

YEAR 3

Science Curriculum Rationale

CURRICULUM INTENT

Year 3 opens Key Stage 2, moving from the observable towards the hidden forces and structures that shape the world. Pupils rotate through biology, chemistry and physics, beginning with the familiar and building to forces and magnets, then drawing the year together in a disciplinary unit. Working scientifically becomes explicit across the six enquiry types.

WHY THIS SEQUENCE

Key Stage 2 opens with the concrete (plants, rocks, light) before forces acting at a distance, with biology, chemistry and physics deliberately rotated so the disciplines are revisited and contrasted. The year closes with a disciplinary unit that applies the science.

THE SIX UNITS

AUTUMN 1

Plants

AUTUMN 2

Rocks

SPRING 1

Light

SPRING 2

Animals Including Humans

SUMMER 1

Forces and Magnets

SUMMER 2

The Bee Project



Year 3 pupils working scientifically

YEAR 3 · AUTUMN 1

Plants

NC · Plants

 Biology

- Pupils revisit plants from Key Stage 1 and go deeper, exploring the functions of roots, stem, leaves and flowers, and what plants need to grow well.
- They study the part flowers play in the life cycle, including pollination, seed formation and seed dispersal.

NATIONAL CURRICULUM

Plants

ENQUIRY FOCUS

Observing over time; comparative testing

KEY VOCABULARY

roots, stem, leaves, flower, nutrients, pollination, life cycle



Pupil booklet for this unit

YEAR 3 · AUTUMN 2

Rocks

NC · Rocks

 Chemistry

- Children compare and group rocks by their appearance and physical properties, and explore how soils are made from rock and organic matter.
- They discover how fossils are formed, an introduction to evidence of the distant past.

NATIONAL CURRICULUM

Rocks

ENQUIRY FOCUS

Comparative and classifying

KEY VOCABULARY

rock, soil, grain, permeable, fossil, sediment



Pupil booklet for this unit

YEAR 3 • SPRING 1

Light

NC • Light

Physics

- Pupils learn that they need light to see and that dark is the absence of light, then explore how light reflects from surfaces.
- They investigate how shadows are formed when light is blocked, and how shadows change.

NATIONAL CURRICULUM

Light

ENQUIRY FOCUS

Pattern seeking

KEY VOCABULARY

light, dark, reflect, surface, shadow, opaque, source



Pupil booklet for this unit

YEAR 3 · SPRING 2

Animals Including Humans

NC · Animals, including humans

 Biology

- The focus is nutrition and the body: that animals, including humans, need the right types of nutrition from what they eat.
- Pupils study the role of the skeleton and muscles in support, protection and movement.

