Little Bollington C of E Primary School

Science
Curriculum Journey
EYFS-Year 6

Little Bollington- How Our Children Learn SCIENCE

Through Faith, we are changing our lives for the better, forever
How is this reflected in our Science Curriculum?

Through our science curriculum we learn about and celebrate differences between a range of Scientists, both historically and in modern Science, from a range of backgrounds, ethnicities, gender and religions. We learn how to work well as a team during group work and investigations, listening to others and respecting their contributions. We learn to respect our environment and know our responsibility to look after it for future generations.
Through scientific learning and working scientifically, our children foster a love of Science enabling them to be the scientists of the future so they too can make the lives of others better.

Our Intent

Science should aim to inspire a curiosity and fascination about the world around us in all pupils. At Little Bollington, confidence and competence in the full range of practical skills will be developed through planning and carrying out scientific investigations. Equipped with scientific knowledge, pupils can make connections, ask questions and understand the uses and implications of science for today and in the future. We aim for the children at Little Bollington to use their secure scientific knowledge and the ability to understand what 'working like a Scientist' looks like to understand the world around them and how this can shape their future. Through a very hands on, practical approach we aim to foster and develop children's enjoyment of science.

Our Children

Our children come to us with a wide variety of experiences of the world around them, so our curriculum ensures we utilise prior knowledge and exposes children to new knowledge and experiences. Pre-assessment opportunities are built into every unit of learning, so we understand the prior learning that is secure and areas that need developing, and these are explicitly planned for. We aim to continually develop our children's confidence to express their learning and opinions. Our children are curious and keen to learn through first hand experiences and our Science curriculum is firmly based in scientific enquiry and working scientifically.

Our Learning Threads

Working Scientifically Skills

Asking questions
Asking questions that can be answered using a scientific enquiry.

Making predictions
Using prior knowledge to suggest what will happen in an enquiry.

Setting up tests
Deciding on the method and equipment to use to carry out an enquiry.

Observing and measuring
Using senses and measuring equipment to make observations about the enquiry.

Recording data
Using tables, drawings and other means to note observations and measurements.

Interpreting and communicating results
Using information from the data to say what you found out.

Evaluating
Reflecting on the success of the enquiry approach and identifying further questions for enquiry.

Enquiry Skills

Comparative / fair testing
Changing one variable to see its effect on another, whilst keeping all others the same.

Research
Using secondary sources of information to answer scientific questions.

Observation over time
Observing changes that occur over a period of time ranging from minutes to months.

Pattern-seeking
Identifying patterns and looking for relationships in enquiries where variables are difficult to control.

Identifying, grouping and classifying
Making observations to name, sort and organise items.

Problem-solving
Applying prior scientific knowledge to find answers to problems.

Our Implementation

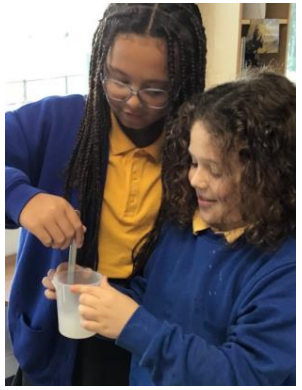
At our school, the requirements of the Science Curriculum are taught using an investigative approach to learning. Our science curriculum is delivered through termly units, following the Plymouth Scheme of Work which is designed around the National Curriculum statements for Knowledge, Working Scientifically and Scientific Enquiry. Each of the units shows progression in the key scientific knowledge and concepts. Working Scientifically skills are embedded into lessons to ensure these skills are being developed throughout the pupil's school career. As scientists at Little Bollington, the pupils are taught to question, observe, classify, predict, create a fair test and analyse outcomes through a variety of practical investigations ensuring science learning is meaningful and fun. Pupils learn key vocabulary/scientific terminology to be able to explain processes and outcomes accurately and through a range of scientific enquiry. The curriculum at our school is carefully mapped out across our 2-year rolling programme to ensure that pupils acquire knowledge, vocabulary and skills in a well-thought out and progressive manner. To ensure that the children's schema in each area of science is secure recall and recapping of key concepts from previous years and terms is built into each unit of learning. Wherever possible and appropriate we will enrich the Science curriculum with educational visits and visitors to school.

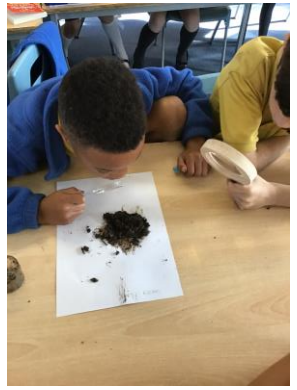
Our Impact

As a result of our high quality and carefully structured Science curriculum children acquire the age-related knowledge and skills to progress as a scientist.
We aim to ensure that:
•The school has a positive STEM culture
•Children have a sense of excitement and curiosity about natural phenomena
•Children understand how science can be used to explain what is occurring, predict how things will behave and analyse course. Making links with previous learning and experiences.
•Children communicate clearly using key scientific vocabulary
•Children can plan investigations to answer questions created by themselves or their teachers.

