

Widney Junior School



Science Policy

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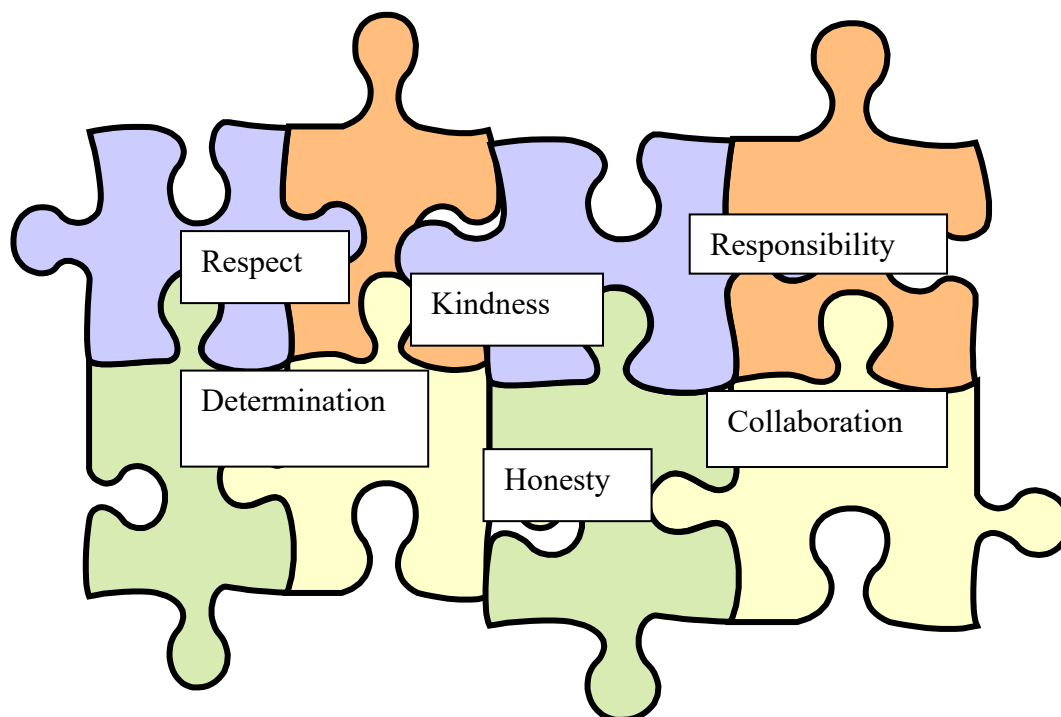
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SCIENCE POLICY

*Inspiring a community where learning is irresistible,
everyone is valued and success is limitless.*

A OUR SCHOOL VALUES

Through discussion by all members of the community including parents, children, teachers, and governors, we hold the following values at the heart of our school.



These core values are held by our school and underpin all aspects of the taught curriculum at Widney.

SCIENCE STATEMENT OF INTENT:

"To provide our children with a strong understanding of the world around them, whilst acquiring specific skills and knowledge to help them to think scientifically. To gain an understanding of scientific processes and also an understanding of the uses and implications of Science, today and for the future."

At Widney, through our science curriculum, we provide a stimulating and happy environment where our pupils will be encouraged to strive for excellence.

We offer a range of opportunities for our pupils to explore and understand the world around them so that they gain a secure knowledge of scientific concepts, together with developing the skills associated with science as a process of enquiry.

Our science curriculum is designed to engage all pupils and prepare them for future learning, whilst encouraging their curiosity, independence, confidence, and resilience. Our pupils gain knowledge through the three key areas of biology, chemistry, and physics, as well as acquiring a range of scientific skills, key vocabulary, and the opportunity to build upon prior knowledge and learning. We encourage respect for living organisms and the physical environment, and provide opportunities for critical evaluation of evidence, as well as ensuring pupils build an awareness of potential risks when investigating.

We want our pupils to be well motivated, confident thinkers who are competent in their understanding of scientific knowledge, concepts and skills thus nurturing future scientists.

B INTENT:

Our Science Policy follows The National Curriculum 2014 for Science Guidelines and aims 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.

In teaching science, we are developing in our pupils:

- a positive attitude towards science and an awareness of its fascination
- an understanding of science through a process of enquiry and investigation
- confidence and competence in scientific knowledge, concepts, and skills
- an ability to reason, predict, think logically and to work systematically and accurately
- an ability to communicate scientifically
- the initiative to work both independently and in co-operation with others
- the ability to use and apply science across the curriculum and in real life
- the ability to assess hazards and risks to themselves and others and know how to take action to control them
- ways in which they can protect the environment
- an understanding of the world in which they live.

OBJECTIVES

The objectives will be divided into the skills, attitudes, and knowledge to be acquired at the end of Key Stage 2.

