

# Science Year Group Overview



	Autumn	Spring	Summer
<b>Year 1</b>	<p><b>Changing World</b></p> <ul style="list-style-type: none"> <li>✓ Observe changes across the four seasons. Trees, plants etc (Autumn to Winter)</li> <li>✓ Observe and describe weather associated with the seasons and how day length varies.</li> </ul> <p><b>Everyday Materials</b></p> <ul style="list-style-type: none"> <li>✓ Distinguish between an object and the material from which it is made</li> <li>✓ Identify and name a variety of everyday materials</li> <li>✓ Describe the simple physical properties of a variety of everyday materials</li> <li>✓ Compare and group together everyday materials on the basis of their physical properties</li> <li>✓ Find out how the shapes of solid objects made from some materials can be changed</li> </ul>	<p><b>Changing World</b></p> <ul style="list-style-type: none"> <li>✓ Observe changes across the four seasons. Trees, plants etc (Winter to Spring)</li> <li>✓ Observe and describe weather associated with the seasons and how day length varies.</li> </ul> <p><b>Animals and Plants</b></p> <ul style="list-style-type: none"> <li>✓ Identify and name a variety of common animals that are birds, fish, amphibians, reptiles, mammals and invertebrates.</li> <li>✓ Identify and name a variety of common animals that are carnivores, herbivores and omnivores.</li> <li>✓ Describe and compare the structure of a variety of common animals.</li> <li>✓ Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.</li> <li>✓ Identify and describe the basic structure of a variety of common flowering plants including trees.</li> </ul>	<p><b>Changing World</b></p> <ul style="list-style-type: none"> <li>✓ Observe changes across the four seasons. Trees, plants etc (Spring to Summer)</li> <li>✓ Observe and describe weather associated with the seasons and how day length varies.</li> </ul> <p><b>Humans</b></p> <p>Identify, name, draw and label basic parts of the human body and say which part of the body is associated with each sense.</p> <p><b>Physics</b></p> <ul style="list-style-type: none"> <li>- Identify a variety of light sources.</li> <li>- Understand how light travels into our eyes for us to see things.</li> <li>- Identify sources of sounds.</li> <li>- Understand how sound travels into our ears for us to hear things.</li> </ul>

