



'Together we Flourish and Achieve'

Our Curriculum

Science

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Intent

At Spaxton and Stogursey, in Science we believe that all children should:

- **Develop Curiosity and Understanding:** Our science curriculum nurtures children's natural curiosity about the world around them. It helps them ask questions and seek answers through observation and experimentation.
- **Build Knowledge and Skills:** Science provides a foundation of knowledge about the natural world. It also develops important skills such as critical thinking, problem-solving, and the ability to conduct investigations.
- **Have a relevance to Everyday Life:** Understanding scientific concepts helps children make sense of everyday phenomena and see the relevance of science in their own lives. This can include everything from understanding weather patterns to how plants grow.
- **Prepare for Future Learning:** A strong foundation in science prepares students for more advanced study in secondary school and beyond. It also helps them develop a positive attitude towards science and its applications.
- **Encourage Scientific Literacy:** Teaching science helps children become scientifically literate, enabling them to make informed decisions and understand the impact of science on society and the environment.
- **Promote Inquiry and Investigation:** Science at Spaxton and Stogursey emphasises inquiry-based learning, where students learn by doing. This approach helps them develop a deeper understanding of scientific concepts and the scientific method.

This is underpinned by our school curriculum intent which in turn is underpinned by the QET principles.

At Spaxton and Stogursey, we deliver a broad and balanced curriculum to all our pupils. Through our ambitious curriculum offer, that has been carefully designed to ensure it is sequential and progressive through each stage, we believe it allows:

1. **Holistic Development:** It supports the overall development of our children, addressing their academic, social, emotional, and physical needs. This approach ensures that our pupils at Spaxton and Stogursey are well-rounded and prepared for next stage of learning and any other future challenges.
2. **Engagement and Motivation:** A varied curriculum keeps our pupils engaged and motivated by offering a range of subjects and activities. Our broad and balanced curriculum offer helps cater to different interests and learning styles, making education more enjoyable and effective for all.
3. **Critical Thinking and Problem-Solving:** Exposure to a wide range of subjects encourages critical thinking and problem-solving skills. Our pupils learn to make connections between different areas of knowledge, enhancing their cognitive abilities.
4. **Cultural Awareness and Respect:** Our broad curriculum includes subjects like history, geography, and the arts, which help our pupils understand and appreciate different cultures and perspectives. This fosters respect and empathy for others. This is particularly important due to our village rural location.
5. **Preparation for Future Learning:** Our balanced curriculum provides a strong foundation in core subjects like English and maths while also introducing pupils to other areas of knowledge. This prepares them for more specialised learning in secondary education and beyond

6. **Personal Growth and Well-being:** Subjects like physical education, music, and art contribute to pupils' physical and emotional well-being. They provide opportunities for self-expression, creativity, and physical activity, which are crucial for healthy development.

Our school curriculum is bespoke and designed to meet the needs of the children in our school. It is underpinned by the Quantock Education Trust curriculum principles (SMART) which guide the development and review of the curriculum in all schools in the Trust:

- A strong and carefully Sequenced curriculum, so that children and young people's learning progresses in a way that builds knowledge intentionally and cumulatively
- A curriculum that Motivates children and young people so they can value and experience joy in learning whilst developing their own unique voice.
- An Ambitious curriculum, so that children and young people are challenged and empowered to think deeply and critically and grapple with complexity, challenge assumptions, question accepted authorities and embrace curiosity.
- A curriculum that is Responsive, so that it meets the needs of children and young people in our local community as well as opening doors to the wider world.
- A curriculum that is Transformative, so that children and young people can put their learning to use as active citizens, working for social justice, environmental stewardship and a healthy, equitable world, enabling them to build character and shape their future.

Implementation

At Spaxton and Stogursey we use enquiry-based learning to develop pupils' scientific knowledge. Sessions mostly begin with a question to promote scientific thinking and allows pupils to apply prior knowledge. Across the year, pupils have opportunities to develop skills in the following areas:

- Asking questions
- Observing and measuring
- Planning and setting up different types of enquiry
- Identifying and classifying
- Performing tests
- Gathering and recording data
- Reporting, presenting and communicating data/findings
- Using equipment

When planning, teachers base their planning on the Kapow scheme, making suitable adjustments for the pupils in their class as necessary.