SKILLS

All pupils will be encouraged to develop their enquiry skills through working scientifically by using first-hand practical experiences and a wide range of sources of information to develop a deeper understanding of scientific ideas. Pupils should have the opportunity to:

1. ask their own questions and plan to answer these using different types of scientific enquiry including observing changes over time, noticing patterns, grouping and classifying things, carrying out comparative and fair tests and carrying out research using a wide range of secondary sources of information
2. select the most appropriate equipment for a task and take accurate measurements
3. identify when to repeat measurements to ensure results are reliable
4. draw conclusions based on their data and observations
5. use evidence from a range of sources to justify their ideas
6. use their scientific knowledge and understanding to explain their findings through talk, in written forms or in other ways

7. recall and use appropriate terminology and scientific vocabulary.
8. explore and talk about their ideas.
9. analyse functions, relationships, and interactions systematically.
10. recognise how abstract ideas help them to understand and predict how the world operates.
11. recognise that scientific ideas change and develop over time.
12. handle equipment safely and effectively.
13. recognise and assess risks to themselves and take action to control them.

ATTITUDES

The pupils should have the opportunity to:

- develop their natural curiosity
- foster understanding of safety and care
- develop perseverance
- increase their self-awareness
- increase self – discipline
- develop their ability to co-operate and take responsibility
- develop their listening skills and learn to treat other people’s ideas with respect
- encourage open-mindedness
- relate science to everyday experiences
- develop a caring attitude towards their environment.

KNOWLEDGE

See programme of study for the new National Curriculum 2014 for each year group for further details.

C IMPLEMENTATION

The implementation of this policy is the responsibility of all the teaching staff. It will be overseen and monitored by the Science Leader and Headteacher.

At Widney, science topics are taught within each year group in accordance with the National Curriculum. Units of work are taught in half termly topics to allow children to focus on developing their knowledge and skills, studying each topic in depth. Each year group builds upon the learning from prior year groups, therefore developing depth of understanding and progression of skills.

Teachers promote enjoyment and foster interest of science by encouraging our pupils to explore, question, predict, plan, carry out investigations and observations, as well as concluding their findings.

Children present their findings and learning using science specific language, observations, and diagrams.

To support pupils, there are regular opportunities to review the learning taken place in previous topics as well as previous lessons.

Pupils are provided with a Knowledge Organiser to support each unit of work. This includes what they should already know, National Curriculum Links, what they will know by the end of the unit, a vocabulary list with definitions, diagrams relating to the unit and investigations to be carried out (Science Enquiry Skills).

SCIENCE CURRICULUM OVERVIEW (2025 – 2026)

Units of work have been carefully sequenced.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3	Earth Rocks (Rocks)	Mirror Mirror (Light)	Food and our Bodies (Animals, including Humans)	Opposites Attract (Forces)	How does your garden grow? (Plants)	
Year 4	Living Things (Living Things and their Habitats)	Power it up (Electricity)	Looking at States (States of Matter)	Teeth and Eating (Animals, including Humans)	What's that sound? (Sound)	
Year 5	Out of this World (Earth and Space)	Material World (Properties and Changes of Materials)	Let's get Moving (Forces)	Amazing Changes (Properties and Changes of Materials)	Cycle of Life (Living Things and their Habitats)	Growing Up and Growing Old (Animals, including Humans - connects with RSE)
Year 6	Classifying Critters (Living Things and their Habitats)	Healthy Bodies (Animals, including Humans)	Electrifying (Electricity)	Let it Shine (Light)		Evolution and Inheritance

OUR CURRICULUM

At Widney, we use a combination of the Switched-on Science and Developing Experts schemes as our main resources, as well as also use a variety of other resources to support learning.

ORGANISATION OF LEARNING

Science is taught every week across the school, through a mixture of whole-class teaching, group work and independent learning. Lessons are planned to encourage curiosity and develop pupils' scientific enquiry skills through a range of teaching approaches, including practical investigations where appropriate, alongside observation, discussion, and research-based activities.

Pupils are given opportunities to ask questions, make predictions, carry out fair tests and draw conclusions based on evidence.

Pupils are taught in their class groups and learning is structured to meet the needs of pupils through 'adaptive teaching'. Teachers provide scaffolds for pupils, model learning and structure

lessons to support the progress of all children. Pupils record their learning in a variety of ways, including written work, diagrams, tables, and graphs.

ASSESSMENT

Formative Assessment

Teachers use a variety of ways in science to assess an individual or group to inform their teaching. These include using brainstorm/spider-grams, concept maps, questioning, listening to pupils' ideas, annotating diagrams, completing tables and direct observation etc.

Summative Assessment

At the end of a unit of work (every half term) pupils complete a written assessment. Teachers use this to help assess their pupils' knowledge and understanding of the unit of work as well as their working scientifically skills.

Using the test scores, as well as their judgements made from each lesson, teachers record pupil achievements for the two combined units of work.

Teacher Assessment at the end of Key Stage 2

At the end of Key Stage 2, the pupils are assessed using the assessment performance descriptors from STA (Standards and Testing Agency). Teachers should judge whether a pupil has achieved the expected national standard using information from tests undertaken during the year, as well as their observations in class.

