Schemes of Work

Stage 1

Sections in the Chapter	Learning Outcome(s) in the Chapter
Chapter 1 Ourselves	
A. What Are the Different Parts of the Body? **B.** What Are Senses? **C.** In What Ways Are We Similar and Different?	• Recognise and name the different parts of the body. • Investigate how senses help humans and animals to be aware of the world around them. • Recognise how humans are similar to and different from one another.
Chapter 2 Living and Growing	
A. What Are Living and Non-living Things? **B.** Where Do Animals and Plants Live? **C.** Do Animals Need Food? **D.** Can Animals Have Young? Can They Grow?	• Recognise that animals and plants are living things. • Recognise that there are living things and non-living things. • Investigate where different animals and plants live. • Recognise the need for water and the right amount and types of food. • Recognise that humans and other animals have young which grow into adults.
Chapter 3 Growing Plants	
A. What Are the Different Parts of a Plant? **B.** How Do Seeds Grow into Plants? **C.** What Do Plants Need to Grow?	• Name the different parts of a plant. • Investigate how seeds grow into plants. • Recognise that plants need light and water to grow.
Chapter 4 What Is It Made Of?	
A. What Are Materials? **B.** What Properties Do Materials Have? **C.** In What Ways Can We Classify Things?	• Use senses to explore and talk about different materials. • Recognise and name some common materials. • Identify the properties of materials. • Sort things into groups based on the properties of their materials.
Chapter 5 Pushes and Pulls	
A. In What Ways Do Things Move? **B.** What Is a Push or a Pull? **C.** What Can Pushes and Pulls Do?	• Investigate the movement of living and non-living things. • Recognise that pushes and pulls are forces. • Recognise that forces can make things start or stop moving, move faster or slower, and change direction.
Chapter 6 Making Sounds	
A. What Are Some Sounds Around Us? **B.** Why Do We Hear Sounds?	• Identify sources of sound. • Recognise that we hear sounds when they enter our ears. • Recognise that as a sound moves away from its source, it gets softer.

Stage 2

Sections in the Chapter	Learning Outcome(s) in the Chapter
Chapter 1 Light and Dark	
A. What Are Light Sources? **B.** What Is Darkness? **C.** How Are Shadows Formed?	• Identify different sources of light such as the Sun. • Recognise that there is total darkness when there is no light. • Identify shadows.
Chapter 2 Rocks and Other Materials	
A. What Are Rocks? **B.** What Is Soil? **C.** What Are the Uses of Rocks? **D.** What Are Natural and Man-made Materials?	• Recognise some types of rocks. • Recognise what soil is. • Recognise the uses of rocks. • Recognise that some materials are natural while others are man-made.
Chapter 3 Changes	
A. How Can Things Change Their Shape? **B.** How Can Things Change When Heated or Cooled? **C.** How Can Solids Change When Mixed With Water?	• Recognise how some things can change their shape by bending, squashing, stretching and twisting. • Investigate and describe how some things change when heated or cooled. • Recognise that some solids can dissolve in water.
Chapter 4 Day and Night	
A. Why Is There Day and Night? **B.** Does the Sun Move Across the Sky? **C.** How Do Shadows Change?	• Model how the spinning of the Earth causes day and night. • Investigate how the Sun appears to move across the sky during the day. • Investigate how shadows change during the day.
Chapter 5 Living Things and Their Environments	
A. Where Can You Find Animals and Plants? **B.** What Can We Do to Care for Our Environment? **C.** What Is Weather?	• Compare some environments and recognise how they affect the animals and plants living there. • Recognise ways to care for the environment. • Observe weather and record observations in a report.
Chapter 6 Electricity	
A. What Can Electricity Do? **B.** What Is a Circuit? **C.** What Is a Switch Used For?	• Recognise the uses of electricity and how to use electricity safely. • Recognise the parts of a simple circuit. • Use a switch to open or close a circuit.