We measure the impact of the science curriculum by:
• Assessing children's understanding of topic-linked vocabulary before and after the unit is taught.
• Marking of written work in books
• Using termly learning tasks to assess understanding
• 'Pupil voice' present in books and on displays.
• Book scrutiny and peer moderation with opportunities for dialogue between teachers to discuss and understand their class's work.

The science leader will continually monitor the impact of science throughout the school to ensure progress of knowledge and skills is being taught. In addition, the science leader will continue to access CPD in order to identify new activities and learning opportunities that will keep the subject fresh, exciting and relevant for an ever-changing world.



EYFS

Keeping Healthy

Colour

Animals from different areas

Mini beasts and growing - insects

Traditional Tales

Under the Sea - Beach

All About Me

Celebrations

People who help us

Mini beasts and growing - plants

Traditional Tales

Under the Sea - Ocean

Year 1/2

Looking after plants

(Plants Y1, Seasons Y1, Plants Y2)

Material world

(Materials Y1, Materials Y2)

Humans, Animals and Staying Healthy

(Animals Y1, Animals Y2, Living things Y2)

Changing Materials

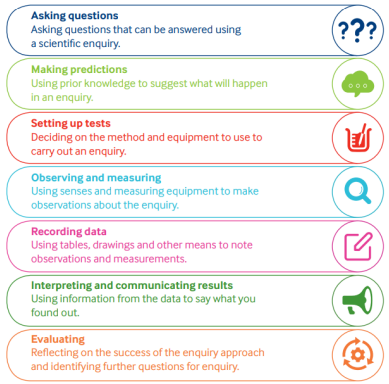
(Materials Y1, Materials Y2)

How does your garden grow?

(Plants Y1, Y2)

The Amazing Human Body

(Animals Y1, Animals Y2)



Year 3/4

The Amazing Human Body

(Animals Y3, Animals Y4)

Archaeology

(Rocks Y3, Animals Y3, Living things Y4)

Healthy Body, Healthy Mind

(Animals Y6)

Bright Sparks

(Materials Y5, Light Y6, Electricity Y6)

Following Darwin's Footsteps

(Evolution and Inheritance Y6)

Engineering

(Forces Y5, Materials Y5)

Living, growing and changing

(Living things Y5)

Out of this world

(Materials Y5, Earth and Space Y5)

Year 5/6

How Stuff Works

(Electricity Y4, Forces Y3)

From the Amazon to Antarctica

(States of matter Y4, Living things Y4, Animals Y4)

Movie Magic

(Light Y3, Sound Y4)

Nurturing Nature

(Plants Y3, Living things Y4)

Science Cycle A

	Term 1	Term 2	Term 3
EYFS	Keeping Healthy Colour	Animals from different areas Mini Beasts and Growing - Insects	Traditional Tales Under the Sea- Beach
Year 1 and 2	Looking after plants (Plants Y1, Seasons Y1, Plants Y2)	Material world (Materials Y1, Materials Y2)	Humans, Animals and Staying Healthy (Animals Y1, Animals Y2, Living things Y2)
Year 3 and 4	Archaeology (Rocks Y3, Animals Y3, Living things Y4)	Nurturing Nature (Plants Y3, Living things Y4)	Movie Magic (Light Y3, Sound Y4)
Year 5 and 6	Out of this world (Materials Y5, Earth and Space Y5)	Living, growing and changing (Living things Y5)	Engineering (Forces Y5, Materials Y5)

Science Cycle B

	Term 1	Term 2	Term 3
EYFS	All about me Celebrations	People who help us Mini Beasts and Growing - Plants	Traditional Tales Under the sea- Oceans
Year 1 and 2	Animal Safari (Animals Y1, Living things Y2, Animals Y2)	Changing Materials (Materials Y1, Materials Y2)	How does your garden grow? (Plants Y1, Y2)
Year 3 and 4	The Amazing Human Body (Animals Y3, Animals Y4)	From the Amazon to Antarctica (States of matter Y4, Living things Y4, Animals Y4)	How Stuff Works (Electricity Y4, Forces Y3)
Year 5 and 6	Following Darwin's Footsteps (Evolution and Inheritance Y6)	Bright Sparks (Materials Y5, Light Y6, Electricity Y6)	Healthy Body, Healthy Mind (Animals Y6)