RESOURCES

The science leader has responsibility for managing and organising resources. In consultation with the teaching staff, the leader purchases resources from within the annual allocation of the science budget proposed by the Head Teacher.

HEALTH AND SAFETY

It is the responsibility of the teacher to use this 'risk assessment' procedure to develop the children's awareness of safety issues involved in tasks carried out in science.

- The scheme of work alerts teachers when particular attention needs to be paid to risks involved.
- It is required that every member of staff reads the following:
- *'BE SAFE' – Some aspects of safety in school science and technology for Key Stages 1 and 2 (ASE)*
- The school is a member of CLEAPSS via the LEA.
- The helpline (**01895 251496**) is constantly available to **any** member of staff should queries arise.
- The leader receives the CLEAPSS newsletter three times per year and updates staff as appropriate.

USE OF SCHOOL GROUNDS

We are very fortunate at Widney to have the use of such wonderful school grounds. The pupils have access to:

- ♦ Large playgrounds for outdoor science activities e.g. using shadow sticks
- ♦ Large playing fields – to practice how sound can travel

- ◆ A wild area for identification of different species of plants and fauna
- ◆ A pond for identification of water fauna
- ◆ A variety of large trees and bushes to study (which are visited by birds and, occasionally, wild animals).

This provides the children with vital first-hand experience needed to develop their interest and promote effective learning.

VISITS/VISITORS

Each year group goes on at least one visit each year, some of which are directly connected with science work. The science leader also organises an annual Science Week in March where pupils have the opportunity to attend specific science visits.

Year 3	Forest School and Botanical Gardens
Year 4	Forest School
Year 5	Forest School and Space Centre in Leicestershire
Year 6	Forest School

SPECIAL EVENT- BRITISH SCIENCE WEEK

Science Week is celebrated in March every year.

EQUAL OPPORTUNITIES

We follow the whole school policy on equal opportunities and inclusion. Science lessons are planned to ensure that all children are fully included and able to access the curriculum. Teaching is adapted to provide appropriate challenge and support, enabling all pupils to make progress in their learning. All pupils are encouraged to participate safely and confidently in practical science activities.

SPECIAL EDUCATIONAL NEEDS

At Widney, teachers will plan inclusive lessons so that all pupils, including those with SEND, are able to access them. Teachers will create an inclusive learning environment through the effective deployment of additional adults and carefully planned resources. Strategies will be employed to scaffold learning, where necessary, by providing reasonable adjustments.

SCIENCE VOCABULARY

Pupils are encouraged to use the correct scientific vocabulary associated with the topics they are learning. Pupils are expected to read, spell and pronounce scientific vocabulary correctly at a level consistent with their word reading and spelling knowledge at Key Stage 2.

MONITORING AND EVALUATION

Subject leaders will monitor their subject within the framework of the SIP. They will negotiate staff meeting times with the Head Teacher. Outcomes from whole staff and year team discussions and the science subject leader's on-going observations will be reported to the Senior Management Team and Curriculum Committee of the Governing Body.

SMSC (Spiritual, Moral, Social and Cultural)

Science promotes the spiritual, moral, social and cultural development in everyone. All pupils are encouraged to develop their own skills and understanding to work as an individual or in a group or class situation, responding to others in an appropriate manner.

The breadth and balance of experiences at Widney embraces many aspects of the PSHE curriculum through exploration of the real world and using imagination and creativity.

Growth Mindset- pupils are encouraged throughout lessons to develop their 'Growth Mindset' skills.

British Values- where appropriate reference is made to our British Values in lessons.

ROLE OF THE SCIENCE LEADER:

- To raise standards and the quality of teaching and learning in science;
- To ensure that all teaching staff have access to quality resources and guideline materials to implement the national curriculum;
- To manage the budget and order resources;
- To assist teachers as required;
- To monitor the quality of teaching and learning across the school through the tracking of pupil progress in Science (use of data, book scrutinies, teacher and pupil questionnaires);
- To review the implementation of science as required;
- To meet with the governor for science to report on the subject;
- To organise the 'Science Week' in March;
- To attend termly Science Synergy Meetings.

IMPACT

Pupils will have gained the following outcomes as a result of the quality of our science curriculum and wider provision:

- a broad range of skills linked to scientific knowledge and understanding, as well as scientific enquiry and investigative skills which will support them in the next stage of their education;
- a secure understanding of key scientific vocabulary that will enable them to communicate their correct understanding of the concepts taught;
- an awe and wonder around the amazing and fascinating world of science;
- a positive attitude towards science and an enjoyment of learning;
- the initiative to work both independently and in co-operation with others;
- the ability to assess risks to themselves and others and know how to take action to control them;
- a respect for their environment;
- good or better progress as set out in the 'National Expectations of Science'.

E REVIEW OF POLICY

This Policy will be reviewed again for 2026 - 2027 with any new developments in the curriculum as part of SIP (School Improvement Plan).