Federation of Eileen Wade and Milton Ernest C of E Primary Schools

Science

Working Together, Aiming High, Shining Brightly

Intent

At Eileen Wade Primary, we recognise the importance of science in our everyday lives. We believe that science teaching is essential for the development of children's curiosity and understanding of the world around them, respect for the living and non-living and how science is used in the real world. Where possible, we aim to provide a practical curriculum that supports the development and progression of scientific skills and enquiry, subject knowledge and vocabulary through the specific disciplines of biology, chemistry and physics. We intend to provide all children, regardless of ethnic origin, gender, class, aptitude or disability, with a broad and balanced curriculum and aim to instil a lifelong love of science learning. We will ensure children work together in lessons, aim high to develop scientific knowledge, vocabulary and skills and shine brightly with all they have learnt.

Implementation

We will provide:

- Science lessons taught weekly from KS1 onwards and through understanding of the world in the foundation stage. Links to other curriculum areas where possible.
- A clear and comprehensive scheme of work in line with the National Curriculum and the school's skills progression where teaching and learning build on prior experiences and show progression across all key stages within the strands of Science.
- Opportunities to develop and apply scientific vocabulary throughout all schemes of work
- As many practical, skill based lessons as possible to develop scientific enquiry skills and apply scientific knowledge.
- Scientific skill tracking and knowledge assessments that clearly show progression through the school
- End of unit assessments to track pupil progress and inform the coordinator of science within the school.
- A well equipped and resourced science curriculum to fully implement the schemes of work in all key stages.
- Science days to foster a love of science and further develop children's knowledge skills and curiosity.

Eileen Wade
Primary

- A forest school for first hand experiences of living things and habitats.
- A gardening bed for first hand development of plants knowledge, respect for living things and science in the real world.
- Visits and visitors to enrich the science curriculum and learning
- Time for the coordinator to monitor planning, books and teaching and learning which is fed back as part of professional development and conduct pupil and teacher voice questionnaires.
- When available, teachers attend CPD to develop confidence, skills and knowledge.

Impact

- Children enjoy and talk enthusiastically about science. They aim high and are keen to engage in practical scientific enquiry and develop their knowledge further.
- There is a clear progression of subject knowledge and scientific skills which is shown in teacher planning, assessment and pupil's work.
- Children reinforce, develop and progress their scientific skills at all stages with KS2 becoming more independent and confident with planning and conducting scientific enquiry and concluding their findings.
- Pupils work collaboratively with others.
- Children shine brightly and use scientific vocabulary in their talk and work.
- Pupils use scientific equipment and apparatus with confidence.
- The progressive schemes and long term plan enable pupils to revisit, reinforce and then progress their learning.
- Our intention is for all our pupils to shine brightly and reach age related expectations and the school's skill tracking targets by the end of each key stage/phase
- Pupil's knowledge and skills are reinforced and deepened through visits, visitors, Science Days and first hand experiences in the school environment.
- Pupils show respect for the environment and living things.
- Teachers are aware of the vision for science and apply this in their planning and teaching.
- The science coordinator is aware of the science teaching and learning within the school.

Teaching & Learning

Where possible, investigative and experimental science underpins the children's work. A variety of teaching methods are employed as appropriate and science regularly involves children in practical work through small group activities and whole class activities. Children are taught to record their work in a methodical, logical and scientific manner. ICT e.g. Seesaw is used as a resource for recording

Eileen Wade
Primary

science. Science is a time-tabled subject which is taught weekly; the content is in line with National Curriculum guidelines. It is taught both as a discrete subject throughout the school and also as part of cross-curricular themes where appropriate.

During the year, we will provide enrichment activities and science days both as a whole school and within individual classes. This is aimed at giving the children the opportunity to aim high and shine brightly by reviewing, extending and enhancing the learning of all pupils, challenging our most able pupils and giving pupils the opportunity to ask and investigate their own questions.

Record Keeping & Assessment

On-going informal assessment takes place in each lesson. Assessment records are updated at the end of each unit of work using the school's knowledge tracking sheets. These are then passed to the co-ordinator which shows the data and any gaps in learning that need to be covered. The children's scientific enquiry skills are assessed and tracked throughout the school. The children's prior learning is assessed at the beginning of each topic and is used to support teaching and learning throughout the scheme. At the end of each school-year, a teacher assessment judgement for each child is made using the National Curriculum framework and these assessments are reported to parents. This judgement is made based on scientific knowledge and scientific skills. At the end of Key Stage 2, teacher assessments are reported to the LA.

Evaluation

We will judge the success of our work in science by:

- the motivation and interest displayed by our pupils.
- the development, over time, of pupils' understanding of scientific concepts, knowledge, vocabulary, skills and processes.
- the pupils' ability to apply their understanding in a variety of new situations.

Resources

We believe that children's learning is enhanced by the provision of high quality resources and that these resources should match the needs of pupils, staff and the developing curriculum. The subject coordinator audits the resources annually. Staff inform the coordinator of resources they require throughout the academic year.

Monitoring and Evaluation

Work within this subject area is monitored and evaluated in accordance with the school's policy for Monitoring and Evaluation.

Health and safety

To provide pupils with an effective, broad, balanced, rich and developmental practical science experience, teachers are required to use a wide range of chemicals, materials, living and once living organisms and equipment. Some of

Eileen Wade
Primary

these could be hazardous or will generate hazardous products. Some situations, eg activities in fieldwork, or the design of a building, may also present hazards.

Teachers cannot, and should not, avoid such hazards but should take them into account, minimise the risks from them, and balance any remaining risks against the benefits of potential learning.

A process of risk assessment is essential for teachers to review and minimise risks to pupils and staff. Any activity deemed to have a potential risk should have a risk assessment. This risk assessment should be drawn up by the teacher and reviewed by the science coordinator and head teacher prior to the activity taking place.

The school believes that there are few science resources or activities where the risks cannot be effectively controlled and managed. Managing health and safety need not be onerous, nor should it inhibit effective and exciting science teaching and learning.

Science teachers should also use the opportunities presented by practical science to teach pupils about hazards and risks, and how the latter can be sensibly controlled. Educating
children about risks and risk management is a vital component of preparation for adult life.