MEDIUM TERM PLANNING | UNIT OBJECTIVES
Nunthorpe Primary Academy

Year Group: 3

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/Skills	Overview
Rocks • compare and group together different kinds of rocks on the basis of their appearance and simple physical properties • describe in simple terms how fossils are formed when things that have lived are trapped within rock • recognise that soils are made from rocks and organic matter.	Children will discover the different types of rocks and how they are formed. Children will compare and group rocks based on appearance and simple properties. They will learn how fossils are formed and learn about the contribution of Mary Anning to the field of palaeontology. Children will understand how soil is formed and then investigate the permeability of different types of soil.
Science - National Curriculum/Skills	Overview
Animals including Humans – Bones and Muscles • Identify that humans and some other animals have skeletons and muscles for support, protection and movement Work scientifically by:	Begin by close observation of the movement of an animal without a skeleton. Compare what extra movement is possible with a skeleton. Use research materials to find out the names of the main bones in the body and label them using a human life size model skeleton.

• identifying and grouping animals with and without skeletons and observing and comparing their movement • exploring ideas about what would happen if humans did not have skeletons. • researching and naming the main bones in a human skeleton • reasoning about the main functions of a skeleton • investigating muscle action by measuring reflexes.	Learn about how muscles are controlled and then investigate the speed of muscle action when a message is sent from the brain.
Science - National Curriculum/Skills	Overview
Forces - Magnets • notice that some forces need contact between 2 objects, but magnetic forces can act at a distance • observe how magnets attract or repel each other and attract some materials and not others • compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials • describe magnets as having 2 poles • predict whether 2 magnets will attract or repel each other, depending on which poles are facing • asking relevant questions and using different types of scientific enquiries to answer them • setting up simple practical enquiries, comparative and fair tests	Children will learn about forces, friction and magnetic attraction. They will learn about forces in the context of pushing and pulling, and will identify different actions as pushes or pulls. The children will work scientifically and collaboratively to investigate friction, by exploring the movement of a toy car over different surfaces. They will work in a hands on way to identify magnetic materials. Furthermore, they will conduct an investigation into the strength of different types of magnet. The children will have chance to explore the way magnetic poles can attract and repel in an exciting activity, making their own compass and using it to find hidden items. The children will use their understanding of magnetic attraction to design and create their own magnetic game.

• making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment • 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. • using results to draw simple conclusions and make predictions for new values	
Science – National Curriculum/Skills	Overview
Plants • identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers • explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant • investigate the way in which water is transported within plants • explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. Work Scientifically by: •asking relevant questions and using scientific enquiries to answer them	Children will learn the names of different parts of plants, and the jobs they do. The children will work scientifically and collaboratively to investigate what plants need to grow well, and will present their findings to their classmates. Furthermore, they will have chance to predict what will happen in an exciting investigation into the transportation of water within plants. They will work in a hands-on way to identify the parts of a flower, and will explore the different stages of the life cycle of a flowering plant.

•setting up simple practical enquiries, comparative and fair tests •making systematic and careful observations •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	Overview
Light and Shadow • recognise that they need light in order to see things and that dark is the absence of light • notice that light is reflected from surfaces • recognise that light from the sun can be dangerous and that there are ways to protect their eyes • recognise that shadows are formed when the light from a light source is blocked by an opaque object • find patterns in the way that the size of shadows change. Working scientifically by: • setting up simple practical enquiries, comparative and fair tests	Children learn about different sources of light, and that we need light to see. The children will work scientifically and collaboratively to investigate reflective materials, in the context of designing a new book bag. They will work in a hands-on way to play a range of mirror games, finding out more about reflective surfaces. Furthermore, they will learn that the sun's light can be dangerous, and will create an advert for a pair of sunglasses or a sun hat that they have designed. The children will have chance to test which objects are opaque in an exciting investigation to design the most effective curtains, and will find out how shadows change when the distance between the object and light source changes.

• making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers • 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	