Year 5 Science

Living Things and their Habitats	Animals including Humans	Earth and Space	Properties and Changes of Materials	Forces	Working Scientifically
L1 I can describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.	A1 I can describe the changes as humans develop to old age.	S1 I can describe the movement of the Earth, and other planets, relative to the Sun in the solar system.	M1 I can compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets.	F1 I can explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.	WS1 I can take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.
L2 I can describe the life process of reproduction in some plants and animals.		S2 I can describe the movement of the Moon relative to the Earth.	M2 I can name some materials that will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.	F2 I can identify the effects of air resistance, water resistance and friction that act between moving surfaces.	WS2 I can use tests results to make predictions to set up further comparative and fair tests.

		S3 I can describe the Sun, Earth and Moon as approximately spherical bodies.	M3 I can use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.	F3 I can recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.	WS3 I can identify scientific evidence that has been used to support or refute ideas or arguments.
		S4 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.	M4 I can give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.		
			M5 I can demonstrate that dissolving, mixing and changes of state are reversible changes.		
			M6 I can 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 and the action of acid on bicarbonate of soda.		

Topic coverage

Autumn 1 Properties and Changes of Materials	Autumn 2 Forces	Spring Space	Summer 1 Humans	Summer 2 Amazing Amazon
M1-6 WS1-3	F1-3 WS1-3	S1-4 WS3	A1 WS1	L1, L2
Vocabulary				
Properties & changes of materials Hardness, solubility, mixing, dissolving, melting, solution, solute, transparency, conductivity, magnetic, filter, filtration, evaporation, condensation,	**Forces** Force, friction, Newton, Earth, gravity, newton meters, air resistance, water resistance, moving surfaces, gears, pulleys, levers	**Earth & Space** Earth, sea, sun, moon, axis, planets, solar system, star, constellation, phases of the moon, waxing, waning, gibbous moon, full moon	**Animals including humans** Foetus, embryo, womb, gestation, baby, toddler, teenager, puberty, adolescent, adult, elderly, development, growth	**Living things and their habitats** Reproduction of mammal, bird, insect and amphibian , offspring, complete / incomplete metamorphosis, hatch

reacting / reactants				

Working Scientifically Vocabulary

Investigation cycle, Question, prediction, method, etc.(see below)

Research - relevant questions, scientific enquiry, comparative and fair test, systematic, careful observation, accurate measurements.

Equipment - thermometer, data logger,

Data - gather, record, classify, present

Plan - variables, measurements, accuracy, precision, repeat readings,

Report data - scientific diagrams, labels, classification keys, tables, scatter graphs, bar graph and line graphs, predictions, further comparative and fair test,

Report and present - conclusions, causal relationship, explanations, degree of trust, oral and written display and presentation.

Evidence - support, refute ideas or arguments identify, classify and describe patterns, systematic, quantitative, measurements.

I will know..

Properties & changes of materials	Forces	Earth & Space	Animals including humans	Living things and their habitats
- how to group and compare materials according to their properties - the names of some materials that will dissolve in liquid to form a solution,	- that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object - the effects of air resistance, water	- that the earth moves - how other planets move, relative to the Sun, in the solar system. - how to describe the movement of the moon in relation to the earth - what shape the planets are - that the earth's rotation creates day and night - why the sun appears to move across the sky	- and can describe the changes that happen as humans develop to old age - how to investigate including variables, measurements,	- the differences between the life cycles of mammal, birds, amphibians and insects - about reproduction in some plants and animals - how to investigate

- how to recover a substance from a solution - about solids liquids and gases - how mixtures might be separated, including through filtering, sieving and evaporating. - how to use evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. - that dissolving, mixing and changes of	resistance and friction that act between moving surfaces - that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect - how to take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. - what equipment I will need to	- how to take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. - what equipment I will need to carry out an investigation - how to investigate including variables, measurements, accuracy, precision and repeat readings - that fair test, careful observations and accuracy are important - how to record my findings in different ways and evaluate what I find out the appropriate scientific vocabulary and will be able to confidently read, write and apply this in my work	accuracy, precision and repeat readings - that fair test, careful observations and accuracy are important - how to record my findings in different ways and evaluate what I find out - the appropriate scientific vocabulary and will be able to confidently read, write and apply this in my work	including variables, measurements, accuracy, precision and repeat readings - that fair test, careful observations and accuracy are important - how to record my findings in different ways and evaluate what I find out - the appropriate scientific vocabulary and will be able to confidently read, write and apply this in my work

state are reversible changes. - 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 and the action of acid on bicarbonate of soda. - how to take measurements, using a range of scientific equipment, with increasing accuracy and precision,	carry out an investigation - how to investigate including variables, measurements, accuracy, precision and repeat readings - that fair test, careful observations and accuracy are important - how to record my findings in different ways and evaluate what I find out - the appropriate scientific vocabulary and will be able to confidently read, write and			

taking repeat readings when appropriate - how to investigate including variables, measurements, accuracy, precision and repeat readings - that fair test, careful observations and accuracy are important - how to record my findings in different ways and evaluate what I find out - the appropriate scientific vocabulary and will be able to confidently read, write and	apply this in my work			

apply this in my work				