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<b>Year 2</b>	<p><b>Rocks</b></p> <ul style="list-style-type: none"> <li>✓ Compare and group together different kinds of rocks on the basis of their simple physical properties</li> <li>✓ Relate the simple physical properties of some rocks to their formation (igneous or sedimentary)</li> <li>✓ Describe in simple terms how fossils are formed when things that have lived are trapped within sedimentary rock</li> </ul> <p><b>Forces and Magnets</b></p> <ul style="list-style-type: none"> <li>✓ Notice that some forces need contact between two objects and some forces act at a distance</li> <li>✓ Observe how magnets attract and repel each other and attract some materials and not others</li> <li>✓ 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</li> </ul>	<p><b>Plants</b></p> <ul style="list-style-type: none"> <li>✓ Identify and describe the function of different parts of flowering plants; roots stem leaves and flowers,</li> <li>✓ 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</li> <li>✓ Investigate the way in which water is transported in plants,</li> <li>✓ Explore the role of flowers in the life cycle of flowering plants, including pollination, seed formation and seed dispersal</li> </ul> <p><b>Animals</b></p> <ul style="list-style-type: none"> <li>✓ 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</li> <li>✓ Describe the ways in which nutrients and water are transported in animals, including humans</li> <li>✓ Identify that humans and some animals have skeletons and muscles for support, protection and movement</li> </ul>	<p><b>Light</b></p> <ul style="list-style-type: none"> <li>✓ Observe and name a variety of sources of light including electric lights, flames and the sun, explaining that we see things because light travels from them to our eyes</li> <li>✓ Notice that light is reflected from surfaces</li> <li>✓ Associate shadows with a light source being blocked by something; find patterns that determine the size of shadows</li> </ul>
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<b>Year 3</b>	<p><b>Rocks</b></p> <ul style="list-style-type: none"> <li>✓ Compare and group together different kinds of rocks on the basis of their simple physical properties</li> <li>✓ Relate the simple physical properties of some rocks to their formation (igneous or sedimentary)</li> <li>✓ Describe in simple terms how fossils are formed when things that have lived are trapped within sedimentary rock</li> </ul> <p><b>Forces and Magnets</b></p> <ul style="list-style-type: none"> <li>✓ Notice that some forces need contact between two objects and some forces act at a distance</li> <li>✓ Observe how magnets attract and repel each other and attract some materials and not others</li> <li>✓ 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</li> </ul>	<p><b>Plants</b></p> <ul style="list-style-type: none"> <li>✓ Identify and describe the function of different parts of flowering plants; roots stem leaves and flowers,</li> <li>✓ 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</li> <li>✓ Investigate the way in which water is transported in plants,</li> <li>✓ Explore the role of flowers in the life cycle of flowering plants, including pollination, seed formation and seed dispersal</li> </ul> <p><b>Animals</b></p> <ul style="list-style-type: none"> <li>✓ 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</li> <li>✓ Describe the ways in which nutrients and water are transported in animals, including humans</li> <li>✓ Identify that humans and some animals have skeletons and muscles for support, protection and movement</li> </ul>	<p><b>Light</b></p> <ul style="list-style-type: none"> <li>✓ Observe and name a variety of sources of light including electric lights, flames and the sun, explaining that we see things because light travels from them to our eyes</li> <li>✓ Notice that light is reflected from surfaces</li> <li>✓ Associate shadows with a light source being blocked by something; find patterns that determine the size of shadows</li> </ul>
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<b>Year 4</b>	<p><b>Animals, including humans</b></p> <ul style="list-style-type: none"> <li>✓ Describe the simple functions of the basic parts of the digestive system in humans</li> <li>✓ Identify the different types of teeth in humans and their simple functions</li> </ul> <p><b>Evolution and Inheritance</b></p> <ul style="list-style-type: none"> <li>✓ Identify how plants and animals, including humans, resemble their parents in many features</li> </ul>	<p><b>Sound</b></p> <ul style="list-style-type: none"> <li>✓ Observe and name a variety of sources of sound, noticing that we hear with our ears</li> <li>✓ Identify how sounds are made, associating some of them with something vibrating</li> <li>✓ Recognise that sounds get fainter as the distance from the sound source increases</li> <li>✓ Find patterns between the pitch of a sound and features of the object that produced it</li> <li>✓ Find patterns between the volume of a sound and the strength</li> </ul> <p><b>States of Matter</b></p> <ul style="list-style-type: none"> <li>✓ Compare and group materials together, according to whether they are solids, liquids or gases</li> <li>✓ Observe that some materials change state when they are heat or cooled, and measure the temperature at which this happens in degrees Celsius, building on their teaching in mathematics</li> <li>✓ Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature</li> </ul>	<p><b>All Living Things</b></p> <ul style="list-style-type: none"> <li>✓ Identify and name a variety of living things (plants and animals) in the local and wider environment using classification keys to assign them to groups</li> <li>✓ Give reasons for classifying plants and animals based on specific characteristics</li> <li>✓ Recognise that environments are constantly changing and this can sometimes pose dangers to specific habitats</li> </ul> <p><b>Evolution and Inheritance</b></p> <ul style="list-style-type: none"> <li>✓ Recognise that living things have changed over time and that fossils provide information about living things that inhabited the earth millions of years ago</li> </ul> <p>Identify how animals and plant are suited to and adapt</p>
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<b>Year 5</b>	<p><b>Properties of Everyday Materials and Reversible Change – IPC Making New Materials</b>            Compare and group together everyday materials based on evidence from comparative and fair tests, including their hardness, solubility, conductivity ( electrical and thermal) and response to magnets            Understand an how 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> <p><b>Changes that form new materials</b>            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, oxidisation, and the action of acid on bicarbonate of soda</p>	<p><b>Earth and Space</b>            Describe the movement of the earth 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</p> <p><b>Forces</b>            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            Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.</p>	<p><b>All living things</b>            Describe the life cycles common to a variety of animals, including humans ( birth, growth, development, reproduction, death), and to a variety of plants (growth, reproduction and death)</p> <p>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>
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<b>Year 6</b>	<p><b>All Living Things</b></p> <ul style="list-style-type: none"> <li>✓ Explain the classification of living things into broad groups according to common observable characteristics and based on similarities and differences, including plants, animals and micro-organisms</li> </ul> <p><b>Evolution and Inheritance</b></p> <ul style="list-style-type: none"> <li>✓ recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago</li> <li>✓ Recognise how and why the human skeleton has changed over time, since we separated from other primates</li> <li>✓ recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents</li> <li>✓ identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution</li> </ul>	<p><b>Light</b></p> <ul style="list-style-type: none"> <li>✓ Understand that light appears to travel in straight lines</li> <li>✓ 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</li> <li>✓ Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them, and to predict the size of shadows when the position of the light source changes</li> </ul> <p><b>Electricity</b></p> <ul style="list-style-type: none"> <li>✓ Identify and name the basic parts of a simple electrical circuit, including cells, wires, bulbs, switches and buzzers</li> <li>✓ Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit</li> <li>✓ 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</li> </ul>	<p><b>Animals including humans</b></p> <ul style="list-style-type: none"> <li>✓ Identify and name the main parts of the human circulatory system , and explain the functions of the heart, blood vessels and blood (including the pulse and clotting)</li> <li>✓ recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function</li> <li>✓ describe the ways in which nutrients and water are transported within animals, including humans</li> </ul>
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