WARREN WOOD PRIMARY SCHOOL

Science

subject policy

Key Document Details:			
Author:	Science Subject Lead (SC)	**Department:**	Education
Reviewer:	SLT	**Version No:**	1.0
Last Review:	September 2024	**Next Review:**	September 2025
Approver:	Executive Team	**Date Ratified:**	

A Beyond SCHOOLS TRUST ACADEMY

Equality Impact Assessment

Who is the policy or process intended for?	Pupils	Employees	Govs/ Trustees	Volunteers	Visitors
	☑	☑	☑	☑	☑

Status of the policy or process:	New policy or process	Existing policy or process
	☐	☑

Analysis				
Protected Characteristic	Impact analysis			Explanation of impact analysis
	Positive	Neutral	Negative	
Age:	☐	☑	☐	
Disability:	☐	☑	☐	
Sex:	☐	☑	☐	
Gender reassignment:	☐	☑	☐	
Race:	☐	☑	☐	
Religion or belief:	☐	☑	☐	
Sexual orientation:	☐	☑	☐	
Marriage or civil partnership:	☐	☑	☐	
Pregnancy and maternity:	☐	☑	☐	
Pupil groups (PP/SEN/CLA):	☐	☑	☐	

Evaluation and decision making	
Summary of action taken:	
Final decision:	

Our Vision

To be the most respected family of schools - trusted to provide the highest quality of educational experiences in our communities.

We believe that by working together, rather than in isolation, we can accelerate school improvement and embed our vision in our academies. In working and collaborating towards our common strategic objectives, we can create more opportunities for lifelong success for our students.

The fundamental philosophy behind the Beyond Schools Trust's vision and strategic plan is all about thinking beyond the present day; looking at what is right for our students and staff both now and in the longer term.
Put simply we strive to:

- Develop and retain the best employees that know how to provide the best educational experience

- Support, motivate and reward our employees to go above and beyond for our students
- Be responsive to our students' and employees' needs so they are prepared for a rapidly changing world.

Our Mission

We want every one of our students, teachers, or Governors to be the best that can be. We will work tirelessly to support them to reach their potential.

Rationale

Science plays a crucial role in developing our understanding of the world around us. Our science teaching helps us to prepare children through experiences and exploration of the world in which they live in. Children can discover, explain, and develop skills of enquiry through working scientifically. We aim to prepare children for life in an increasingly scientific and technological world. To develop scientific thinking, we build on children's natural curiosity and enthusiasm for learning. We believe a practical, inspiring, and challenging science curriculum is the entitlement of all our children. In all our lessons, we encourage children to become better learners.

Warren Wood uses a variety of teaching and learning styles in science lessons through Skills for Life. Our principal aim is to develop children's knowledge, skills and understanding in science and to develop an enquiring mind, using our school focus of RECIPE. We do this through lessons which include a mix of whole class, group work, paired work, and individual teaching. We encourage children to ask and answer scientific questions and wherever possible, we encourage the children to use and apply their learning in everyday situations. We use ICT and the interactive whiteboard to enhance the children's learning where appropriate.

Aims

Our aims in teaching science are that all children will:

- develop a curiosity about the world in which they live
- develop an interest and enthusiasm for science and scientific thinking
- develop a conceptual understanding of science, a range of scientific skills and scientific knowledge
- be equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.
- develop an 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
- build skills to work both independently and cooperatively
- be open minded, creative and show perseverance

Supporting SEND Children Across the Curriculum including the Evergreen Centre.

We adapt the curriculum and learning environment for pupils with SEND: Warren Wood Primary Academy & Evergreen Centre prides itself in being inclusive and will endeavour to support every child regardless of their level of need. All pupils follow the National Curriculum at a level and a pace that is appropriate to their abilities. At times and when it is felt appropriate, modifications to the curriculum may be implemented.

To successfully match pupil ability to the curriculum there are some actions we may take to achieve this:

1. Ensure that all pupils have access to the school curriculum and all school activities.
2. Help all pupils achieve to the best of their abilities, despite any difficulty or disability they may have.
3. Ensure that teaching staff are aware of and sensitive to the needs of all pupils, teaching pupils in a way that is more appropriate to their needs.
4. Assess arrangements are considered and monitored by the SEND Team.
5. Pupils to gain confidence and improve their self-esteem.
6. To work in partnership with parents/ carers, pupils, and relevant external agencies in order to provide for children's special educational needs and disabilities.
7. To identify at the earliest opportunity, all children that need special consideration to support their needs (whether these are educational, social, physical, or emotional)
8. To make suitable provision for children with SEND to fully develop their abilities, interests, and aptitudes and gain maximum access to the curriculum.
9. Ensure that all children with SEND are fully included in all activities of the school in order to promote the highest levels of achievement.
10. To promote self-worth and enthusiasm by encouraging independence at all age and ability levels.
11. To give every child the entitlement to a sense of achievement.
12. To regularly review the policy and practice in order to achieve best practice.
13. To ensure that we provide a language-rich environment and use resources such as Widgit to create communication boards for some pupils.

We understand that children learn and develop in different ways. Teachers and teaching assistants recognise this and use different teaching styles, and resources and plan different levels of work in the classroom to cater to the various ways children learn.

Implementation

The teaching and implementation of the Science curriculum at Warren Wood Primary Academy is based on the National Curriculum and focuses on skills progression. Science is taught as part of a half-termly topic, with all objectives planned carefully to ensure progression of skills and knowledge across the school. The children's learning is enriched through themed days.

Provision in Foundation Stage:

Science at Foundation Stage is introduced indirectly through activities that encourage the child to explore, problem solve, observe, predict, think, make decisions and talk about the world around them. It's called 'knowledge and understanding of the world'. Early Years science also helps children with skills in other Foundation Stage areas of the national curriculum, such as physical development and creative development.

