

BURFORD PRIMARY & NURSERY

SUBJECT: SCIENCE

LEADER: JACK MAGEE



INTENT

At Burford, we aim to deliver a science curriculum that empowers children for their future lives. By providing them with rich opportunities and scientific experiences, we aim to build curiosity, learn how science links with wider concepts and spark interest and ambition for future career paths.

By combining the knowledge children need and taking part in scientific experiments, we ensure children are engaged in lessons and excited to learn more. We want children to know that science is everywhere and will give them a better understanding of how the world works.

We want children to think and work scientifically so they have a deeper understanding, question and use experiments to prove their theories.

IMPLEMENTATION

The national curriculum lays out the key elements of what science must be taught in primary schools and we follow these expectations at Burford use the White Rose scheme of work.

A progressive scheme of learning is mapped out with key skills, knowledge and vocabulary explicit. Work over time includes new learning and retrieval practise to build both knowledge and confidence over time.

Where possible, lessons are enquiry based with each topic providing opportunities for children to experiment, investigate and being able to ask key questions. This is implemented through five types of enquiries: fair testing (controlled investigations), observing over time, use of secondary resources, pattern seeking and identifying and classifying.

As a school we aim to give children the confidence and encouragement to achieve success and understand that they can have careers that involve thinking and working scientifically in the future.

SCIENCE CURRICULUM COVERAGE MAP

Y1	Seasonal changes	Everyday materials	Animals, including humans	Plants	
Y2	Animals, including humans	Uses of everyday materials	Plants	Living things and their habitats	
Y3	Forces and magnets	Animals, including humans	Rocks	Plants	Light
Y4	Sound	Electricity	Animals, including humans	Living things and their habitats	States of matter
Y5	Living things and their habitats	Earth and space	Animals, including humans	Forces	Properties and changes of materials
Y6	Animals including humans	Light	Electricity	Evolution and inheritance	Living things and their habitats

Communication and Language

Listening, Attention and Understanding

- Listen attentively and respond to what they hear with relevant questions, comments and actions when being read to and during whole class discussions and small group interactions.
- Make comments about what they have heard and ask questions to clarify their understanding.
- Hold conversation when engaged in back-and-forth exchanges with their teacher and peers.

Speaking

- Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary.
- Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate.
- Express their ideas and feelings about their experiences using full sentences, including use of past, present and future tenses and making use of conjunctions, with modelling and support from their teacher.

Understanding the World

Past and Present

- Talk about the lives of the people around them and their roles in society.
- Know some similarities and differences between things in the past and now, drawing on their experiences and what has been read in class.
- Understand the past through settings, characters and events encountered in books read in class and storytelling.

People, Culture and Communities

- Describe their immediate environment using knowledge from observation, discussion, stories, non-fiction texts and maps.
- Know some similarities and differences between different religious and cultural communities in this country, drawing on their experiences and what has been read in class.
- Explain some similarities and differences between life in this country and life in other countries, drawing on knowledge from stories, non-fiction texts and - when appropriate - maps

The Natural World

- Explore the natural world around them, making observations and drawing pictures of animals and plants.
- Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class
- Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter

Where does Science appear in the EYFS EARLY LEARNING GOALS?

Personal, Social and Emotional Development

Self-Regulation

- Show an understanding of their own feelings and those of others, and begin to regulate their behaviour accordingly.
- Set and work towards simple goals, being able to wait for what they want and control their immediate impulses when appropriate.
- Give focused attention to what the teacher says, responding appropriately even when engaged in activity, and show an ability to follow instructions involving several ideas or actions

Managing Self

- Be confident to try new activities and show independence, resilience and perseverance in the face of challenge
- Explain the reasons for rules, know right from wrong and try to behave accordingly
- Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices

Building Relationships

- Work and play cooperatively and take turns with others
- Form positive attachments to adults and friendships with peers.
- Show sensitivity to their own and to others' needs

Expressive Arts and Design

Creating with Materials

- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function
- Share their creations, explaining the process they have used.
- Make use of props and materials when role playing characters in narratives and stories

Being Imaginative and Expressive

- Invent, adapt and recount narratives and stories with peers and their teacher
- Sing a range of well-known nursery rhymes and songs
- Perform songs, rhymes, poems and stories with others, and when appropriate try to move in time music

Mathematics

Number

- Have a deep understanding of number to 10, including the composition of each number.
- Subitise (recognise quantities without counting) up to 5
- Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.

Numerical Patterns

- Verbally count beyond 20, recognising the pattern of the counting system
- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity
- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally

Physical Development

Gross Motor Skills

- Negotiate space and obstacles safely, with consideration for themselves and others
- Demonstrate strength, balance and coordination when playing
- Move energetically, such as running, jumping, dancing, hopping, skipping and climbing.

Fine Motor Skills

- Hold a pencil effectively in preparation for fluent writing- using the tripod grip in almost all cases.
- Use a range of small tools, including scissors, paint brushes and cutlery
- Begin to show accuracy and care when drawing

Literacy

Comprehension

- Demonstrate understanding of what has been read to them by retelling stories and narratives using their own words and recently introduced vocabulary.
- Anticipate - where appropriate - key events in stories.
- Use and understand recently introduced vocabulary during discussions about stories, non-fiction, rhymes and poems and during role-play.

Word Reading

- Say a sound for each letter in the alphabet and at least 10 digraphs.
- Read words consistent with their phonic knowledge by sound-blending.
- Read aloud simple sentences and books that are consistent with their phonic knowledge, including some common exception words

Writing

- Write recognisable letters, most of which are correctly formed.
- Spell words by identifying sounds in them and representing the sounds with a letter or letters.
- Write simple phrases and sentences that can be read by others.