Stage 3

Sections in the Chapter	Learning Outcome(s) in the Chapter
Chapter 1 Living Things	
A. What Do Living Things Need? **B.** What Can Living Things Do? **C.** What Kinds of Living Things Are There? **D.** What Kinds of Animals Are There?	• Recognise what living things need. • Describe how living things and non-living things are different. • Recognise what living things can do. • Classify living things and explain why they are classified that way.
Chapter 2 Our Senses	
A. What Are the Ways We Use Our Sense of Sight? **B.** What Are the Ways We Use Our Sense of Hearing? **C.** What Are the Ways We Use Our Sense of Touch? **D.** What Are the Ways We Use Our Sense of Smell? **E.** What Are the Ways We Use Our Sense of Taste?	• Investigate our sense of sight and the ways we use it to learn about the world. • Investigate our sense of hearing and the ways we use it to learn about the world. • Investigate our sense of touch and the ways we use it to learn about the world. • Investigate our sense of smell and the ways we use it to learn about the world. • Investigate our sense of taste and the ways we use it to learn about the world.
Chapter 3 Keeping Healthy	
A. Why Do We Need Food? **B.** How Can We Eat to Keep Healthy? **C.** What Other Ways Can We Keep Healthy?	• Recognise what living things need. • Investigate the type of diet needed for us to keep healthy. • Recognise that some food can be unhealthy. • Investigate the types of exercise needed for us to keep healthy.
Chapter 4 Flowering Plants	
A. What Are the Parts of a Plant? **B.** Do Plants Need Light and Water? **C.** Does Temperature Affect How Plants Grow?	• Recognise that plants have parts such as leaves, flowers, stems and roots. • Recognise that roots take in water and stems transport water. • Recognise that the leaves, stems and roots of plants need to be healthy in order for plants to grow well. • State that plants need light or water to grow as the reason for observations. • Recognise that temperature affects how well plants grow.

Sections in the Chapter	Learning Outcome(s) in the Chapter
Chapter 5 Materials	
A. What Are the Different Materials and Their Properties? **B.** How Can We Classify Materials? **C.** What Are the Uses of Materials?	• Recognise that each material has its own properties. • Find out about magnetic and non-magnetic materials. • Classify materials based on their properties. • Discuss how the properties of a material make it suitable for certain uses.
Chapter 6 Forces	
A. What Can Forces Do? **B.** How Can We Measure Forces? **C.** What Are the Effects of Friction?	• Recognise that a force is a push or a pull. • Investigate how a force can make a thing move or stop moving. • Investigate how a force can make a thing go faster or slower, or change its direction. • Investigate how a force can affect the shape of a thing. • Recognise that a forcemeter can be used to measure forces. • Investigate how friction can make a thing go slower.

Stage 4

Sections in the Chapter	Learning Outcome(s) in the Chapter
Chapter 1 Solids, Liquids and Gases	
A. What Is Matter? **B.** What Are the States of Matter? **C.** Can Matter Change in State?	• Recognise that matter has mass and occupies space. • Recognise that solid, liquid and gas are three states of matter. • Investigate how substances can change in state when they gain or lose heat. • Observe and recognise these changes in state — melting, boiling, condensation and freezing. • Recognise that freezing is the reverse of melting.
Chapter 2 Skeleton and Muscles	
A. What Is a Skeleton? **B.** How Do the Skeleton and Muscles Work Together? **C.** What Are Drugs and Medicines?	• Recognise that humans and some animals have bony skeletons inside their bodies. • Recognise that the skeleton supports and protects the body. • Recognise that our bones grow as we grow. • Recognise that animals with skeletons have muscles that are joined to their bones. • Describe how the skeleton and muscles work together to allow us to move. • Explain that some drugs are used as medicines.

