Crossfell Science Planning Overview 2022-23

Science	Eating and Digestion	Circuits and Conductors	Living in Environments	Changing Sound	States of Matter	What Scientists Do
Year 4	**Autumn (1) 7 weeks**	**Autumn (2) 8 weeks**	**Spring (1) 6 weeks**	**Spring (2) 6 weeks**	**Summer (1) 5 weeks**	**Summer (2) 6 weeks**
What We Will Learn	**Pupils should be taught to:** Describe the simple functions of the basic parts of the digestive system in humans; identify the different types of teeth in humans and their simple functions; construct and interpret a variety of food chains, identifying producers, predators and prey.	**Pupils should be taught to:** identify common appliances that run on electricity; construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers; identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery; recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit; recognise some common conductors and insulators, and associate metals with being good conductors.	**Pupils should be taught to:** Recognise that living things can be grouped in a variety of ways; explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment recognise that environments can change and that this can sometimes pose dangers to living things.	**Pupils should be taught to:** identify how sounds are made, associating some of them with something vibrating; recognise that vibrations from sounds travel through a medium to the ear; find patterns between the pitch of a sound and features of the object that produced it; find patterns between the volume of a sound and the strength of the vibrations that produced it; recognise that sounds get fainter as the distance from the sound source increases.	**Pupils should be taught to:** Compare and group materials together, according to whether they are solids, liquids or gases; observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C); identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.	Pupils will consolidate prior learning from throughout the year and will link scientists to all units of work studied within the year. They will study famous scientists and implement fair tests.
What We Will Do	Pupils will generate questions and use scientific evidence that is given to answer questions. Identify similarities related to scientific ideas. Set up a simple enquiry with support. Make observations, record findings and use results to draw simple conclusions. Name parts of the digestive system. Add functions to the parts of the digestive system. Identify the function of teeth in humans. Construct a simple food chain.	Pupils will learn to identify electrical and non-electrical appliances. They will be able to explain, with support, how a circuit works. Children will be able to name at least two electrical conductors and insulators. They will be able to create a simple series circuit both with and without a switch. They will be able to accurately record their findings in a table.	Pupils will sort living things into groups. Generate questions about animals. See similarities and differences between vertebrates. Identify vertebrate groups. Identify the characteristics of living things. Suggest how to have a positive effect on the local environment. Record observations on a map. Name some endangered species	Pupils will describe sounds around them. Identify high and low sounds. Identify loud and quiet sounds. Observe how different sounds are made. Describe how sounds change over distance. Participate in an investigation to find the best material for absorbing sound. Answer questions based on their learning using prompts. Create a musical instrument that will play different sounds. Predict what will happen in an investigation. Make observations.	Pupils will sort materials into solids, liquids and gases. Explain that heating causes melting, and cooling causes freezing. Identify the melting and freezing point of water. Describe evaporation and condensation using practical examples. Describe the effect of temperature on evaporation referring to their investigation. Identify the stages of the water cycle. Predict what will happen in an investigation. Make observations.	Pupils will conduct a practical experiment, record findings in a table and draw conclusions from data. Create a hypothesis and plan an investigation to answer an enquiry question.
Skills Learned	They will describe the simple functions of the basic parts of the digestive system in humans, identify the different types of teeth in humans and their simple functions, construct and interpret a variety of food chains, identifying producers, predators and prey.	Pupils will use straightforward scientific evidence to answer questions about electricity or to support their findings. Begin to look for naturally occurring patterns and relationships.	They will learn to recognise that living things can be grouped in a variety of ways, explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.	They will be able to recognise and identify sounds and vibrations and find patterns between the pitch of the sound.	Pupils will develop simple descriptions of the states of matter, report on findings from enquiries, using relevant scientific language, including oral and written.	Pupils will using scientific evidence and secondary sources of information, throughout this unit of work.

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