

The Bellbird Primary School



Science Policy

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Policy Lead: Science Subject Leader

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Why teach Science?

Science stimulates and excites pupils' curiosity about the world around them. At The Bellbird, Science enables children to develop an understanding of the world within them, around them and beyond them, whilst harnessing their natural curiosity and encouraging them to ask **"Why?", "How?" and "What if?"**

Through practical experiences, scientific enquiry and the development of knowledge and vocabulary, we aim to inspire children to become curious, knowledgeable and thoughtful scientists. We want pupils to understand the relevance of Science to their everyday lives and to recognise the important role Science plays in shaping our future.

Our Intent

At The Bellbird, we aim to:

- **Develop scientific knowledge and understanding**, building a secure and connected understanding of the world around us.
- **Develop curiosity and a love of Science**, encouraging children to ask questions, explore ideas and seek evidence-based explanations.
- **Develop disciplinary knowledge and Working Scientifically skills**, enabling pupils to plan, carry out and evaluate a range of investigations.
- **Develop scientific vocabulary and communication**, enabling pupils to explain their observations, ideas, findings and conclusions clearly.
- **Develop independence in scientific thinking and recording**, so that pupils increasingly communicate their own ideas rather than relying on models or scaffolds.
- **Develop positive attitudes towards Science**, including an appreciation of its relevance to everyday life, health, sustainability, environmental responsibility and future careers.
- **Ensure that all pupils can succeed in Science**, through appropriate adaptive teaching, scaffolding and challenge.

Implementation

Curriculum and progression

We use the Kapow Primary Science curriculum as the foundation for our Science curriculum. It is aligned with the National Curriculum programmes of study and the statutory Working Scientifically requirements. The curriculum is carefully sequenced to develop pupils' substantive scientific knowledge and disciplinary knowledge progressively across the school.

Science is taught as a discrete subject, with opportunities to make meaningful connections with other areas of the curriculum where these enhance pupils' understanding.

Teachers use the curriculum progression to build on pupils' prior learning, address misconceptions and develop increasingly sophisticated substantive knowledge, disciplinary knowledge and Working Scientifically skills.

Kapow follows a spiral curriculum. Important knowledge, concepts, vocabulary and enquiry skills are revisited with increasing depth and complexity, enabling pupils to strengthen connections and build secure long-term understanding.

A typical lesson sequence includes retrieval of relevant prior knowledge, explicit teaching and modelling of scientific vocabulary, focused explanation, practical exploration and scientific enquiry, followed by opportunities for pupils to reflect, explain and apply what they have learned. Teachers adapt this sequence in response to the unit, pupils' needs and assessment information.

Kapow's Making connections units give pupils opportunities to revisit and apply knowledge and Working Scientifically skills from earlier units. They help pupils make links across scientific concepts, work with greater independence and use learning in purposeful investigations and real-world contexts.

Science in EYFS

In EYFS, Science is developed mainly through Understanding the World and through purposeful play, talk, observation and first-hand exploration. Children are encouraged to notice similarities and differences, ask questions, describe change and develop early scientific vocabulary. These experiences establish curiosity, knowledge and enquiry habits that provide a strong foundation for the Year 1 curriculum.

Scientific enquiry and Working Scientifically

Pupils are given regular opportunities to develop disciplinary knowledge and understand how Science works through the five principal types of scientific enquiry: observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing; and researching using secondary sources.

Practical experiences are used purposefully to develop scientific understanding rather than simply as engaging activities. Pupils are encouraged to make predictions, observe and measure carefully, collect and interpret evidence, draw conclusions and evaluate their investigations.

As pupils progress through the school, they develop increasing independence in selecting appropriate enquiry approaches and methods, interpreting evidence, identifying patterns and explaining their conclusions.

Health and Safety

Practical Science is planned and taught with due regard to the school's Health and Safety Policy, relevant risk assessments and current safety guidance. Teachers check equipment and the learning environment, teach pupils how to use resources safely and establish clear routines for practical work. Activities are adapted where necessary to meet individual medical, physical or additional needs. Pupils are expected to follow instructions, behave responsibly and report spillages, breakages or concerns immediately.

Scientific Vocabulary and Recording

Scientific vocabulary is explicitly taught and revisited throughout each unit so that pupils can use appropriate terminology when discussing and recording their learning.

Pupils communicate their scientific understanding in a range of ways, including verbally, pictorially, symbolically, graphically and in writing. We aim for pupils to become increasingly independent in selecting appropriate ways to record and communicate their findings.

Teachers provide appropriate scaffolding, such as vocabulary banks, sentence stems, visual prompts and recording structures, where required. These supports are adapted and gradually reduced as pupils develop confidence and independence. Pupils who are ready for greater challenge are encouraged to explain their reasoning, interpret evidence and evaluate investigations with increasing sophistication.

Assessment

Assessment in Science is ongoing and responsive. Teachers use Kapow's assessment opportunities, including knowledge catchers, assessment quizzes and unit outcomes where appropriate, to establish prior knowledge, check understanding and evaluate progress. Formative assessment throughout lessons and units identifies misconceptions and gaps so that teaching can be adapted promptly.

Assessment considers pupils' substantive scientific knowledge, disciplinary knowledge and their application of statutory Working Scientifically skills.

