

APS CURRICULUM	SCIENCE	YEAR 5/6		YEARLY OVERVIEW – YEAR B	
Knowledge, Skills and understanding breakdown					
National Curriculum Links	Light Autumn Term	Electricity Autumn Term	Animals incl. Humans Spring Term	Living Things Spring Term	Materials Summer Term
Living things and their habitats Pupils should be taught to: - Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals - Give reasons for classifying plants and animals based on specific characteristics. Light Pupils should be taught to: - Recognise that light appears to travel in straight lines - Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye - Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes - Use the idea that light travels in straight lines to explain	- Can they explain how light travels? - Can they explain how the human eye sees objects? - Can they explain how different colours of light can be created? - Can they use and explain how simple optical instruments work? (periscope, telescope, binoculars, mirror, magnifying glass, Newton’s first reflecting telescope) Can they explain changes linked to light (and sound)?	- Can they identify and name the basic parts of a simple electric series circuit? (cells, wires, bulbs, switches, buzzers) - Can they compare and give reasons for variation in how components function, including bulb brightness, buzzer volume and on/off position of switches? - Can they explain how to make changes in a circuit? - Can they explain the impact of changes in a circuit? - Can they explain the effect of changing the voltage of a battery?	- Can they create a timeline to indicate stages of growth in humans? - Can they explain what puberty is?	- Can they describe and compare the life cycles of a range of animals, including humans, amphibians, insects and birds? - Can they describe the life cycles of common plants? - Can they describe and explain the process of respiration in humans and plants? - Can they talk with knowledge about birth, reproduction and death of familiar animals or plants? - Can they explore the work of well know naturalists? (David Attenborough and Jane Goodall) - Can they explain the classification of living things into broad groups based on common observable characteristics? (five kingdoms of all living	- Can they test and group materials based on scientific evidence? (hardness, solubility, transparency, conductivity, insulation, magnetism) - Can they explain the process of dissolving? - Can they recover a substance from a solution? - Can they decide how a mixture would best be separated? (filtering, sieving, evaporating) - Can they give reasons for the uses of everyday materials based on scientific evidence? - Can they show what they know about the properties of different materials? - Can they use their knowledge of materials to suggest

why shadows have the same shape as the objects that cast them. Electricity Pupils should be taught to: • Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit • Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches • Use recognised symbols when representing a simple circuit in a diagram. Living things and their habitats Pupils should be taught to: • Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird • Describe the life process of reproduction in some plants and animals. Animals, including humans Pupils should be taught to: • Describe the changes as humans develop to old age.				things, vertebrates, mammals, marsupials) • Can they sub divide their original groupings and explain their divisions? • Can they group animals into vertebrates and invertebrates?	ways to classify? (solids, liquids, gasses) • Can they describe changes using scientific words? (evaporation, condensation) • Can they use the terms 'reversible' and 'irreversible'?
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Properties and changes of materials	More Challenging				
	Light	Electricity	Animals incl. Humans	Living Things	Materials
Pupils should be taught to: • 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 • Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution • Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating • Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic • Demonstrate that dissolving, mixing and changes of state are reversible changes • 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	• Can they use the ray model to explain the size of shadows?	• Can they make their own traffic light system or something similar? • Can they explain the danger of short circuits? • Can they explain what a fuse is?	• Can they create a timeline to indicate stages of growth in certain animals, such as frogs and butterflies?	• Can they observe their local environment and draw conclusions about life-cycles? (for example, the vegetable garden or plants in a shrubbery) • Can they compare the life cycles of plants and animals in their local environment with the life cycles of those around the world, e.g. rainforests? • Can they readily group animals into reptiles, fish, amphibians, birds and mammals?	• Can they describe methods for separating mixtures? (filtration, distillation) • Can they work out which materials are most effective for keeping us warm or for keeping something cold?

the action of acid on bicarbonate of soda.					
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