

Holy Cross CEVA Primary School

Science Key Stage 2 Coverage and Progression



	Year 3	Year 3
Big Question	How do wild plants and trees grow?	A study of human/animal nutrition, their skeletons and muscles.
NC coverage	Working Scientifically Plants	Working Scientifically Animals, including humans
Scientific knowledge, skills and understanding progression	- I can identify and describe functions of the different parts of flowering plants. (pl3a) - I understand what is needed for plants to live and grow. (pl3b) - I can explain variances between plants. - I can investigate the way in which water is transported within plants. (pl3c) - I can explain the importance of flowers, including pollination, seed formation and seed dispersal (pl3d)	- I can explain the importance of a nutritionally balanced diet. (AiH3a) - I can describe how nutrients, water and oxygen are transported within animals and humans (AiH3b) - I understand that animals and humans get nutrients from food and cannot generate their own food. - I can describe and explain the human skeleton. (AiH3c) (as above but also animals) (AiH3e) - I can describe and explain the muscular system of a human. (AiH3d)
	Year 3	Year 3
Big Question	How do magnets work?	Fun experiments
NC coverage	Working Scientifically Forces and magnets	Working Scientifically
Scientific knowledge, skills and understanding progression	- I can compare how objects move on differing surfaces. (fm3a) - I can observe how some magnetic forces can be transmitted without direct contact. (fm3b) - I can describe how magnets attract and repel each other. (fm3c) - I can classify magnetic materials. (fm3d) - I understand that magnetic forces can act at a distance. - I can describe some magnetic materials. - I can describe how magnets have two poles (N&S) (fm3e) - I can make predictions on whether two magnetic poles will attract or repel each other. (fm3f)	Refer to separate 'Working Scientifically' guidelines.
	Year 3	Year 3
Big Question	How important is light?	Are all rocks the same?
NC coverage	Working Scientifically Light	Working Scientifically Rocks
Scientific knowledge, skills and understanding progression	- I can recognise that we need light in order to see things. (L 3b) - I know that dark is the absence of light. (L 3a) - I notice that light is reflected from surfaces. (L 3c) - I know that light from the sun can be dangerous and we need to protect our eyes in different ways. (L 3f) - I understand that shadows are formed when the light from a light source is blocked by a solid object. (L 3d) - I can find patterns in the way that the size of shadows change. (L 3e)	- I can compare and group together different rocks based upon their appearances and physical properties. (R 3a) - I can describe how rocks can be useful to us. - I can describe and explain the differences between sedimentary and igneous rocks, considering their formation. (R 3d) - I can describe how fossils are formed when things that have lived are trapped within rock. (R 3b) - I can recognise that soils are made from rocks and organic matter. (R 3c)

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	Year 4	Year 4
Big Question	How could we cope without electricity for one day?	Why did the snowmen melt?
NC coverage	Working Scientifically Electricity	Working Scientifically States of Matter
Scientific knowledge, skills and understanding progression	- I can name electrical appliances. (E4a) - I can construct a simple circuit and name the components. (E 4b and E4c) - I can draw a circuit diagram. (E4 d) - I can evaluate whether a lamp will light in a circuit. (E4 e) - I can recognise the function of a switch. (E 4f) - I can associate a switch position and the effect on the lamp. - I can recognise common conductors and insulators. (E 4g)	- I can compare and group materials according to whether they are a solid, liquid or gas. (SM4a) - I can describe what happens when a material is heated or cooled. - I can measure/research the temperature (deg celcius) at which materials change state. (SM 4b) - I can describe how some materials change state. (SM 4d) - and 'explore' changes of state (SM 4e) - I can recognise evaporation and condensation. (SM 4c) - I can describe the water cycle. (SM 4f) - I can identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.
	Year 4	Year 4
Big Question	A study of the human digestive system	How do we make different qualities of sounds?
NC coverage	Working Scientifically Animals including humans	Working Scientifically Sound
Scientific knowledge, skills and understanding progression	- I can identify the basic parts of a human digestive system. (AiH 4a) - I can describe the simple functions of these parts. (AiH 4b) - I can describe the functions of different types of human teeth. (AiH 4d) - I can compare the teeth of herbivores and carnivores, including humans. (AiH 4c) - I can explain a simple food chain. (AiH 4e) - I can construct and interpret a variety of food chains, identifying producers, predators and prey. (AiH 4f)	- I can describe a range of sounds and explain how they are made. (S 4a) - I can associate sounds with vibrations. (S 4c) - I can compare sounds and explain their origins. - I can explain how to make a sound louder/softer. (S 4e) - I recognise how vibrations travel to the ear. (S 4b) - I can find patterns between the volume of the sound and strength of vibrations that make it. (S 4e) - I can associate fainter sounds with distance. (S 4f) - I can explain how to change the pitch of a sound (S 4d) - I can explain how different materials can effect pitch and volume.
	Year 4	Year 4
Big Question	Fun experiments	Which wild plants and animals thrive in Oldham?
NC coverage	Working Scientifically	Working Scientifically Living things and their habitats
Scientific knowledge, skills and understanding progression	Refer to separate 'Working Scientifically' guidelines.	- I can recognise that living things can be grouped in various ways. (LTH 4a) - I can explore and use a classification key to group, identify and name a variety of living things. (LTH 4b) - I can create classification keys to group, identify and name living things (for other people to use). (LTH 4c) - I can compare the classification of common plants and animals to living things found in other places. - I can recognise that environments can change and this can pose a threat to living things. (LTH 4d)