- Children explore creatures, people, plants and objects in their natural environments.
- They observe and manipulate objects and materials to identify differences and similarities.
- Children also learn to use their senses, feeling dough or listening to sounds in the environment.
- Children are encouraged to ask questions about why things happen and how things work.
- They ask questions about what they think will happen to help them communicate, plan, investigate, record and evaluate findings.
- Children explore creatures, people, plants and objects in their natural environments.
- They observe and manipulate objects and materials to identify differences and similarities.
- They will also learn to recognise changes that happen to the body when they are active. Children will also learn about the importance of keeping healthy and the things that contribute to this by, for example, cooking or identifying fruit and vegetables.
- Children collect materials, such as rough sandpaper, soft fabric and shiny bottle tops to build a sensory wall. They explore colour, texture, shape, form and space by mixing colours, painting, modelling and dancing.
- They also learn about sounds - how they can be changed and how to imitate sounds they hear.

In KS1 children should:

- Observe, explore and ask questions about living things, materials and the world around them.
- Work together to collect evidence to help answer questions.
- Use reference materials to find out more about scientific ideas.
- Share their ideas and communicate them using scientific vocabulary and drawings.

In KS2 children should:

- Apply their knowledge and understanding of scientific ideas to familiar phenomena, everyday things and their personal health.
- Carry out more systematic investigations, working on their own and with others.
- Communicate their ideas using a wide range of scientific language, conventional diagrams, charts and graphs.

Guidelines

- All children are entitled to access to the National Curriculum for Science.
- Planning is in line with the National Curriculum for KS1, KS2 and EYFS (see appendix for coverage.)
- We follow the Primary Science Scheme of work 2023.
- Resources are stored in the Science cupboard.
- Vocabulary to be displayed in each classroom to develop children's understanding of scientific language.

Our Approach to Teaching and Learning in Science

Planning for science is a process in which all teachers are involved to ensure that the school gives full coverage of the Science National Curriculum and the Foundation Stage Profile. It is kept as practical as possible, allowing children to have first-hand experience to explore for themselves thus stimulating their curiosity. Science teaching in the school is about children developing skills, knowledge and independence when investigating practically. We adapt and extend the curriculum to match the varied needs of the children in our school.

Equality of Access and Differentiation

- Science is taught within the guidelines of the school's Equal Opportunities Policy.
- We ensure that all our children have the opportunity to gain scientific knowledge and understanding regardless of gender, race, class or ability.
- Our expectations do not limit pupil achievement and assessment does not involve cultural, social, linguistic or gender bias.
- We aim to teach science in a broad global and historical context, using the widest possible perspective and including the contributions of people of many different backgrounds.
- We value science as a vehicle for the development of language skills, and we encourage our children to talk constructively about their science experiences.
- In our teaching, science is closely linked with literacy and mathematics.
- We recognise that science may strongly engage our gifted and talented children, and we aim

to challenge and extend them.

- We exploit science's special contribution to children's developing creativity; we develop this by asking and encouraging challenging questions and encouraging original thinking.

Outdoor Learning

At Warren Wood, we aim to enhance our science curriculum and learning through the use of and exploration of our extensive outdoor environment. The outdoor classroom provides an opportunity to learn in a natural environment and the planned wildlife area will promote eco-awareness throughout the school. Learning that takes place outside the classroom can improve pupils' teamwork, motivation and enthusiasm for science. We provide a safe, stimulating outdoor environment where space is used effectively to enable children to explore a challenging and engaging.

Assessment of Science

Assessment for learning is continuous throughout the planning, teaching and learning cycle. Assessment is carried out in a variety of ways:

- Observing when children are learning, individually, in pairs, in a group, and in classes.
- Questioning, talking, and listening to children.
- Considering work/materials / investigations produced by children together with discussion about this with them.
- At the end of each term, children's understanding of the topic will be assessed on Arbor.
- Observations and assessments are recorded by class teachers in Early Years within the children's individual pupil profiles.
- Evidence of learning is presented in children's books and class/school displays.

Assessment for Learning

- We regularly use assessment to inform and develop our teaching.
- Topics develop from children's current level of scientific knowledge and skill. Some teachers will use mind maps which can be added to during the unit to show a child's progression in knowledge.
- Children are involved in the process of self-improvement, recognising their achievements, and acknowledging where they could improve. Activities during, and at the end of, each topic record achievement and celebrate success.
- We mark each piece of work positively, making it clear verbally, or on paper, where the work is good, and how it could be further improved. For further information see our marking policy.

Resources

We encourage the use of our wide range of equipment and the outdoor environment to further promote curiosity and embed scientific understanding. Resources are stored in the science cupboard which all members of staff have access to. It is everyone's responsibility to look after the science resources and any damaged equipment should be reported to the Science Leaders. It is the Subject Leader's responsibility to monitor the quality and quantity of all resources and purchase resources when necessary.

Health and Safety

Any risks associated with a scientific activity should be identified and minimised through careful planning. Teachers refer to the Health and Safety Policy for extra guidance.

Role of the Science Leaders

The role of the Science Leader is to:

- Inspire others to teach science in a practical, engaging and challenging way.
- Monitor the effectiveness of science within the school.
- Support teachers in their planning and strategies for classroom management.
- Encourage the use of scientific vocabulary across the school.
- Keep up to date with any new, relevant government documents and disseminate new information.
- Ensure continuity and improvement of the teaching and learning of science across the school by monitoring and professional development opportunities.
- Ensure that the science assessment across the school is consistent, accurate and to judge whether data is in line with national averages.