The Federation of Skelton Newby Hall and Sharow CE Primary Schools

We promise to flourish together

Science Rationale

Science is a way of discovering more about the world around us and is integral in everyday life. It is a body of knowledge which attempts to explain our experiences. In order to achieve and apply this knowledge we must learn and follow sets of skills and processes. It develops our attitudes towards scientific enquiry and thus we must be scientifically literate.

Intent

At Skelton Newby Hall and Sharow CE Primary Schools we believe that science should provide the chance to develop the natural curiosity of the child, encourage respect for living organisms and the physical environment and provide opportunities for critical evaluation of evidence.

We understand that it is important for lessons to have a skills-based focus, and that the knowledge can be taught through this. All children are encouraged to develop and use a range of skills including observations, planning and investigations, as well as being encouraged to question the world around them and become independent learners in exploring possible answers for their scientific based questions. Specialist vocabulary for topics is taught and built up, and effective questioning to communicate ideas is encouraged. Concepts taught should be reinforced by focusing on the key features of scientific enquiry, so that pupils learn to use a variety of approaches to answer relevant scientific questions.

We intend for our children to leave our schools equipped with the scientific skills required to understand the uses and implications of science, today and for the future. It is important that they are able to see the relevance of science in their own lives and imagine future science-related careers based upon it.

Implementation

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Teachers create a positive attitude to science learning within their classrooms and reinforce an expectation that all children are capable of achieving high standards in science.

Prior knowledge must be revisited before introducing new ideas, and misconceptions are actively diagnosed and discussed. Prior knowledge is ascertained with a quiz at the beginning of each new scientific unit. These quizzes are then readdressed across the year to constantly block learning and increase space in working memory.

We plan units to build upon the learning and skill development of the previous years. Working Scientifically skills are embedded into lessons to ensure these skills are being developed. For each unit class teachers will use the key vocabulary bank including tier 1-3 words, increasing as the children progress through school. These skills and vocabulary will be taught through direct teaching.

At Skelton Newby Hall and Sharow CE Primary Schools we will plan trips and arrange visits from experts, closely linked to class teaching, to complement our curriculum.

Regular events such as Science Week and learning together sessions allow children to come off timetable and have a broad range of acquisition and application. These events often include families at our schools alongside members of the local community.

Impact
(To be reviewed at the end of each year)

As a result of science teaching at Sharow and Skelton Newby Hall CE Schools children will retain knowledge that is pertinent to Science with a real-life context. Pupils will make links across various curriculum areas and use their scientific knowledge and skills to enhance work in English and Maths. Children will also be able to question ideas and reflect on knowledge. They

will have a wider vocabulary which they use to articulate their understanding.

To be reviewed at the end of each academic year.

Assessment

Tracking children's progress throughout school is vital for the continued acquisition of knowledge. At Skelton Newby Hall and Sharow CE Primary Schools learning always starts with children's prior knowledge and misconceptions. This is ascertained in a range of different ways according to the age of the child. The learning is then tailored to the needs of the pupils in that class with misconceptions identified and addressed appropriately.

The teacher then reassesses the children at regular intervals throughout the year to track their progress against national curriculum objectives. These assessments are conducted and recorded in a range of ways for example; teachers notes, mini-assessment scores and staff planning.

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study as set out in the National Curriculum. These are set out as statutory requirements. We also draw on the non-statutory requirements to extend our children and provide an appropriate level of challenge.

Each child has their own assessment booklet which documents their progress against national curriculum objectives for working scientifically and knowledge statements. This maps out their attainment and progress from Y1-Y6. These are then accumulated onto our own whole class tracking system from Y1-Y6 at the end of each academic year. In EYFS Science is assessed through various strands of learning from the Development Matters statements and recorded as part of their early years profile.

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