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	Year 5	Year 5
Big Question	Do all plants and animals start life as an egg?	What would you see on a trip around the solar system?
NC coverage	Working Scientifically Living things and their habitats	Working Scientifically Earth and Space
Scientific knowledge, skills and understanding progression	- I can describe the differences in the life cycles of a mammal, amphibian, insect and bird. (LTH 5a) - I can describe the life cycles of common plants. - I can explore the work of well-known naturalists and animal behaviourists. - I can compare life cycles of local plants and animals with those found globally. (LTH 5b) - I can describe the process of reproduction in plants. (LTH 5c)- and animals- (LTH 5d)	- I can identify and explain the movement of the Earth and other planets relative to the sun. (ES 5a) - I can explain how seasons and associated weather is created. - I can describe and explain the movement of the moon relative to Earth. (ES 5b) - I can describe the sun, earth and moon as spherical bodies. (ES 5d) - I can explain day and night and the apparent movement of the sun across the sky. (ES 5c)
	Year 5	Year 5
Big Question	Which materials would you choose to build a city?	Can you feel the force?
NC coverage	Working Scientifically Properties and change of materials	Working Scientifically Forces
Scientific knowledge, skills and understanding progression	- I can compare and group materials based upon their properties. (PCM 5a) - I can explain how some materials dissolve in liquid to form a solution. (PCM 5b) - I can describe how to recover a substance from a solution. (PCM 5c) - I can suggest the best ways to separate a mixture, ie, filtering, sieving, evaporating. (PCM 5d) and demonstrate this- (5e) - I can give reasons for the everyday use of common materials. (PCM 5i) - I can describe changes using scientific words. (PCM 5g) - I can discuss a reversible reaction and compare this to a non-reversible reaction (using the correct words) (PCM 5f) and (PCM 5h)	- I can explain that unsupported objects fall towards the earth due to gravity. (F 5a) - I can explain the effects of air resistance, water resistance and friction that act between moving surfaces. (F 5b, 5c and 5d) - I can recognise that some mechanisms allow a smaller force to have a greater effect (ie, levers, pulleys and gears). (F5e)
	Year 5	Year 5
Big Question	A study of the growth and development of humans.	Fun Experiments
NC coverage	Working Scientifically Animals, including humans	Working Scientifically
Scientific knowledge, skills and understanding progression	- I can describe the changes as humans develop to old age. - I can create a growth timeline for different species, including the development of humans. (AiH 5a)	Refer to separate 'Working Scientifically' guidelines.

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	Year 6	Year 6
Big Question	How can you light up your life?	How can we classify plants and animals?
NC coverage	Working Scientifically Light	Working Scientifically Living things and their habitats
Scientific knowledge, skills and understanding progression	- I can recognise that light travels in straight lines. (L 6a) - I can use this to explain that objects can be seen as they emit or reflect light into the eye. (L 6b) - I can explain how shadows are made and why they have the same shape as the object that cast them. (L 6c) - I can explain how simple optical instruments work, eg, periscopes. (L 6d)	- I can describe how living things are classified into broad groups including similarities and differences between micro-organisms, animals, plants). (LTH 6a) - I can give reasons for classifications based upon specific characteristics. (LTH 6b) - I can give reasons for classifying organisms in a specific way. (LTH 6c)
	Year 6	Year 6
Big Question	How do some animals adapt to suit their environment?	A study in to how electronic circuits work.
NC coverage	Working Scientifically Evolution and inheritance	Working Scientifically Electricity
Scientific knowledge, skills and understanding progression	- I can recognise that living things have changed over time and that fossils provide historical information. (EH 6a and 6b) - I know that living things produce offspring of the same kind (but they vary and are not identical to parents). (EH 6c) - I can give reasons for these variations. - I can describe the process of evolution. (EH 6f) - I can describe how plants and animals are adapted to suit their environment. (EH 6d) - I can identify that this adaption may lead to evolution. (EH 6e)	- I can explain how the voltage or number of cells in a circuit link to the brightness of a lamp or the volume of a buzzer. (E 6a) - I can identify and name the basic parts of electric series circuit (cells, wire, switches, buzzer, bulbs). - I can compare and give reasons for why components work and do not work in a circuit (including bulbs, buzzers and switches). (E 6b) - I can use recognised symbols when representing a simple circuit in a diagram. (E 6c)
	Year 6	Year 6
Big Question	What would a journey through your body look like?	Business challenge
NC coverage	Working Scientifically Animals, including humans	
Scientific knowledge, skills and understanding progression	- I can identify and name the main parts of the human circulatory system and describe functions of the heart, blood vessels and blood. (AiH 6a and 6b) - I can recognise the impact of diet, exercise, drugs and lifestyle on the way our bodies function. (AiH 6c) - I can describe the ways in which nutrients and water are transported within animals, including humans. (AiH 6d)	