MEDIUM TERM PLANNING | UNIT OBJECTIVES
Nunthorpe Primary Academy

Year Group: 4

Science

Science Intent
Through science, children are taught to be curious about the world around them. Our curriculum is stimulating, engaging and challenging and ensures full coverage of the National Curriculum. It fosters a sense of wonder about natural phenomena. Children develop and use a range of scientific skills including questioning, fair-testing and drawing conclusions. Scientific vocabulary is taught and built upon as topics are revisited progressively in different year groups and across key stages.

Science – National Curriculum Knowledge and Skills	Overview
Teeth and Eating • identify the different types of teeth in humans and their simple function • construct and interpret a variety of food chains, identifying producers, predators and prey comparing the teeth of carnivores and herbivores and suggesting reasons for differences. Work Scientifically by: • setting up simple practical enquiries, comparative and fair tests • making systematic and careful observations • gathering, recording, classifying and presenting data in a variety of ways to help in answering questions • recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables	Children will learn about the digestive system in humans and animals and the functions of teeth. Children will learn more about herbivores, carnivores and omnivores in the context of teeth, digestion and the food chain. In addition, they will extend their understanding of food chains to more complex chains and food webs.

• reporting on findings from enquiries, including oral and written explanations • using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions • using straightforward scientific evidence to answer questions or to support their findings.	
Science – National Curriculum Knowledge and Skills	Overview
Electricity 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 Work scientifically by: -Asking relevant questions and using different types of scientific enquiries to answer them -Setting up scientific enquiries -Making systematic and careful observations, using a range of equipment	Children will learn about what electricity is and how it was discovered. They will identify which appliances use electricity in their homes and how to keep themselves safe. Children will construct circuits, start to create pictorial circuits and conduct an investigation into how easily different types of switches can break and reconnect a circuit.

-Recording findings using simple scientific language, drawings and labelled diagrams -Reporting on findings, results and conclusions -Using straightforward scientific evidence to answer questions or to support their findings -Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. -Identifying differences, similarities or changes related to simple scientific ideas and processes	
Science – National Curriculum Knowledge and Skills	Overview
Sound – see Cross Curricular Topic	
Science – National Curriculum Knowledge and Skills	Overview
Animals and their Habitats – Environmental Change 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 Work scientifically by:	Children will explore a variety of ways to identify, sort, group and classify living things. They learn how animals are split into 'vertebrates' and 'invertebrates' and begin to consider the differences between living things within these classifications. They use and create classification keys to group, identify and name living things from the local habitat and beyond. This unit also introduces children to the idea that environments are subject to human-made and natural changes, and that these changes can have a significant impact on living things.

• asking relevant questions and using scientific enquiries to answer them • making systematic and careful observations • gathering, recording, classifying and presenting data to help in answering questions • recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables • reporting on findings from enquiries, including oral and written explanations, displays and presentations of results and conclusions • identifying differences, similarities or changes related to simple scientific ideas and processes • using straightforward scientific evidence to answer questions or to support their findings.	

Science – National Curriculum Knowledge and Skills	Overview
States of Matter Compare and group materials together, according to whether they are solids, liquids or gases.	Children learn about the differences between solids, liquids and gases, classifying objects and identifying their properties. The children will work scientifically and collaboratively to investigate the weight of a gas.

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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 Work scientifically by: • asking relevant questions and using scientific enquiries to answer them • setting up simple practical enquiries, comparative and fair tests • making systematic and careful observations and, where appropriate, taking accurate measurements using standard units with thermometers • gathering, recording, classifying and presenting data to help in answering questions • recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables • reporting on findings from enquiries, including oral and written explanations, displays and presentations of results and conclusions • using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions • identifying differences, similarities or changes related to simple scientific ideas and processes	Furthermore, they will have chance to find the ideal temperature to melt chocolate. They will explore in-depth how water changes state, exploring melting, freezing, condensing as well as a particular focus on evaporation. Finally, they will learn about the stages of the water cycle, creating mini water worlds and an interactive water wheel to represent the different stages.

Using straightforward scientific evidence to answer questions or to support their findings.	