Teachers draw on a proportionate range of evidence, including observations, questioning, discussion, practical work and pupils' recorded learning. Assessment information is used to inform future teaching and to ensure that pupils build securely on prior learning.

Pupils are supported to understand what they are learning and to recognise how their substantive knowledge, disciplinary knowledge and Working Scientifically skills are developing.

Inclusion and adaptive teaching

Science is an entitlement for all pupils. Teachers use adaptive teaching to ensure that all pupils can access the curriculum and demonstrate their scientific understanding.

Appropriate scaffolding may include vocabulary support, visual resources, sentence stems, practical equipment, structured recording frameworks and additional adult support. Teachers consider pupils' individual needs when planning practical activities, recording and scientific enquiry.

Scaffolds are adapted and reduced as pupils develop independence. Where appropriate, pupils are challenged to deepen their understanding through greater independence, reasoning, interpretation of evidence and evaluation.

We recognise that pupils may demonstrate their scientific understanding in different ways and provide a range of opportunities for pupils to communicate their ideas.

Enrichment and Wider Opportunities

We aim to raise the profile of Science across the school and help pupils recognise its relevance to their lives, future opportunities and the decisions people make about the natural world.

Pupils are given opportunities to engage with Science beyond their regular lessons through activities such as STEM and careers events, visitors, trips and practical experiences.

We celebrate pupils' scientific learning and achievements through displays and other opportunities to share their work. Where possible, pupils are introduced to a diverse range of scientists and STEM careers, helping them to understand the contribution Science makes to society and to see the possibilities available to them in the future. Teaching also draws attention to sustainability, environmental responsibility and the ways scientific knowledge can be applied to real-world challenges.

Subject Leadership and Monitoring

The Science Subject Leader monitors the quality and impact of Science across the school. This includes reviewing curriculum coverage and progression; sampling planning, assessment information and pupils' work; observing practical Science and teaching where appropriate; speaking with pupils; and checking how well provision meets the needs of vulnerable pupils, including pupils with SEND and disadvantaged pupils. Findings are shared with staff and senior leaders and are used to identify support, resources, professional development and priorities for improvement.

Impact

Through this curriculum, pupils will know and remember more over time, develop secure and connected scientific understanding, and use scientific vocabulary accurately and confidently. They will apply substantive knowledge through a range of scientific enquiries, demonstrate increasingly secure disciplinary knowledge and Working Scientifically skills, and communicate observations, evidence and conclusions with growing independence. Pupils will leave The Bellbird curious about the world, able to think critically about scientific ideas and aware of the relevance of Science to everyday life, sustainability and future study and careers.

Appendix A Curriculum overview

The overview below reflects the Kapow Primary Science sequence taught at The Bellbird during 2026-27. It is presented as text in a structured table so that it can be read by assistive technology and published as a separate accessible curriculum document if required.

Year group	Period	Kapow Science unit
EYFS	Autumn	Animal adventures
EYFS	Spring	I am a scientist
EYFS	Summer	Our beautiful planet
EYFS	Across the year	Changing seasons
Year 1	Autumn 1	Forces and space: Seasonal changes
Year 1	Autumn 2	Materials: Everyday materials
Year 1	Spring 1	Animals: Sensitive bodies
Year 1	Spring 2	Animals: Comparing animals
Year 1	Summer 1	Plants: Introduction to plants
Year 1	Summer 2	Making connections: Investigating science through stories
Year 2	Autumn 1	Living things: Habitats
Year 2	Autumn 2	Living things: Microhabitats
Year 2	Spring 1	Materials: Uses of everyday materials
Year 2	Spring 2	Animals, including humans: Life cycles and health
Year 2	Summer 1	Plants: Plant growth
Year 2	Summer 2	Making connections: Plant-based materials
Year 3	Autumn 1	Animals: Movement and nutrition
Year 3	Autumn 2	Forces and space: Forces and magnets
Year 3	Spring 1	Materials: Rocks and soil
Year 3	Spring 2	Energy: Light and shadows
Year 3	Summer 1	Plants: Plant reproduction
Year 3	Summer 2	Making connections: Does hand span affect grip strength?
Year 4	Autumn 1	Animals, including humans: Digestion and food
Year 4	Autumn 2	Energy: Electricity and circuits
Year 4	Spring 1	Materials: States of matter
Year 4	Spring 2	Energy: Sound and vibrations
Year 4	Summer 1	Living things: Classification and changing habitats

Year group	Period	Kapow Science unit
Year 4	Summer 2	Making connections: How does the flow of liquids compare?
Year 5	Autumn 1	Materials: Mixtures and separation
Year 5	Autumn 2	Materials: Properties and changes
Year 5	Spring 1	Forces and space: Earth and space
Year 5	Spring 2	Living things: Life cycles and reproduction
Year 5	Summer 1	Forces and space: Unbalanced forces
Year 5	Summer 2	Animals: Human timeline (3 lessons); Making connections: Does the size of an asteroid affect the diameter of its crater? (3 lessons)
Year 6	Autumn 1	Living things: Classifying big and small
Year 6	Autumn 2	Energy: Light and reflection
Year 6	Spring 1	Living things: Evolution and inheritance
Year 6	Spring 2	Energy: Circuits, batteries and switches
Year 6	Summer 1	Animals, including humans: Circulation and health
Year 6	Summer 2	Making connections: Are some sunglasses safer than others?