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them .
Spring 2		<u>Everyday Materials</u> Identify a variety of common materials.	<u>Plants</u> Understand that different	<u>Animals (including humans)</u>	<u>Living Things and Their Habitats – Conservation</u>	<u>Living Things and their Habitats</u>	<u>Electricity</u> Associate the brightness of a lamp or the volume of a buzzer with the

		<p>Distinguish between an object and the material from which it is made.</p> <p>Describe materials according to their properties.</p> <p>Describe why some materials suit certain objects better than others.</p> <p>Carry out an experiment to find out which materials are waterproof.</p>	<p>seeds grow into different plants and to describe them.</p> <p>Plants from bulbs. Understand why seeds need to be dispersed. Ask questions that can be investigated.</p> <p>Plan and carry out an investigation, making sure it is a fair test. Evaluate results and draw conclusions.</p> <p>Use technical vocabulary such as germination, growth, disperse.</p>	<p>Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food;</p> <p>Identify that humans and some other animals have skeletons and muscles for support, protection and movement.</p>	<p>Recognise that environments can change and that this can sometimes pose dangers to living things.</p>	<p>Understand life cycles, reproduction and animal characteristics.</p> <p>New concepts such as asexual reproduction and metamorphosis are introduced to help the children understand how life cycles are constantly progressing.</p> <p>Have the opportunity to dissect an egg, pretend to be David Attenborough or Jane Goodall as they research their favourite creature and even create their own reports on world-renowned scientists.</p>	<p>number and voltage of cells used in the circuit;</p> <p>Learn how to 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;</p> <p>Use recognised symbols when representing a simple circuit in a diagram.</p>
Summer 1	<p><u>Identifying Plants</u></p> <p>Learn about what a plant is.</p> <p>Learn about identify features of a variety of common garden and wild plants.</p> <p>Identify and name trees, learn some differences between deciduous and evergreen trees</p> <p>Identify the main parts of a variety of plants and describe their functions.</p>	<p><u>Living Things and their Habitats</u></p> <p>Be able to identify things that are living, things that are dead and things that have never been alive.</p> <p>Understand that living things need to live in suitable habitats.</p> <p>Explore the plants and animals that live in seaside and unfamiliar habitats.</p>	<p><u>Scientific Enquiry</u></p> <p>Ask relevant questions and use different types of scientific enquiries to answer them</p> <p>Set up simple practical enquiries, comparative and fair tests</p> <p>make systematic and careful observations and, where appropriate, take accurate measurements using standard units, and use a range of equipment, including</p>	<p><u>Sound</u></p> <p>Identify how sounds are made, associating some of them with something vibrating;</p> <p>Recognise that vibrations from sounds travel through a medium to the ear;</p> <p>Find patterns between the pitch of a sound and features of the object that produced it;</p> <p>Find patterns between the volume of a sound and the strength of the</p>	<p><u>Changes of Materials</u></p> <p>Describe how to recover a substance from a solution;</p> <p>Demonstrate that dissolving, mixing and changes of state are reversible changes;</p> <p>Learn how to 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><u>Healthy Bodies</u></p> <p>Find out how scientific ideas about food and diet were tested in the past and how this has contributed to our knowledge of a balanced diet.</p> <p>Investigate different food groups and find out why a variety of foods is important for a healthy diet</p> <p>Find out how nutrients and water are transported in the human body</p> <p>Investigate what happens to the heart</p>	

		<p>Identify ways in which plants change over time.</p>	<p>Explore and describe a micro-habitat. Explore food chains in a habitat.</p>	<p>thermometers and data loggers</p> <p>Gather, record, classify and present data in a variety of ways to help in answering questions record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</p> <p>report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p> <p>use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions identify differences, similarities or changes related to simple scientific ideas and processes</p> <p>Use straightforward scientific evidence to answer questions or to support their findings.</p>	<p>vibrations that produced it; Recognise that sounds get fainter as the distance from the sound source increases.</p>		<p>when we exercise and why</p> <p>Investigate muscles, skeleton and increased blood flow</p> <p>Investigate effects of tobacco, alcohol and other drugs (Link with work with the Youth Service)</p> <p>Evaluate what we can do to keep our bodies healthy (link with PSHE)</p>
<p>Summer 2</p>		<p><u>Living Habitats</u> Identify things that are living, things that are dead and things that have never been alive</p>	<p><u>Habitats Around the World</u> Understand that living organisms are suited to live in one or more habitat</p>	<p><u>Plants</u> Identify and describe the functions of different parts of flowering plants:</p>	<p><u>States of Matter</u> Compare and group materials together, according to whether they are solids, liquids or gases;</p>	<p><u>Animals including Humans</u> Identify key stages of a mammal's life cycle</p>	<p><u>Looking after our environment</u> Learn about climate change</p>

		<p>Understand that living things need to live in suitable habitats.</p> <p>Explore the plants and animals that live in seaside and unfamiliar habitats.</p> <p>Explore and describe a micro-habitat</p> <p>Explore food chains in a habitat.</p>	<p>Identify what you can do to help reduce the impact humans have on a habitat</p> <p>Identify how rainforests are endangered</p> <p>Understand an ocean habitat</p> <p>Identify the differences between the Arctic and Antarctic</p>	<p>roots, stem/trunk, leaves and flowers.</p> <p>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.</p> <p>Learn how to investigate the way in which water is transported within plants and finally they learn how to explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p>	<p>Observe that some materials change state when they are heated or cooled, 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>	<p>Explore the gestation period of mammals</p> <p>Learn about foetal development</p> <p>Investigate the hand span of differently aged children</p> <p>Learn about the changes experienced in puberty</p> <p>Describe the changes humans may experience during old age</p>	<p>Understand what happens to waste that is sent to landfill</p> <p>Suggest ways in which the school can reduce the amount of waste that is sent to landfill</p> <p>Understand the difference between renewable and non-renewable energy</p> <p>Explore what happens when fuels are burnt</p> <p>Explore the outcomes of COP26</p> <p>Compare data associated with the weather</p> <p>Identify the effects of climate change on animals and habitats</p>
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