Sections in the Chapter	Learning Outcome(s) in the Chapter
Chapter 3 Habitats and Environments	
A. What Is a Habitat? **B.** In What Ways Are Animals Suited or Adapted to Their Environments? **C.** What Is an Identification Key? **D.** In What Ways Do Human Activities Affect the Environment?	• Investigate the variety of animals and plants found in different habitats. • Recognise the ways animals are suited or adapted to the environment in which they live. • Use simple identification keys to identify or classify animals. • Recognise some ways that human activities affect the environment.
Chapter 4 How Magnets Work	
A. What Is a Magnet? **B.** What Are the Properties of a Magnet? **C.** What Are Some Uses of Magnets?	• Recognise that magnets can attract some metals but not others. • Recognise that magnets can attract or repel each other. • Explain the magnetic force of attraction and repulsion between magnets. • Recognise that magnets can attract some metals but not others.
Chapter 5 Electric Circuits	
A. How Does an Electric Circuit Work? **B.** How Do Electrical Components Affect an Electric Circuit? **C.** Can We Connect Buzzers and Simple Motors in an Electric Circuit? **D.** In What Ways Can We Use Electricity Safely?	• Set up electric circuits using electrical components such as cells or batteries, lamps or bulbs, wires and switches. • Recognise that electric current flows and this can be described with the use of models. • Investigate whether an electrical device will be able to work if there is a break in its electric circuit. • Recognise how to use electricity safely.
Chapter 6 Sound	
A. How Are Sounds Made? **B.** How Do Sounds Travel? **C.** Why Are Some Sounds Soft and Some Sounds Loud? **D.** What Can We Do to Keep Out Sounds? **E.** Why Do Sounds Have Different Pitches?	• Investigate how sounds are made when things or air vibrate. • Investigate how sound travels through air, liquids and solids to the ears. • Measure sound levels in decibels with a sound-level meter. • Investigate how some materials help prevent sound from travelling through them. • Investigate sounds with high and low pitches and how pitch can be changed in musical instruments. • Differentiate between loudness and pitch.

Sections in the Chapter	Learning Outcome(s) in the Chapter
Chapter 1 Solids, Liquids and Gases	
A. What Are Boiling and Melting? **B.** What Is Evaporation? **C.** What Is Condensation? **D.** What Is the Water Cycle?	• Recognise that the boiling point of water is 100°C and the melting point of ice is 0°C. • Recognise that evaporation is the process of a liquid changing into a gas. • Recognise that a solid is obtained when a liquid evaporates from a solution. • Recognise that condensation is the process of a gas changing into a liquid and that it is the reverse of evaporation. • Recognise that there is water vapour in the air and that water vapour may condense when it comes into contact with a cold surface.
Chapter 2 Investigating Plant Growth	
A. What Do Seeds Need to Germinate? **B.** What Do Plants Need to Grow?	• Find out how water and warmth, and not necessarily light, are needed for seeds to germinate. • Recognise that plants need light energy to grow.
Chapter 3 Reproduction in Flowering Plants	
A. Why Do Plants Produce Flowers? **B.** What Is Pollination? **C.** What Is Fertilisation? **D.** What Is Seed Dispersal? **E.** What Happens in the Life Cycle of a Flowering Plant?	• Recognise that plants reproduce. • Recognise that flowering plants produce flowers with male and female parts. • Recognise the processes of pollination, fertilisation, seed production, seed dispersal and germination involved in the reproduction of flowering plants. • Recognise that the flowers of some plants are pollinated by insects. • Recognise that seeds are formed after fertilisation takes place. • Recognise the various ways in which seeds can be dispersed. • Observe that flowering plants have life cycles.
Chapter 4 The Way We See Things	
A. What Is Light? **B.** What Is Reflection of Light?	• Recognise that we see a light source because its light enters our eyes. • Recognise that we can measure light intensity. • Recognise that a surface can reflect light. • Investigate why a beam of light changes direction when it is reflected from a surface. • Recognise that we can see an object that does not give off light because it reflects light into our eyes.

