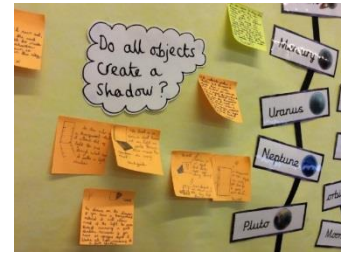
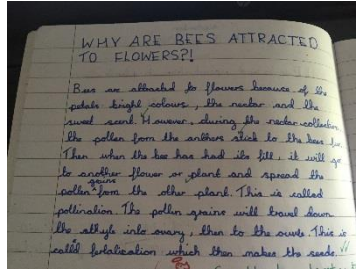


Science at Wylde Green Primary School



We strive to develop a spirit of enquiry and inquisitive minds through Science at Wylde Green Primary School. Our lessons are investigation led and practical! In this way, our children can make sense of the world in which they live through engaging investigations and relate their learning to the world they live in too. To develop our children's natural inquisitiveness every Science topic is focused around a **big question** that the children have to discover the answer to.



We follow the 'Rising Stars - Switched on Science' programme of study which covers all aspects of the 2014 revised National Curriculum for Science.

Our aim is to ensure that all pupils:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them
- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

We will enable pupils to carry out scientific enquiries and work scientifically. They will be given regular opportunities to:

- observe over time
- look for patterns in their observations and results
- identify, classify and group
- carry out controlled investigations using comparisons and fair testing methodology
- research using secondary sources
- present their findings clearly, precisely and coherently, using scientific vocabulary.

Key Stage 1 pupils will:

- explore the world around them
- carry out scientific enquiries
- learn how to answer scientific questions
- compare objects, materials and living things
- sort and group objects, materials and living things
- notice patterns and relationships by observing changes over time
- use simple measurements and equipment to gather data
- carry out simple tests and record simple data.



Lower Key Stage 2 (Years 3 and 4) pupils will:

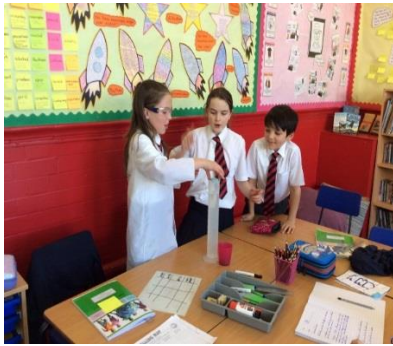
- ask relevant questions and use different types of scientific enquiry to answer them
- make systematic and careful observations, using a range of equipment
- gather, record, classify and present data to help answer questions
- record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and table
- report on findings from enquiries
- use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- identify differences, similarities or changes related to simple scientific ideas and processes
- use scientific evidence to answer questions.



Upper Key Stage 2 (Years 5 and 6) pupils will:



- plan different types of scientific enquiries to answer questions, recognising and controlling variables where necessary
- take measurements with a wide range of scientific equipment with increasing accuracy and precision
- record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- use test results to make predictions to set up further comparative and fair tests
- report and present findings from enquiries, including conclusions, causal relationships and explanation of an degree of trust in results
- identify scientific evidence that has been used to support or refute ideas or arguments.



Year Group Overview

	<u>Physics</u>	<u>Biology</u>	<u>Chemistry</u>
Year 1	Seasonal Change	Plants Animals, including humans	Everyday Materials
Year 2	Everyday Materials	Plants Animals, including humans Living Things and their Habitats	
Year 3	Light Forces and Magnets	Plants Animals, including humans	Rocks and Soils

Year 4	Electricity Sound	Animals, including humans Living Things and their Habitats	States of Matter
Year 5	Earth and Space Forces	Animals, including humans Living Things and their Habitats	Properties of Materials
Year 6		Animals, including humans Living Things and their Habitats Evolution and Inheritance	Electricity Light

Principles for the teaching and learning of science:

Practical and hands-on: Science teaching and learning uses practical hands-on resources.

Range of enquiry: Children develop a full range of enquiry skills. Teachers are confident teaching enquiry and understand progression.

Subject knowledge: Teachers show an interest in science. Concepts and knowledge are firmly secured for both children and teachers. Common pupil misconceptions are known.

Exciting: Teachers are creative and imaginative in their approach to teaching science. Children are excited about their learning in science.

Real life: Science provision relates to real life contexts and experiences. This includes working in an outdoor environment and trips.

