

This is Science

Topic	We are learning to:
What is Science?	State the names of the main areas of Science.
	List some activities which are carried out in Science.
	Give examples of jobs Scientists do
Bunsen Burners	Label and correctly spell the parts of a Bunsen burner.
	Light a Bunsen burner safely.
	Draw a conclusion from our observations in an experiment.
Apparatus	Accurately draw the symbols for apparatus used in KS3 Science.
	Correctly spell the names for this apparatus.
	Identify and locate the apparatus around the Science laboratory.
Measurements	Understand the importance of units when recording measurements.
	Choose appropriate scientific apparatus to make basic measurements.
	Use basic measurement apparatus to make accurate measurements.
Thinking like Scientists	List in order the main processes of the scientific method
	Plan a simple experiment using the scientific method
	Discuss the meaning of a <i>fair test</i> and plan a fair test experiment
Scientific Investigation	List the main things to be included in an experiment write up.
	Identify Independent, dependent and controlled variables.
How to draw a line graph	Know when to use a line graph to represent our results
	Successfully draw a line graph
How to draw a bar graph	Know when to use a bar graph to represent our results
	Successfully draw a bar graph
Safety	State 10 safety rules of a Science lab
	Identify Hazard symbols
	Carry out a risk assessment

Particles and the States of Matter

Topic	We are learning:
States of matter	Describe the three states of matter, solid, liquid and gas in terms of particle arrangement and movement
	Draw particle diagrams of solids, liquids and gases
	Explain why some substances expand when heated and during changes of state
	Define and explain diffusion in liquids and gases
Physical and chemical changes	Identify and name the changes of state between solids, liquids and gases
	Recall that changes of state are examples of physical changes
	Explain differences between physical and chemical changes
	Identify signs of a chemical change
	Recall that combustion is an example of a chemical change
	The 3 factors needed for a fire to burn

Life, body systems and cells

Topic	We are learning:
What is a living thing?	Recognise living things
	List the seven characteristics of living things
Cells	Know that all living things are made of cells
	Label the parts of an animal and a plant cell and describe their functions
	Identify similarities and differences between plant and animal cells
	Prepare an onion slide
What type of cell?	Label a microscope and develop practical skills using microscopes
	List and describe some specialised animal and plant cells
Tissues, organs and organ systems	Work out the magnification of a microscope
	Recognise that similar cells make up tissues, tissues make up structures called organs and they work together in organ systems
	Identify the main organs of the organ systems and describe their functions
	Relate the body systems to the characteristics of life.

Forces everywhere

Topic	We are learning to:
Introduction to Physics and Forces	Understand what Physics is and what physicists do
	Research two important Physicists (Albert Einstein and Sir Isaac Newton)
Observations and Measurements	That physics involves observations and measurements
	That units are vital for all quantities
	That physics ranges from the extremely small to the extremely large
Forces	Forces are pushes and pulls
	Define what a force is and its units
	List different forces and observe their effect
	Know the four possible effects of forces on an object
	How to measure forces
	Investigate the extension of a loaded spring
Gravity and Forces	Give a definition for gravity
	Know the difference between mass and weight
	Know how to calculate weight on different planets
Density Floating and Sinking	to compare materials using their density
	to calculate the density of materials using the Density equation
	to explain floating and sinking

Atoms & Elements

What we learned
Matter is anything that occupies space
Matter is made up of building blocks called atoms
An atom is the smallest particle of an element.
Learn the general atomic structure of an atom
Recall the names and positions of three subatomic particles
Know that each element has a unique atom structure
Define atomic number
Elements are made up of just one kind of atom
Elements can be sorted into metals and non-metals
General properties of a metal
The Periodic Table was first put together by Dimitri Mendeleev
The smallest particle of a compound is called a molecule
That compounds are different than the elements they are made of
The air contains chemical elements
Each element has its own characteristics or properties
How to make oxygen in the laboratory
the chemical test used to identify oxygen
Compounds are formed when 2 or more elements join together
The word equation for the chemical reaction between magnesium and oxygen
Compounds are represented by chemical formula
Chemical formula showing how many of each element are present in a molecule

Reproduction

Topic	We are learning:
Changes	To identify the physical changes that happen in puberty
	To compare the changes of males and females at puberty
	To identify the emotional changes that happen in puberty
Sex cells	To identify the different parts of sperm cells
	To identify the different parts of ovum cells
	To understand the different functions of the cells' parts
Reproductive systems	To identify the different parts of the female reproductive system
	To identify the different parts of the male reproductive system
	To understand the different functions of both reproductive systems
Fertilisation and implantation	To understand the events that occur that lead to fertilisation
	To identify the changes in the uterus
Characteristics	To identify different characteristics between people
	To understand what influences different characteristics
Development of the baby	To identify the stages of foetal development
	To understand how the foetus survives in the uterus
Birth	To identify the three stages of child birth