SCIENCE

1 Curriculum Intent

Our curriculum is underpinned by the National Curriculum and Cornerstones Curriculum, which provide a rich and engaging framework designed to foster a lifelong love of learning. Our curriculum is tailored to meet the unique needs of each child in our local community. Recognising the backgrounds, strengths, and challenges specific to children from our area, we aim to inspire and motivate children through our learning values of Recalling Learning, Making Links, Staying Focused, Asking Questions, Persevering and Using Vocabulary and our Core Values of Excellence, Friendship and Respect.

Through our Curriculum, we aim to:

- Inspire curiosity by connecting learning to real-world experiences and local contexts that are meaningful to the children in our area.
- Cultivate critical thinking, creativity, and problem-solving skills through thematic and cross-curricular projects that adapt to different learning styles and reflect the diverse backgrounds of our community.
- Foster values such as empathy, respect, and perseverance, creating a safe and supportive space where every child feels valued.
- Build an inclusive classroom culture that celebrates diversity, embracing each child's unique strengths, cultural backgrounds, and perspectives.
- By adapting the curriculum to reflect the realities and resources of our local community, we seek to engage children academically, socially, emotionally, and creatively.

Our goal is to equip all students with the knowledge, skills, and confidence to thrive as responsible, compassionate members of their communities, prepared to face the challenges and opportunities that lie ahead.

Our curriculum intent is underpinned by the National Curriculum and Cornerstones. Subject Leaders have worked hard to ensure learning is based in meaningful contexts, that build upon each other as children progress through school.

The most important element of our school is that pupils are challenged, supported, prepared and happy learners.

Our curriculum Champions have been created to inspire and motivate the children to find out more and be interested in Art and Design. The champion for Art and Design is Artistic Archie and he is seen around school on displays and in curriculum assemblies.

2 Science Intent

At Cawston Grange Primary School, we recognise the importance of Science in every aspect of daily life. As one of the core subjects taught in Primary Schools, we give the teaching and learning of Science the prominence it requires.

The Scientific area of learning is concerned with increasing pupils' knowledge and understanding of our world, and with developing skills associated with Science as a process of enquiry. It will develop the natural curiosity of the child, encourage respect for living organisms and the physical environment and provide opportunities for critical evaluation of evidence. Our Science teaching offers opportunities for children to: develop 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; be equipped with the scientific knowledge required to understand the uses and implications of Science, today and for the future; develop the essential scientific enquiry skills to deepen their scientific knowledge; use a range of methods to communicate their scientific information and present it in a systematic, scientific manner, including I.C.T., diagrams, graphs and charts; develop a respect for the materials and equipment they handle with regard to their own, and other children's safety and, ultimately, develop an enthusiasm and enjoyment of scientific learning and discovery. We endeavour to ensure that the Science curriculum we provide will give the children the confidence and motivation to continue to further develop their skills into the next stage of their education and life experiences.

3 Implementation

3.1 In Reception, we teach Science as an integral part of the Cornerstones curriculum projects delivered throughout the year. Learning is planned in line with the Understanding the World area of the Early Learning Goals (ELGs), which underpin the Early Years Foundation Stage framework. Scientific exploration is embedded through hands-on, child-led activities that develop children's natural curiosity about the world around them. Children are encouraged to observe, question, predict, and investigate as they explore materials, changes, living things, and their environments. For example, they might explore concepts such as floating and sinking, light and shadow, or the needs of plants and animals. These early scientific experiences help lay the foundation for enquiry-based learning and foster a lifelong interest in science.

3.2 In Key Stage 1 and 2, the school uses the National Curriculum and Cornerstones as the basis of its curriculum planning. We use Cornerstones to ensure progression and coverage of skills and knowledge, ensuring that all children can and do make progress. Teachers are encouraged to adapt lessons to meet the needs of their cohort and add bespoke lessons using their own creativity and teaching ideas.

4 The contribution of science to teaching in other curriculum areas.

4.1 English – Science contributes significantly to the teaching of English in our school by actively promoting the skills of reading, writing, speaking and listening. Some of the texts that the children study in English are of a scientific nature. The children develop oral skills in science lessons through discussions (for example of the environment) and through recounting their observations of scientific experiments. They develop their writing skills through written reports, projects, biographies of famous scientists and by recording information.

