

Autumn

Spring

Summer

Unit Summary

Animals including Humans

In this unit of work children will continue to learn about the importance of nutrition and should be introduced to the main body parts associated with the skeleton and muscles. Pupils might work scientifically by: identifying and grouping animals with and without skeletons and observing and comparing movement. They might compare and contrast the diet of different animals and decide ways of grouping them according to what they eat. They might research different food groups and how they keep us healthy.

Rocks

This unit of work children will link with geography where pupils will explore different kinds of rocks and soils including those in the local environment. Pupils might work scientifically by: observing rocks, including those used in the environment, exploring how and why they have changed over time. They might use hand lenses to identify and classify rocks. Pupils could explore different soils and identify similarities and differences between them. They could raise and answer questions about how soils are formed.

Light

In this unit of work pupils will explore what happens when light reflects off a mirror or other reflective surfaces, to help them to answer questions about how light behaves. They should look for, and measure, shadows, and find out how they are formed and what might cause the shadows to change. Pupils might work scientifically by: looking for patterns in what happens to shadows when the light source moves or the distance between the light source and the object changes.

Forces

In this unit of work children will observe that magnetic forces can act without direct contact, unlike most forces, where direct contact is necessary. They should explore the behaviour and everyday uses of different magnets. Pupils might work scientifically by: comparing how different things move and grouping them; raising questions and carrying out tests to find out how far things move on different surfaces and gathering and recording data to find answers their questions; exploring the strengths of different magnets and finding a fair way to compare them; sorting materials into those that are magnetic and those that are not; looking for patterns in the way that magnets behave in relation to each other and what might affect this, for example, the strength of the magnet or which pole faces another; identifying how these properties make magnets useful in everyday items and suggesting creative uses for different magnets

Plants

In this unit of work children will be introduced to the relationship between structure and function: the idea that every part has a job to do. They should explore questions that focus on the role of the roots and stem in nutrition and support, leaves for nutrition and flowers for reproduction. Pupils might work scientifically by: comparing the effect of different factors on plant growth, for example, the amount of light, the amount of fertiliser; discovering how seeds are formed by observing the different stages of plant life cycles over a period of time; looking for patterns in the structure of fruits that relate to how the seeds are dispersed. They might observe how water is transported in plants, for example, by putting cut, white carnations into coloured water and observing how water travels up the stem to the flowers

Year 3 Knowledge

<p>Animals including Humans</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • 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 • Identify that humans and some other animals have skeletons and muscles for support protection and movement 	<p>Rocks</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties • Describe in simple terms how fossils are formed when things that have lived are trapped within rocks • Recognise that soils are made from rocks and organic matter 	<p>Light</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • Recognise that they need light in order to see things and that the dark is the absence of light • Notice that light is reflected from surfaces • 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 a solid object • Find patterns in the way that the size of shadows change 	<p>Forces</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • Compare how things move on different surfaces • Notice that some forces need contact between two 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, and identify some magnetic materials • Describe magnets as having two poles • Predict whether two magnets will attract or repel each other, depending on which poles are facing. 	<p>Plants</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers • 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 • Investigate the way in which water is transported within plants • Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.
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Year 3 Scientific Enquiry Skills

Working Scientifically

Pupils in years 3 and 4 should be given a range of scientific experiences to enable them to raise their own questions about the world around them. They should start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions; recognise when a simple fair test is necessary and help to decide how to set it up; talk about criteria for grouping, sorting and classifying; and use simple keys. They should begin to look for naturally occurring patterns and relationships and decide what data to collect to identify them. They should help to make decisions about what observations to make, how long to make them for and the type of simple equipment that might be used.

They should learn how to use new equipment, such as data loggers, appropriately. They should collect data from their own observations and measurements, using notes, simple tables and standard units, and help to make decisions about how to record and analyse this data. With help, pupils should look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions. With support, they should identify new questions arising from the data, making predictions for new values within or beyond the data they have collected and finding ways of improving what they have already done. They should also recognise when

and how secondary sources might help them to answer questions that cannot be answered through practical investigations. Pupils should use relevant scientific language to discuss their ideas and communicate their findings in ways that are appropriate for different audiences.

<p>Ideas and Evidence in Science Pupils can recognise why it is important to collect evidence by making observations and measurements to answer a question, and that science has made our lives better.</p>	<p>Asking Questions and Enquiry Pupils can recognise how scientific ideas and concepts can be turned into relevant questions that can be investigated and put forward their own ideas about how to find the answer to a scientific question using different types of enquiries.</p>	<p>Predicting and Hypothesising Pupils can make a prediction, giving a reason based on everyday experience.</p>	<p>Planning and Enquiry Pupils can make a simple plan which identifies the basic features of the test, e.g. what is being changed, what is being measured and which variables are being controlled to keep the test fair.</p>	<p>Fair Testing Pupils can carry out a fair test which identifies the variable being changed, measured and controlled. Recognise and explain why it is fair.</p>	<p>Observing and Measuring Pupils can make observations and measurements which are relevant to the test. They can measure quantities in standard units, using a range of simple equipment.</p>
<p>Investigating Pupils can set up simple practical enquiries and consider fair tests.</p>	<p>Recording Results Pupils can record observations and measurements in a variety of ways, including ICT. They can record results in a variety of ways, including simple tables, labelled diagrams, keys and bar charts.</p>	<p>Presenting Results Pupils can, where appropriate, record observations and standard.</p>	<p>Drawing Conclusions Pupils can identify and explain simple patterns in recorded measurements and observations, and communicate what has been found in a simple scientific way.</p>	<p>Reviewing the Test Pupils can suggest improvements to the test to improve.</p>	