NATIONAL CURRICULUM

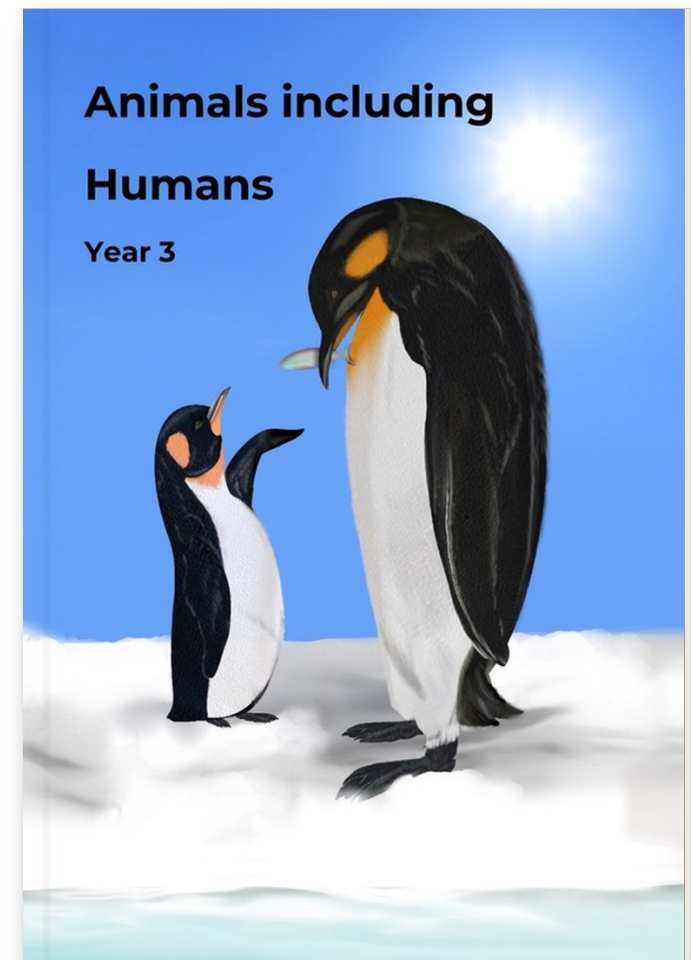
Animals, including humans

ENQUIRY FOCUS

Researching; comparative testing

KEY VOCABULARY

nutrition, nutrients, skeleton, muscle, support, protect, movement



Pupil booklet for this unit

YEAR 3 • SUMMER 1

Forces and Magnets

NC • Forces and magnets

 Physics

- Children explore how things move on different surfaces, and compare how magnets attract and repel each other and other materials.
- This is their first study of forces acting at a distance.

NATIONAL CURRICULUM

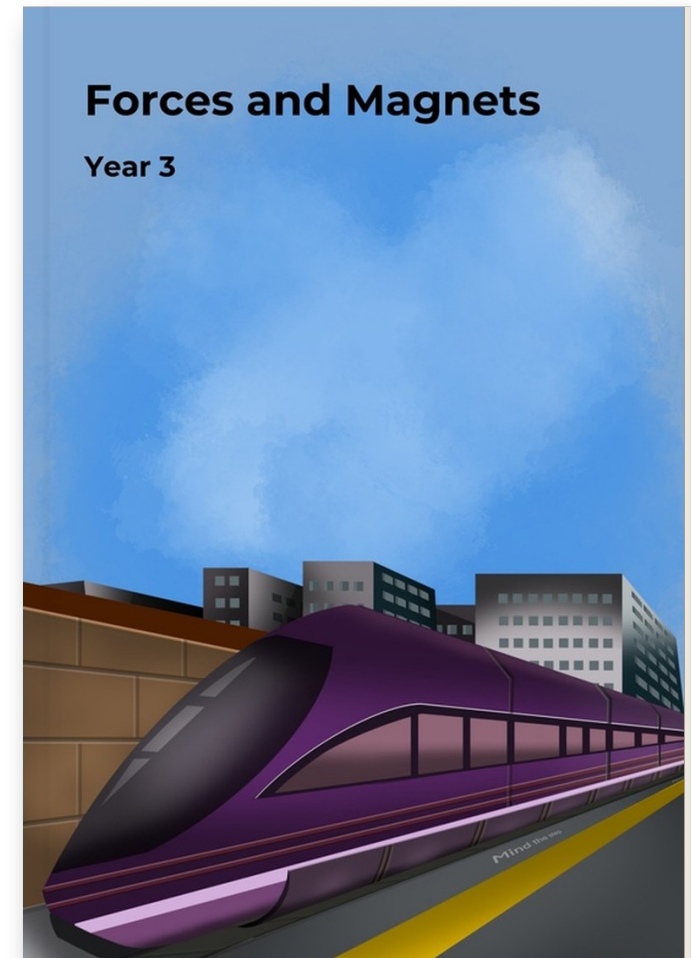
Forces and magnets

ENQUIRY FOCUS

Comparative and fair testing

KEY VOCABULARY

force, push, pull, friction, magnet, attract, repel, magnetic



Pupil booklet for this unit

YEAR 3 · SUMMER 2

The Bee Project

NC · Working scientifically

 Disciplinary

- The year ends with a synoptic, disciplinary unit. Pupils apply the year's biology to bees, pollination and our food supply.
- They learn how scientists work, drawing the science of the year together through the lens of working scientifically.

NATIONAL CURRICULUM Working scientifically**ENQUIRY FOCUS** All six enquiry types**KEY VOCABULARY** pollination, pollinator, habitat, dependence, observe, conclude

Pupil booklet for this unit