NEW AVENUE SCHOOL

Science – Curriculum Overview

What we teach in Science

At New Avenue, we teach Science to build curiosity, critical thinking, and a deeper understanding of the world. Our curriculum covers biology, chemistry and physics across all phases, closely mapped to the National Curriculum but adapted to meet the needs and stages of our pupils.

We follow a structured, spiralling approach where key ideas are revisited and deepened over time. Scientific enquiry skills are taught alongside subject knowledge, helping pupils ask questions, design investigations, and interpret findings confidently.

Our aim is to develop pupils who can think scientifically, apply knowledge practically, and make links between science and everyday life.

How we teach Science

Science lessons follow a consistent structure:

- **Do Now / Retrieval Practice**
  Pupils begin with a short activity recalling knowledge from previous lessons or years, strengthening long-term memory.
- **New Learning**
  One clear scientific concept is introduced per lesson. Teachers model the knowledge, vocabulary and skills needed, often using practical demonstrations.
- **Scientific Enquiry and Investigation**
  Pupils practise enquiry skills such as observing, measuring, comparing, testing and concluding. Lessons involve hands-on experiments where possible, with careful scaffolding to support pupils in recording and explaining findings.

- **Real-World Application and Discussion**
  Links are made between science content and real-life examples, current issues (e.g., climate change, health), and everyday experiences to build relevance.

Practical activities, visuals, and modelling are used across all phases to support understanding.

How we measure progress in Science

Progress is assessed through:

- Questioning, observation and feedback during lessons.
- Termly teacher assessment against curriculum milestones.
- End-of-unit knowledge checks.
- Practical investigations where pupils demonstrate scientific enquiry skills.

We track how pupils build subject knowledge, use scientific vocabulary accurately, and apply skills like predicting, observing and drawing conclusions.

Curriculum Overview for Science

Phase	Focus	Key Topics
Foundation (Years 1–2)	Introduction to scientific thinking through everyday experiences	Animals including humans, Plants, Materials, Seasonal Changes, Working Scientifically
Phase 1 (Years 3–4)	Developing scientific skills through structured investigations	Rocks, Light, Plants, Forces and Magnets, Animals including humans, Electricity, Living Things and their Habitats, Sound
Phase 2 (Years 5–6)	Deepening scientific understanding and preparing for secondary study	Properties and Changes of Materials, Earth and Space, Forces, Living Things and their Habitats, Animals including humans, Electricity, Light, Evolution and Inheritance
Phase 3 (Years 7–9)	Building knowledge across Biology, Chemistry and Physics strands	Cells, Forces, Atoms and Periodic Table, Reproduction, Health and Human Body, Energy Changes, Space, Earth and Atmosphere, Chemical Reactions, Waves, Inheritance and Evolution
Phase 4 (Years 10–11)	Preparing for GCSE Science or Entry Level qualifications	Biology, Chemistry and Physics units: Cell Biology, Electricity, Infection and Response, Chemical Calculations, Homeostasis, Waves, Ecology, Rates of Reaction, Inheritance, Organic Chemistry, The Earth's Resources

Science Long-Term Plan

Phase	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Foundation (Years 1–2)	Animals including Humans (Body)	Animals including Humans	Seasonal Changes	Plants	Everyday Materials	Living Things and Habitats
Phase 1 (Years 3–4)	Animals including Humans (Skeletons)	Rocks	Light	Plants	Forces and Magnets	Sound
Phase 2 (Years 5–6)	Properties and Changes of Materials	Earth and Space	Living Things and Habitats	Forces	Animals including Humans	Light
Phase 3 (Years 7–9)	Forces	States of Matter & Separating Mixtures	Atoms and Periodic Table	Cells and Organisation	Energy Transfers	Reproduction
Phase 4 (Years 10–11)	Cell Biology	Electricity & Circuits	Infection and Response	Chemical Calculations	Waves	Ecology