Stage 6

Sections in the Chapter	Learning Outcome(s) in the Chapter
Chapter 5 Shadows	
A. Do All Materials Allow Light to Pass Through Them? **B.** How Are Shadows Formed? **C.** How Do Shadows Change?	• Investigate how opaque materials do not allow any light to pass through them, while transparent materials allow most of the light to pass through them. • Observe that shadows are formed when light is blocked. • Observe that the lengths and positions of shadows change throughout the day. • Investigate how the position of an object affects the size of its shadow.
Chapter 6 The Earth and Beyond	
A. What Does the Earth's Spinning Cause? **B.** Does the Earth Move Around the Sun? **C.** What Makes Up the Solar System? **D.** What Is Beyond the Solar System?	• Investigate through modelling that the Sun's apparent movement is caused by the Earth spinning on its axis. • Recognise that the Earth takes 24 hours to spin once on its axis. • Recognise that the Earth takes one year to orbit the Sun, while constantly spinning. • Research the life and discoveries of scientists who explored the Solar System and stars.

Sections in the Chapter	Learning Outcome(s) in the Chapter
Chapter 1 Organs and Organ Systems	
A. What Are Some Organs and Organ Systems? **B.** What Does Our Respiratory System Do? **C.** What Does Our Blood Circulatory System Do? **D.** What Does Our Digestive System Do? **E.** What Does Our Excretory System Do? **F.** What Does Our Nervous System Do?	• Use scientific names for some major organs in the body. • Identify the position of major organs in the body. • Describe the main functions of major organs in the body. • Explain how the functions of major organs in the body are essential.
Chapter 2 More About Changes	
A. How Can Solids Be Mixed and Separated? **B.** How Do Solids Change When Mixed With Water? **C.** What Are Solutions? **D.** What Are Reversible and Irreversible Changes?	• Investigate how solids can be mixed and separated. • Observe, describe, record and explain changes that occur when some solids are mixed with water. • Investigate how solids that do not dissolve or react with water can be separated by sieving or filtration. • Investigate how some solids dissolve in water to form solutions, and recognise that they are still present, although they cannot be seen in the solutions. • Distinguish between reversible and irreversible changes.

Sections in the Chapter	Learning Outcome(s) in the Chapter
Chapter 3 Food Chains	
A. What Are the Relationships Between Living Things in a Habitat? **B.** What Are Some Food Chains in Different Habitats?	• Recognise how food chains can be used to represent feeding relationships in a habitat. • Recognise that many food chains begin with a plant which uses energy from the Sun. • Recognise the terms 'producer', 'consumer', 'predator' and 'prey'. • Investigate and construct food chains in a particular habitat.
Chapter 4 Caring for the Environment	
A. What Are the Positive Effects of Some Human Activities on the Environment? **B.** What Are the Negative Effects of Some Human Activities on the Environment? **C.** What Can We Do to Care for the Environment?	• Investigate the positive effects of human activities on the environment. • Investigate the negative effects of human activities on the environment. • Investigate some ways of caring for the environment.
Chapter 5 More About Electricity	
A. What Are Electrical Conductors and Insulators? **B.** How Can We Draw Electric Circuits? **C.** How Do Changes Affect Electric Circuits?	• Investigate the ways some materials are better electrical conductors than others. • Investigate the ways some metals are good electrical conductors and that most other materials are not. • Recognise why metals are used for cables and wires, and why plastics are used to cover wires, plugs and switches. • Represent series circuits with drawings and circuit symbols. • Predict and test the effects of changes to electric circuits, including the change in the number and type of electrical components, and the length or thickness of a wire.
Chapter 6 More About Forces	
A. What Is Gravitational Force? **B.** How Do Forces Act? **C.** What Are the Effects of Friction	• Distinguish between mass measured in kilogram (kg) and weight measured in newton (N), noting that kilogram is used in everyday life. • Recognise and use units of force, mass and weight, and identify the direction in which forces act. • Recognise the concept of energy in movement. • Recognise friction, including air resistance, as a force which can affect the speed of a moving object and sometimes stop a moving object.