

Year 5 Science			
	<u>Autumn Term 1</u>		
<u>Topic</u>	<u>Objectives linked to curriculum</u>	<u>Working Scientifically</u>	<u>Vocabulary</u>
<u>Forces (gravity, friction, air and water resistance, levers pulleys gears.)</u>	- I can explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. - I can identify the effects of air resistance, water resistance and friction, that act between moving surfaces - I can recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. - I can explore the effects of air resistance by observing how different objects such as parachutes and sycamore seeds fall. - I can explore the effects of friction on movement and find out how it slows or stops moving objects. - I can find out how scientists, helped to develop the theory of gravitation for example, Galileo Galilei and Isaac Newton	WS1 planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary WS2 taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate WS3 recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs WS4 using test results to make predictions to set up further comparative and fair tests. WS5 reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations WS6 identifying scientific evidence that has been used to support or refute ideas or arguments. WS7 explore and talk about their ideas; asking their own questions about scientific phenomena; and analysing functions, relationships and interactions more systematically.	Force, gravity, Earth, air resistance, water resistance, friction, mechanisms, simple machines, levers, pulleys, gears

		WS8 recognise that scientific ideas change and develop over time. WS9 draw conclusions based on their data and observations, use evidence to justify their ideas, and use their scientific knowledge and understanding to explain their findings. WS10 Pupils should read, spell and pronounce scientific vocabulary correctly.	
	<u>Year 5 Autumn Term 2</u>		
<u>Topic</u>	<u>Objectives linked to curriculum</u>	<u>Working Scientifically</u>	<u>Vocabulary</u>
<u>Earth and space (Other planets)</u>	- I can describe the movement of the Earth and other planets, relative to the sun in the solar system - I can describe the movement of the Moon relative to the Earth. - I can describe the Sun, Earth and Moon as approximately spherical bodies. - I can use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky. - I can understand that the Sun is a star at the centre of our solar system and that it has eight planets: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune (Pluto was reclassified as a 'dwarf planet' in 2006). Opportunity to link to DT - I can understand that a moon is a celestial body that orbits a planet.	WS6 identifying scientific evidence that has been used to support or refute ideas or arguments. WS7 explore and talk about their ideas; asking their own questions about scientific phenomena; and analysing functions, relationships and interactions more systematically. WS8 recognise that scientific ideas change and develop over time. WS9 draw conclusions based on their data and observations, use evidence to justify their ideas, and use their scientific knowledge and understanding to explain their findings. WS10 Pupils should read, spell and pronounce scientific vocabulary correctly.	Earth, Sun, Moon, (Mercury, Jupiter, Saturn, Venus, Mars, Uranus, Neptune), spherical, solar system, rotates, star, orbit, planets

	(Earth has one moon; Jupiter has four large moons and numerous smaller ones).		
	<u>Year 5 Spring Term 1</u>		
<u>Topic</u>	Objectives linked to curriculum	Working Scientifically	Vocabulary
<u>Properties and Changes of Materials.</u>	- I can compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal). - I can compare and group together everyday materials based on their response to magnets. - I can understand that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution. - I can use my knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. - I can give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood, and plastic. - I can demonstrate that dissolving, mixing and changes of state are reversible changes. - I can explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible.	WS1 planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary WS2 taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate WS3 recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs WS4 using test results to make predictions to set up further comparative and fair tests WS5 reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations WS7 explore and talk about their ideas; asking their own questions about scientific phenomena; and analysing functions, relationships and interactions more systematically.	Thermal/electrical insulator/conductor, change of state, mixture, dissolve, solution, soluble, insoluble, filter, sieve, reversible/non-reversible change, burning, rusting, new material

	- I can explain that some changes may result in the formation of new materials including changes associated with burning. - I can explain that some changes result in the formation of new materials including the action of acid on bicarbonate of soda. - I can explore reversible changes, including, evaporating, - I can explore the reversible change of filtering. - I can explore the reversible change of sieving. - I can explore the reversible change of melting. - I can explore the reversible change of dissolving, - I can recognise that melting and dissolving are different processes. - I can explore changes that are difficult to reverse, for example, burning, rusting. - I can explore changes have other reactions, for example, vinegar with bicarbonate of soda.	WS8 recognise that scientific ideas change and develop over time. WS9 draw conclusions based on their data and observations, use evidence to justify their ideas, and use their scientific knowledge and understanding to explain their findings. WS10 Pupils should read, spell and pronounce scientific vocabulary correctly	
	<u>Year 5 Summer Term 1</u>		
<u>Topic</u>	<u>Objectives linked to curriculum</u>	<u>Working Scientifically</u>	<u>Vocabulary</u>
<u>Living things and their habitats.</u> <u>(life process of reproduction in plants and animals)</u>	- I can describe the life process of reproduction in some plant. - I can find out about different types of reproduction, including sexual and asexual reproduction in plants,	WS6 identifying scientific evidence that has been used to support or refute ideas or arguments. WS7 explore and talk about their ideas; asking their own questions about scientific phenomena; and analysing functions,	Life cycle, reproduce, sexual, sperm, fertilises, egg, live young,

	• I can describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird • I can describe the life process of reproduction in some animals. • I can find out about different types of reproduction, including sexual reproduction in animals. • I can raise questions about my local environment throughout the year. • I can find out about the work of naturalists and animal behaviourists.	relationships and interactions more systematically. WS8 recognise that scientific ideas change and develop over time. WS9 draw conclusions based on their data and observations, use evidence to justify their ideas, and use their scientific knowledge and understanding to explain their findings. WS10 Pupils should read, spell and pronounce scientific vocabulary correctly.	metamorphosis, asexual, plantlets, runners, bulbs, cuttings
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