The curriculum is divided into seven key areas;

- Plants
- Animals Including Humans
- Living things and their habitats
- Materials
- Energy
- Forces, earth and Space
- Making Connections

All staff use high-quality teaching and make use of explicit instruction, cognitive and metacognitive strategies, scaffolding, flexible grouping and technology to ensure a supportive environment for all pupils, without exception.

At the start of each unit, teachers use a range of assessment techniques to ascertain pupils' current attainment and skill level, and adapt planning where necessary. This continues throughout the unit, including addressing any identified misconceptions or misuse of vocabulary. At the end of the unit, teachers assess current skill and knowledge to inform future planning.

It is expected that by the end of each key stage teachers will have taught and covered all of the skills and knowledge expected for the pupils. The curriculum returns to skills and knowledge over the four years so supports the learning in mixed aged classes.

Curriculum Overview

At Spaxton and Stogursey our Science overview is based on a rolling programme that ensures that all students cover the curriculum over a two- or four-year cycle, in mixed-age classes. It guarantees that no student misses essential content regardless of their starting point in the cycle. Where prior knowledge and skills are required we have tried to design the curriculum so that the units are taught in sequence. At times the teachers will need to adapt their teaching to consider the knowledge younger pupils need before proceeding.

Reception

	Cycle A	
Autumn 1	Animal adventures	Changing Seasons to be taught across the year.
Autumn 2		
Spring 1	I am a scientist	
Spring 2		
Summer 1	Our Beautiful Planet	
Summer 2		

Key Stage 1

	Cycle A	Cycle B
Autumn 1	Plants: Introduction to plants	Animals including humans: Sensitive bodies
Autumn 2	Forces and space: Seasonal Changes	Materials: Everyday Materials
Spring 1	Living Things: Habitats	Materials: Uses of everyday materials
Spring 2	Animals Including humans: Life cycles and health	Animals including humans: Comparing animals
Summer 1	Plants: Plant Growth	Living Things: Microhabitats
Summer 2	Making Connections: Ocean Protectors	Making connections: Fairytale science

Key Stage 2

Four year rolling programme.

Units where prior learning is required are grouped, so that knowledge and skills build progressively.

Teachers are expected to adapt lessons so that pupil knowledge is extended according to their age and stage of learning.

	Cycle A	Cycle B	Cycle C	Cycle D
Autumn 1	Rocks and Soils	Electricity and Circuits	Circuits batteries and switches	Life cycles and reproduction
Autumn 2	Movement and Nutrition	Evolution and inheritance	Classification and changing habitats	Sounds and Vibrations
Spring 1	Digestion and food	Mixtures and separation	Light and reflection	Unbalanced forces
Spring 2	States of Matter	Properties and changes	Plant reproduction	Earth and space
Summer 1	Classifying big and small	Light and Shadow	Forces and Magnets	Circulation and health
Summer 2	Making connections: Does Hand span affect grip?	Making connections: How does the flow of liquids compare?	Making connections: Are some sun glasses safer than others	Human Timeline and Making Connections: Does the size of an asteroid affect its impact strength?

Our small step progression allows for focused attention on a single concept or skill at a time. This approach aligns with cognitive science principles, such as the **"chunking" method**, which helps the brain process and retain information more effectively. Learners can fully grasp one concept or skill before moving on to the next, avoiding gaps in knowledge.

Impact and Assessment

We assess pupils as we observe them during lessons and mark their work following this, annotating with appropriate comments, if necessary. Science skills and learning can be enhanced through effective verbal and written questions.

At the beginning of each unit, prior learning is explored through a variety of means such as; retrieval, pre-assessment 'brain dumps', use of KWL grids or quizzes.

Each class has impact tasks at the end of a unit to support the teachers' assessments, book looks, observations of science lessons, pupil voice and the end of year teacher assessments all contribute to the overall assessment of Science.

Inclusion

At Spaxton and Stogursey we believe that **All** leaders are leaders of SEND, and all teachers are teachers of SEN, and as such is it our responsibility to ensure an inclusive approach to promote the wellbeing and academic progress of **all** our children in whole curriculum. By removing barriers to learning and supporting the growth of the whole child we are helping **all** to succeed.

In the Trust, we have adopted an evidence-based approach to supporting **all** of our children as we believe what is good for all can be vital for some.

We use the EEF 'Five a day' principles to support our repertoire of teaching strategies daily in response to individual needs.



These work in conjunction with the work we have been doing on Retrieval with Kate Jones and Rosenshine's Principles of instruction such as small step learning, modelled examples, independent practice.