Questions: Children are encouraged to be curious and pose questions. They have the opportunity to answer their own questions through practical enquiry.

Language: Children have a secure understanding of key vocabulary and use it with precision and confidence.

Curriculum links: links are made across the curriculum to enhance and promote scientific understanding.

Progress: All children make progress in their scientific knowledge and skills. Good use is made of assessment to inform further teaching.

Famous Scientists: Children are aware of famous scientists, their fields of work and their impact on society.

Future: Children see themselves as scientists; they are aware of the role of science in daily life and are aware that science offers opportunities for future jobs.

Celebrating Scientific Achievement:

Every week we award a Super Scientist Award to those children who have shown fantastic learning in Science. Our Super Scientists turn into professors for the lesson, wearing their own laboratory coat and help the teacher lead the lesson as well as being celebrated in our school newsletter!

Miss Jennings' Super Scientists

Celebrating achievement in Science across

Wylde Green!



Reception: *Finley B* for asking thoughtful and inquisitive questions about the animals we saw at the farm.

Year 1: *Harper J* for showing an excellent understanding and passion when investigating materials and their properties.

Year 2: *Barnaby H* for carefully performing tests to investigate how the shape of a material can be changed and using his observations to draw conclusions.

Year 3: *Anaiya H* for showing super investigative skills when exploring the properties of different rocks.

Year 4: *Jessica F* for carefully considering the variables needed in order to make a test fair.

Year 5: *Jasmin Y* for showing fantastic investigative skills when testing the changes made to a variety of materials.

Year 6: *Daniel H* for interpreting results on a line graph and writing a detailed scientific conclusion following an investigation linked to shadows.



Things to do at Home:

Why not become an astronomer and look out for constellations in the night sky!

<https://www.ducksters.com/science/physics/constellations.php>

Why not become a naturalist and investigate habitats in the garden or your local park! How many different animals and species of plants can you identify? Why not explore the wildlife that lives and travels through your community!

<http://www.primaryresources.co.uk/science/science2e.htm>

Why not become a nutritionist and create a healthy meal at home!

<https://www.educationquizzes.com/ks2/science/healthy-eating/>

Why not become a paleontologist and dig for fossils in your back garden- just remember to ask for permission first!

<http://www.dinosaursforkids.com/paleontology.html>

There are many wonderful places nearby to visit too:

Thinktank – an award winning Science museum guaranteed to get those inquisitive minds working!

<https://www.birminghammuseums.org.uk/thinktank>

Sealife Centre – Discover a multitude of sea life creatures and learn about the importance of conservation!

<https://www.visitsealife.com/birmingham/discover/explore-our-creatures/>

RAF Cosworth – soar through the skies and learn about the importance of engineering!

<https://www.rafmuseum.org.uk/cosford/>

The National Space Centre, Leicester – A sure-fire out-of-this-world experience for all budding astronauts out there!

<https://spacecentre.co.uk/>

Websites

- [Natural History Museum https://www.nhm.ac.uk/our-science.html](https://www.nhm.ac.uk/our-science.html)
Kids only section of the museum's website.
- [Teaching Ideas https://www.teachingideas.co.uk/subjects/science](https://www.teachingideas.co.uk/subjects/science)
Lots of useful Science resources.
- [Woodlands Junior School http://www.primaryhomeworkhelp.co.uk/revision/Science/space.htm](http://www.primaryhomeworkhelp.co.uk/revision/Science/space.htm)
Lots of great Science links.
- [UK Space Agency https://www.stem.org.uk/esero](https://www.stem.org.uk/esero)
The British National Space Centre's learning zone.
- [Coxhoe-Durham School http://www.coxhoe.durham.sch.uk/curriculum-links/science](http://www.coxhoe.durham.sch.uk/curriculum-links/science)
Lots of KS1 and KS2 Science links.
- [BBC Primary Science http://www.bbc.co.uk/schools/websites/4_11/site/science.shtml](http://www.bbc.co.uk/schools/websites/4_11/site/science.shtml)
Science activities from the BBC.
- [Planet Science http://www.planet-science.com/](http://www.planet-science.com/)
Lots of scientific fun and activities for under 11's.

- [Primary Resources http://www.primaryresources.co.uk/science/science.htm](http://www.primaryresources.co.uk/science/science.htm)
Useful science resources.