William Austin Junior School

Policy for Science

Rationale

At William Austin Junior School, science is a world of exploration and discovery. The children are taught the key scientific principles of biology, chemistry and physics. All lessons follow the national curriculum and the children have two hours a week dedicated to this core subject.

Aims

The purpose of science education is to: -

- develop scientific strategies and skills;
- develop attitudes appropriate to working scientifically;
- develop basic scientific concepts;
- apply scientific ideas to real life problems;
- stimulate curiosity;
- work co-operatively and communicate scientific ideas to others;
- use simple and safe apparatus;
- relate to the interest and everyday experience of the pupils;
- help pupils to understand their world;
- develop responsibility and good positive attitudes towards their environment;
- extend the learning environment of our pupils via The Willow Garden and local areas;
- develop an understanding of the relationship of scientific ideas to spiritual, ethical and moral dilemmas.

Organisation

Science within the school follows the National Curriculum's programme of study. The organisation of these topics will ensure that the curriculum is met and that key scientific skills are learnt over a range of contexts. This will allow the reinforcement, development and deepening of these areas of scientific knowledge. Children are encouraged to work scientifically and develop explorative techniques.

Teaching and Learning

- The children will be given the opportunity to work independently and in co-operation with their peers.
- The stimulus for investigative tasks will be related to the science topic.
- The tasks will be differentiated to meet the children's ability promoting confidence and enthusiasm in the subject.
- The tasks will enable the children to choose and use appropriate instruments for measuring observations and discoveries, developing skills of dexterity necessary for scientific work and increasing their role as independent learners.
- The tasks set will give scope for the children to make predictions and hypotheses and then go on to construct tests to confirm these. The tasks will enable them to draw conclusions from their results.
- Learning intentions and success criteria will be clearly stated in child-centred language and shared with the children.
- An integral part of all scientific work will involve showcasing the skills of the 5 enquiry types in a diagrammatic, written and verbal manner to different audiences eg. teacher, small groups or to the whole class.
- Scientific investigation will also require the use of secondary information in the form of non-fiction material available from the school library and internet resources.
- All topics will incorporate a reading lesson.

Cross Curricular Links
We believe that science should not be taught in isolation but will naturally draw from, and contribute towards, other areas of the curriculum; in particular English, Maths, Computing, Design Technology, Geography, History and Music.

Inclusion
1. Multicultural

The curriculum will take account of the rich cultural and ethnic diversity within the school, and planned to make it equally relevant to all children, regardless of race or creed. Tasks set will consider the need for support of EAL children. The tasks will be set at appropriate levels. Verbal responses and discussions in pupil's mother tongue with staff, will be counted as relevant and appropriate.

2. Special Educational Needs and disabilities

Children with special educational needs and disabilities will be encouraged to take part in all scientific activities with support from class teachers and teaching assistants and by the use of appropriately targeted levels of work. Children will be encouraged to report their findings verbally and diagrammatically. Children will have the opportunity to participate fully in the science curriculum through effective planning, teaching, appropriate support and assessment.

3. More able children

Staff will ensure that there are opportunities for more able children to secure motivation and concentration via an effective learning environment, setting targets for learning, where appropriate.

4. Gender

No child will be excluded from science on the basis of gender. Subject matter resources and teaching methods are such that every child will be given the opportunity to enjoy, participate and contribute. As in all subjects the children are taught that every member of the class has something of value to offer.

5. Looked After Children

Staff will ensure that Looked After Children's well being and learning are positively promoted within the science curriculum.

Health and Safety
The children will be taught to be aware of their own safety, that of their peers and their environment when working scientifically within the class and the school grounds. Where a risk is identified control measures will be included as part of the lesson plans in each year group.

Planning
Collaborative planning is based on the National Curriculum's programmes of study for each year group and meets the statutory requirements. During the four years of Junior School the programmes of study for Key Stage 2 will be covered. The classes within each year group will all have been offered the same academic and practical experiences. Planning builds upon concepts taught in Key Stage 1 and follows the school's working scientifically progression document. At the beginning of each Science topic, there may be a WOW to engage children in the topic.

Outdoor Learning Environment
All children will be encouraged to observe changes in the outdoor learning environment. This will involve regular visits to our Willow Garden. The children will explore the natural habitats that are established in this area and use it to provide children real-life experiences to enhance learning across all science topics. A vegetable patch will also encourage awareness and understanding of the world around us, and the benefits of home grown produce.

Assessment, Recording and Reporting
Throughout the school, teachers assess whether children are working towards or working at the expected level for their age based on their understanding and application of the content of the National Curriculum. Assessment

is used to inform children of their successes and what they need to do to improve their work. Assessment informs future planning, is used to report to parents, and to maintain records of progress. This is a continuous process and as

such is an integral part of each lesson. This enables the teacher to have a clear view of what a child has achieved in order to plan further appropriate work. Children will be assessed using a variety of methods e.g. verbal responses, written, diagrammatic, observations of activities, questioning and constructional explanations. Opportunities are provided for open-ended investigations to be carried out to assess scientific enquiry.

Resources

Science resources are in a locked central store, enabling access by all members of staff. The equipment available will be reviewed and updated as appropriate and staff informed of any new resources. The resources will be assessed at regular intervals to ensure that they are appropriate to teaching the National Curriculum.

Monitoring and Evaluation

The Science Co-ordinator will monitor the teaching and learning on a regular basis through: planning scrutiny; learning walks, pupil voice and the sampling of children's work to ensure continued awareness of standards.

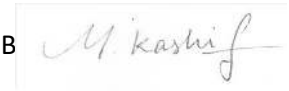
Medium-term planning is retained by the co-ordinator to ensure continuity and progression and easily accessed by all staff members in a shared folder.

This policy will be monitored and reviewed by the Science Co-ordinator every two years.

Policy updated: April 2025

Staff responsible: Science Co-ordinator

This policy was ratified by the Governing Body on: 7th May 2025

Signed on behalf of the Governing B  (signature)

M. Kashif - Chair of Governors (printed)