

Science Curriculum Overview

Intent

At Park Schools Federation, our science curriculum nurtures curiosity and encourages pupils to question the world around them. We want children to:

- Build secure knowledge of **biology, chemistry, and physics**.
- Understand and apply the skills of **working scientifically**.
- Make connections between science learning and the wider world, including local, environmental, and global issues.
- Develop the ability to think critically, ask questions, and use evidence to explain and justify ideas.

Implementation

- We use the **White Rose Science scheme** to support the teaching of science. This provides clear progression and ensures full coverage of the **National Curriculum**.
- Lessons are enquiry-based and framed around key questions (e.g. *What do plants need to grow well?*).
- Each lesson begins with **four flashback questions** — revisiting prior learning from the last lesson, last unit, last year, and even further back — to strengthen recall and deepen long-term understanding.
- **Progression across key stages:**
 - In **KS1**, pupils observe and explore the world around them (plants, animals including humans, materials, seasonal change).
 - In **KS2**, children build on these foundations with more abstract concepts (forces, electricity, sound, light, Earth and space, evolution).
- **Working scientifically** is embedded throughout: pupils observe, classify, research, test, measure, and record in increasingly sophisticated ways.
- **Vocabulary focus:** Scientific language is taught explicitly and revisited regularly (e.g. *habitat, evaporation, photosynthesis, friction, variable*).
- **Cross-curricular links:** Science is connected with Maths (measuring, data handling), English (scientific writing, explanation), DT (structures, food, electricity), Geography (climate, environments), and PSHE (health, wellbeing).
- **Practical enquiry:** Pupils learn through hands-on investigations, outdoor learning, and real-life contexts.

Impact

By the end of KS2, pupils will be able to:

- Recall and explain secure knowledge across biology, chemistry, and physics.
- Apply scientific enquiry skills to design and carry out investigations.
- Record and interpret data accurately, presenting findings clearly.
- Use scientific vocabulary confidently to explain their ideas.
- Understand how science connects to real life, both locally (e.g. mining, nature) and globally (e.g. climate change, energy).

Pupils leave Park Schools Federation curious, confident, and equipped with the knowledge and skills to see themselves as scientists, ready for the next stage of their education.

Topic Overview

Year Group	Autumn	Spring	Summer
FS2	Seasons – Geography link.	Explore the life cycle of a plant.	Staying healthy.
1	The Human Body; Seasonal Changes – Autumn & Winter; Materials	Planting; Animals; Caring for the Planet; Seasonal Changes – Spring	Plants; Planting; Growing and Cooking; Seasonal Changes – Summer
2	Animals' needs for survival; Humans; Materials; Plastic	Plants – Light & Dark; Living things and their habitats	Plants (bulbs and seeds); Growing up; Bulbs and seeds; Wildlife
3	Skeletons; Movement; Nutrition and diet; Food Waste; Rocks	Fossils; Soil; Light	Plants; Forces; Magnets; Biodiversity
4	Group and classify living things; Data collections; States of matter	Sound; Data Collection; Electricity; Energy	Data Collection; Habitats; Deforestation; The digestive system; Food chains
5	Forces; Space; Global Warming	Properties of materials; Animals including humans; Life cycles	Reproduction; Reversible & irreversible changes; Plastic pollution;
6	Light; Light pollution; Electricity; Renewable energy	Living things and their habitats; The circulatory system; Diet, drugs and lifestyle	Variation; Adaptations; Fossils