The Science Curriculum at Winford

	Biology		Chemistry		Physics

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Our Christian Values	Respect Forgiveness	Patience Happiness	Honesty Cooperation	Hope Determination	Wisdom Curiosity	Trust Peace
YEAR 1	**Animals including humans**		**Everyday materials**		**Plants**	**Seasonal changes**
	-classify fish, amphibians, reptiles, birds and mammals -carnivores, herbivores and omnivores		-identify: wood, plastic, glass, metal, water, and rock - describe and compare materials based on physical properties		-deciduous and evergreen -label leaves, flowers, petals, roots, bulb, seed, trunk, stem	-the four seasons -the weather linked to the seasons and how the day length changes
Working Scientifically	-Ask simple questions and recognise they can be answered in different ways. -Observe closely using simple equipment. Perform simple tests. Identify and classify. Use observations					
YEAR 2	**Animals including humans**		**Use of everyday materials**		**Plants**	**Living things and their habitats**
	-animal offspring -that animals need water, food and air -importance of healthy food and exercise for humans		-identify and compare the suitability of materials for different uses -manipulating solid objects (squashing, bending, twisting)		-how seeds and bulbs grow -discover what plants needs to grow healthy	-things that are living, dead and have never been alive -habitats -simple food chains
Working Scientifically	-Ask simple questions and recognise they can be answered in different ways. -Observe closely using simple equipment. -Perform simple tests. -Identify and classify. -Use observations and ideas to suggest answers to questions. -Gather and record data to help answer questions					
YEAR 3	**Animals including humans**	**Light**	**Rocks**	**Forces and magnets**	**Plants**	
	-nutrition for animals and humans	-why we need light	-compare properties of rocks	-how things move on different surfaces	-functions of: roots, flower, leaves, stem -requirements of different plants	

	-Skeletons and muscles	-that the darkness is the absence of light -light reflects -that the sun can be dangerous -how shadows are formed and how they change	-how fossils are formed -that soils are made from rocks	-magnetic forces act at a distance -magnets: attracting, repelling, the poles and which objects are magnetic	-how water is transported through plants -pollination and seeds
Working Scientifically	-Ask relevant questions and use different types of scientific equipment to answer them. -Set up simple practical enquiries, comparative and fair tests. -Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment including thermometers and data loggers. -Gather, record, classify and present data in a variety of ways to help answer questions. -Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. -Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. -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. -Use straightforward scientific evidence to answer questions or to support their findings.				
YEAR 4	**Animals including humans**	**Living things and their habitats**	**Sound**	**Electricity**	**States of matter**
	-digestive system -types of teeth -food chains, predators and prey	-grouping living things -use classification keys -environmental changes and dangers	-how sounds are made -how vibrations travel -pitch and volume	-appliances that use electricity -simple series circuits (cell, wires, bulbs, switches and buzzers) -switches -conductors and insulators	-solids, liquids and gasses -changing states when heated or cooled (degrees Celsius) -evaporation, condensation and the water cycle
Working Scientifically	-Ask relevant questions and use different types of scientific equipment to answer them. -Set up simple practical enquiries, comparative and fair tests. -Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment including thermometers and data loggers. -Gather, record, classify and present data in a variety of ways to help answer questions. -Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. -Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. -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. -Use straightforward scientific evidence to answer questions or to support their findings.				

YEAR 5	Animals including humans	Living things and their habitats	Earth and space	Light	Forces
	-changes as humans develop to old age	-differences in the life cycles of: mammals, amphibians, insects and birds -reproduction in plants and animals	-movement of the earth and planets relative to the sun -movement of the moon relative to the earth -the earth's rotation day and night	-that light travels in straight lines -how we see -how light travels -how light affects how shadows are formed and the shape of them	-gravity -air resistance, water resistance and friction -mechanisms, levers, pulleys and gears
Working Scientifically	-Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. -Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. -Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. -Use test results to make predictions to set up further comparative and fair tests. -Report and present findings from enquiries, including conclusions, causal relationships and explanations of degree of trust in results, in oral and written forms such as displays or other presentations. -Identify scientific evidence that has been used to support or refute ideas or arguments.				

YEAR 6	Animals including humans	Properties and changes in materials	Electricity	Evolution and inheritance	Living things and their habitats
	-circulatory system -impact of diet, exercise and drugs on the function of bodies -describe how nutrients and water are transported in animals	-compare materials based on: hardness, solubility, transparency, conductivity and response to magnets -dissolving, liquids and solutions -filtering, evaporating, sieving -fair tests -reversible and irreversible changes	-associate brightness or lamp or volume of buzzers with voltage and number of cells -changes in brightness of bulbs and loudness of buzzers -use symbols to draw circuit diagrams	-the information that fossils provide -variation and adaptation	-detailed classification of micro-organisms, animals and plants -give reasons for classification based on characteristics
Working Scientifically	-Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. -Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. -Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. -Use test results to make predictions to set up further comparative and fair tests. -Report and present findings from enquiries, including conclusions, causal relationships and explanations of degree of trust in results, in oral and written forms such as displays or other presentations. -Identify scientific evidence that has been used to support or refute ideas or arguments.				