4.2 Mathematics – Science contributes to the teaching of mathematics in a number of ways. The children use weights and measures and use and apply number skills. Through working on investigation, they learn to estimate and predict. They develop the skills of accurate observation and recording events. They use numbers in many

of their answers and conclusions and use data handling as an integral part of the recording results.

4.3 Personal, Social, Health and Economic education (PSHE) – Science makes a significant contribution to the teaching of personal, social and health education. This is mainly in two areas. Firstly, the subject matter lends itself to raising matters of citizenship and social welfare. For example, children study the way people recycle material and how environments are changed for better or worse. Secondly, children benefit from the nature of the subject in that it gives them opportunities to take part in debates and discussions. Aspects relating to drug awareness, sex education and healthy lifestyles are also covered within the science curriculum.

4.4 Spiritual, moral, social and cultural development – Science teaching offers children many opportunities to examine some of the fundamental questions in life, for example, the evolution of living things and how the world was created. Through many of the amazing processes that effect living things, children develop a sense of awe and wonder regarding the nature of our world. Science raises many social and moral questions. Through the teaching of science, children have the opportunity to discuss, for example, the effects of smoking and the moral questions involved in this issue. We give them the chance to reflect on the way people care for the planet and how science can contribute to the way we manage the Earth's resources. Science teaches children about the reasons why people are different and, by developing the children's knowledge and understanding of physical and environmental factors, it promotes respect for other people. During their time at Cawston Grange, they will also study a number of different scientists from a variety of backgrounds.

4.5 British Values - The teaching of Science at our school actively promotes British values by fostering curiosity, critical thinking, and respect for evidence and differing viewpoints. Through the National Curriculum and Cornerstones projects, pupils explore scientific concepts and discoveries that shape the world, learning to question, investigate, and draw conclusions based on facts. Children are encouraged to work both independently and collaboratively, developing a sense of responsibility, fairness, and mutual respect. Scientific discussions support the values of democracy and individual liberty, as pupils are given the freedom to share ideas, listen to others, and reflect on different perspectives. By exploring ethical and environmental issues, such as sustainability, health, and the use of resources, pupils begin to understand their role in society and the importance of contributing positively to their community and the wider world.

4.6 Enrichment opportunities - These opportunities are carefully mapped out so that children regularly experience trips or visits linked to the Science Curriculum. These experiences allow children to delve deeper into a topic area, therefore broadening their knowledge and understanding. (See Trips and visitors Enrichment Plan)

5.0 Impact

Assessment/ Recording/ Reporting

5.1 We assess children's work in Science by making informal judgements as we observe and discuss Scientific concepts with them during lessons. Each class teacher will refer regularly to the knowledge organisers, giving children time to read them and test their own knowledge and use of geographical vocabulary. Each year group has a set of sticky knowledge questions to be asked frequently to ensure that this knowledge sticks. Teachers will create their own knowledge organiser / sticky knowledge quizzes. On completion of a piece of work, the teacher marks the work and comments as necessary. Marking is often developmental and encourages children to stretch their knowledge and use of correct vocabulary. Teachers will adapt their questioning for different abilities, using Walk Thru techniques in order to question and assess all children.

5.2 Teachers will add each Science lesson (whether this be a Cornerstones lesson or Teacher created lesson) to the Cornerstones timetable. At the end of each lesson, they will select that the lesson has been taught. This then allows the subject champion to check coverage and progression of what has been taught throughout the school.

5.3 Teachers make a summative assessment of the children's attainment in Science at the end of each Driver Project and record the results on Cornerstones. Teachers can use the Knowledge and Skills criteria in Cornerstones to assess children working at, below and above the stages expected stage for their Year group. Children's annual school reports indicate the attainment that children have made each year.

(See Assessment guidelines for Foundation Subjects)

6.0 Monitoring

Monitoring the subject of Science at Cawston Grange Primary School is carried out regularly to ensure high-quality teaching and learning across all year groups. This includes book trawls to evaluate progression, coverage, and the development of geographical skills and vocabulary. Lesson observations are conducted to assess the effectiveness of teaching strategies and pupil engagement. Pupil voice plays a key role in our monitoring, providing valuable insight into children's enjoyment, understanding, and recall of geographical learning. In addition, trustees undertake visits to observe Science in practice and meet with staff and pupils to discuss their experiences.