

Cumwhinton School Curriculum - Science Y3 AUT

Year 3	NC Content	<p><u>Plants</u> Pupils should be taught to: 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</p> <p><u>Animals, including humans</u> Pupils should be taught to: 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> <p><u>Rocks</u> Pupils should be taught to: 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 rock recognise that soils are made from rocks and organic matter</p> <p><u>Light</u> Pupils should be taught to: 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 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</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, and identify some magnetic materials describe magnets as having 2 poles predict whether 2 magnets will attract or repel each other, depending on which poles are facing</p>
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Science

Scientific Knowledge & Understanding

Science Enquiry & Working Scientifically

Uses & Implications of Science today and for the future

Mapping across the Year			
	AUTUMN	SPRING	SUMMMER
Scientific Knowledge & Understanding	<p><u>Animals including Humans</u> 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> <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, and identify some magnetic materials Describe magnets as having 2 poles Predict whether 2 magnets will attract or repel each other, depending on which poles are facing</p>	<p><u>Rocks</u> 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 rock Recognise that soils are made from rocks and organic matter</p>	<p><u>Plants</u> 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</p> <p><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 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</p>
Science Enquiry & Working Scientifically	<p><u>Animals including Humans</u> Identifying differences, similarities or changes related to simple scientific ideas and processes Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</p> <p><u>Forces and Magnets</u> Asking relevant questions and using different types of scientific enquiries to answer them Setting up simple practical enquiries, comparative and fair tests Making systematic and careful observations. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p>	<p><u>Rocks</u> Identifying differences, similarities or changes related to simple scientific ideas and processes Asking relevant questions and using different types of scientific enquiries to answer them Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</p>	<p><u>Plants</u> Setting up simple practical enquiries, comparative and fair tests Making systematic and careful observations. Identifying differences, similarities or changes related to simple scientific ideas and processes Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions</p> <p><u>Light</u> Asking relevant questions and using different types of scientific enquiries to answer them Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables Using straightforward scientific evidence to answer questions or to support their findings.</p>
Uses & Implications of Science today and for the future	<p><u>Animals including Humans</u> Use food labels to explore the nutritional content of a range of food items. Identify similarities & differences Find out the types of food that contain the different nutrients. Use food labels to answer enquiry questions e.g. How much fat do different types of pizza contain? How much sugar is in soft drinks? Gather & record data in charts, tables & graphs. Plan a daily diet to contain a good balance of nutrients Explore the nutrients contained in fast food.</p> <p><u>Forces and Magnets</u> Carry out investigations to explore how objects move on different surfaces e.g. spinning tops/coins, rolling balls/cars, clockwork toys, soles of shoes etc.</p>	<p><u>Rocks</u> Observe how rocks change over time e.g. gravestones or old buildings.</p>	<p><u>Plants</u> Investigate what happens to plants when they are put in different conditions e.g. in darkness, in the cold, deprived of air, different types of soil, different fertilisers, varying amounts of space. Use the results to draw conclusions about what plants need to survive. Spot flowers, seeds, berries and fruits outside throughout the year. Identify similarities & differences.</p> <p><u>Light</u> Explore how objects with different surfaces (e.g. shiny vs matt) are more or less visible. Investigate the role of reflectors in road safety.</p>

CONCEPTUAL SCHOOL AMBITION DRIVERS

	EYFS & KS1	LKS2	UKS2
AUT	Diversity	Fairness	Individuality
SPR	Truth	Change	Resilience
SUM	Responsibility	Equality	Sustainability

Science - AUTUMN 1 YEAR 3
HUMANITY - Fairness
Scientific Knowledge & Understanding Science Enquiry & Working Scientifically Uses & Implications of Science today and for the future

Global goals - poverty link

	NC	CUMWHINTON CURRICULUM
Finding out (Facts & knowledge)	<p>Animals including Humans</p> <p>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</p> <p>Identify that humans and some other animals have skeletons and muscles for support, protection and movement</p>	<p>What is nutrition? Give a definition. Nutrition is food and drink you put into your body in order to survive.</p> <p>What do humans need to consume to live? Discuss nutrients and calories in foods and drinks.</p> <p>How can animals get nutrition? Only from what they eat.</p> <p>Identify bones in the human skeleton</p> <p>Identify muscles in the human skeleton</p> <p>Discuss the uses of muscles - to support protect and move</p> <p>Compare animal and human skeletons</p>
Using (Applying & analysing)	<p>Animals including Humans</p> <p>Identifying differences, similarities or changes related to simple scientific ideas and processes</p> <p>Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions</p> <p>Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</p>	<p>Non- statutory</p> <p>Pupils might work scientifically by: identifying and grouping animals with and without skeletons and observing and comparing their movement;</p> <p>Exploring ideas about what would happen if humans did not have skeletons.</p> <p>They might compare and contrast the diets of different animals (including their pets) and decide ways of grouping them according to what they eat.</p> <p>They might research different food groups and how they keep us healthy, and design meals based on what they find out.</p>
Concluding (Evaluating & summarising)	<p>Animals including Humans</p> <p>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.</p>	<p>Use food labels to explore the nutritional content of a range of food items. Identify similarities & differences</p> <p>Find out the types of food that contain the different nutrients.</p> <p>Use food labels to answer enquiry questions e.g. How much fat do different types of pizza contain? How much sugar is in soft drinks? Gather & record data in charts, tables & graphs.</p> <p>Plan a daily diet to contain a good balance of nutrients</p> <p>Link to Global goals - poverty (Y3 Spring Geography)</p> <p>Explore the nutrients contained in fast food.</p>

Science - AUTUMN 2 YEAR 3

HUMANITY - Fairness

Scientific Knowledge & Understanding

Science Enquiry & Working Scientifically

Uses & Implications of Science today and for the future

Would it be fair if Wolverine and Magnito had a fight?

	NC	CUMWHINTON CURRICULUM
Finding out (Facts & knowledge)	<p>Forces and Magnets</p> <p>Compare how things move on different surfaces</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 or 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>Friction - what is friction? Friction is a force between two surfaces that are sliding, or trying to slide, across each other.</p> <p>See NC</p>
Using (Applying & analysing)	<p>Asking relevant questions and using different types of scientific enquiries to answer them</p> <p>Setting up simple practical enquiries, comparative and fair tests</p> <p>Making systematic and careful observations.</p> <p>Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions</p>	<p>Complete an investigation with cars using different materials on sloped surfaces (same car, same angle, different material - fair test)</p> <p>Can you adapt a toy car so that it moves without you touching it? (Understanding that magnetic forces act without materials touching)</p> <p>See NC</p>
Concluding (Evaluating & summarising)	<p>Carry out investigations to explore how objects move on different surfaces e.g. spinning tops/coins, rolling balls/cars, clockwork toys, soles of shoes etc.</p>	<p>Use a variety of different objects in practical investigations, spinning tops, coins, balls, etc.</p>