



Science Intent Statement

What is Science?

Science is the study of the nature and behaviour of natural things and the knowledge that we obtain about them.

Intent

The intent of the Science curriculum and teaching at JWPA is to maintain curiosity, foster enthusiasm and secure a strong foundation for the future scientists of our society. It aims to stimulate creative thought and discussion and to help our pupils to begin to appreciate the way Science will affect our future on a personal, national and global level. We want our children to realise and believe that they are capable of making valuable and far reaching contributions in any Scientific field.

We want our children to leave John Wheeldon being able to:

- ask and answer scientific questions;
- plan, carry out and evaluate scientific investigations using equipment (including IT) correctly and effectively;
- know and understand the life processes of living things;
- know and understand the physical processes of materials, electricity, light, sound and natural forces;
- know about the nature of the solar system, including the earth; evaluate evidence and present conclusions clearly and accurately.
- use Scientific vocabulary confidently and accurately in their work and discussions.

Implementation

Teachers are expected to develop their planning using the objectives taken from the schools Long Term Plan. This will ensure a clear progression of knowledge and skills from EYFS to Year 6. Teachers are free to use a variety of resources to plan lessons but must ensure that they are specific to our school's intent policy, follow the schools LTP and that they meet the needs of all pupils in their class. Our inclusive approach and differentiation allows all children to learn regardless of race, gender, faith, culture or disability. We select and use resources that positively reflect all of the above. Inclusion for science is carried out in line with the school's policies for SEN, EMAG, G&T, Equal Opportunities and the

Disability Equality Scheme.

- Planning and teaching and learning in science set high expectations for all children.
- Science provides opportunities for all children to achieve including, boys and girls, children with SEN, children with disabilities, children who are G&T, children from all social and cultural backgrounds, including Pupil Premium children, children from different ethnic groups including travellers, refugees, asylum seekers and those from diverse linguistic backgrounds.
- Teachers are aware that children bring to school different experiences, interests and strengths that will influence the way in which they learn science.
- Teachers will use a variety of teaching styles and strategies to meet the needs of all children in their science learning.

Teachers will ensure that:

- Science is practical and hands on and children enjoy learning through exploration, investigation and discussion.
- The children have access to good quality resources.
- Enrichment events / school visits / workshops happen regularly.
- Children confidently use accurate scientific vocabulary appropriate to their stage of learning and in context. (see LTP for expected vocabulary for each unit of work)
- All pupils are actively engaged in Scientific enquiry, using a variety of enquiry strategies, independently making decisions and answering their own questions

We recognise that in all classes children have a wide range of scientific abilities, and we ensure that we provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this in a variety of ways:

- setting tasks which are open-ended and can have a variety of responses;
- setting tasks of increasing difficulty through the use of extension or high order thinking questions - linked to Chris Quigleys Greater depth in Science resources (we do not expect all children to complete all tasks)
- providing resources of different complexity, matched to the ability of the child;
- using classroom assistants to support the work of individual children or groups of children (where possible);
- by teaching children in mixed ability groups;
- by making links across subjects.
- Through regular discussions with the pupils it will be clear that our children's curiosity is encouraged and valued; they are excited and enthusiastic when anticipating their Science lessons.

Assessment grids are used to track and monitor the progress of each pupil and will inform future planning. These have been created by the science coordinator and will help to ensure that children are fluent in all areas of the curriculum at the end of each phase of the Key Stage. Pupils who achieve this early are identified and will secure a greater depth of understanding.

Impact

Our principal aims are to encourage all children to have a deepening curiosity about the world around them and to develop their knowledge, skills, and understanding. Sometimes we do this through whole-class teaching, while at other times we engage the children in an enquiry-based research activity. We encourage the children to ask, as well as answer, scientific questions. They have the opportunity to use a variety of data, such as statistics, graphs, pictures, and photographs. They use ICT in science lessons where appropriate to enhance their learning. They take part in role-play and discussions, and they present reports to the rest of the class, school or parents/guardians. Wherever possible, we involve the pupils in real scientific activities, for example, investigating a local environmental problem, or carrying out a practical experiment and analysing the results.

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We are PROUD of all we do!