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**Calder Primary School**

**Science**

**Intent**

At Calder Learning Trust we aim to inspire in pupils a curiosity and fascination about the natural and ever-developing man-made world and a respect for the environment that will remain with them for the rest of their lives.

We aim to provide our pupils witha science curriculum which develops and builds on knowledge, skills and vocabulary in a logical, progressive sequence throughout Early Years, Primary phase and Secondary phase.

The aims of teaching science in our school are to:

* Equip children to use themselves as starting points for learning about science, and to build on their enthusiasm and natural sense of wonder about the world
* Develop through practical work the skills of observation, prediction, investigation, interpretation, communication, questioning and hypothesizing, and increased use of precise measurement skills and ICT
* Enable children to develop their skills of co-operation through working with others, and to encourage where possible, ways for children to explore science in forms which are relevant and meaningful to them
* Encourage children to collect relevant evidence, question outcome and to build resilience to persevere as it is likely they will need to repeat results or will encounter unexpected results that do not support their hypothesis
* Encourage children to treat the environment with respect and sensitivity
* To critically question the world around them
* To enable children to appreciate that we do not always know the answers when carrying out scientific enquiry as the world around us is continually changing and developing
* Equip children with the language to be able to discuss their learning and confidently explain their scientific understanding.

**Implementation:**

To ensure high standards of teaching and learning in science, we implement a curriculum that is progressive throughout the whole school. Science is taught in discrete lessons for at least 1 hour per week, or through longer Science focus afternoons. We ensure that teachers have the same expectations during Science lessons that they would have when teaching English or Mathematics and that any mathematical task (such as measuring or drawing graphs) is pitched at an age-appropriate level to ensure sufficient challenge.

The science curriculum is based upon the National Curriculum, which provides a broad framework and outlines the knowledge and skills taught in each Key Stage. Teachers plan lessons for their class using our progression of knowledge and skills documents, which incorporate working scientifically.

When teaching science, teachers also often make links with other subjects, for example the class topics. A variety of teaching approaches are used based on the teacher’s judgement. Teaching key subject specific vocabulary is also a crucial part of our science curriculum.

In EYFS ‘Understanding the World – The World’ pupils are taught about similarities and differences in relation to places, objects, materials and living things. Through championing EYFS ‘Characteristics of Effective Learning’ pupils develop their scientific enquiry through thinking of their own ideas and finding new ways to solve problems.

Science teaching is inclusive for all pupils through differentiated tasks and a variety of learning styles. It provides additional opportunities to enhance the learning of more able pupils through asking opened ended problems, analysing results and drawing conclusions based on scientific findings. We make use of the specialist Science teachers and resources from Calder High School to enhance learning and provide progression into Key Stage 3. Pupils are able to use the science laboratories for experimental work, for example using additional scientific equipment in Years 5 and 6.

We also provide a variety of opportunities for science learning outside the classroom for example in our Forest School setting and allotment.

We enhance Science learning at home through whole school events such as our Science poster competition and homework projects. These encourage the children to ask questions about the world and demonstrate how they can think scientifically and carry out investigations using simple everyday objects.

**Impact:**

Within science, we strive to create a supportive and collaborative ethos for learning by providing opportunities for children to question and investigate to discover answers for themselves

Our science curriculum is planned to ensure progression of knowledge, skills and vocabulary.

We measure the impact of our curriculum through the following methods:

* Assessing children’s understanding of topic linked vocabulary before and after the unit is taught
* Marking of written work in books
* Using dialogic learning tasks to assess children’s understanding
* Summative assessment of pupil discussions about their learning.
* Images and videos of the children’s practical learning.
* Interviewing the pupils about their learning (pupil voice)
* Moderation staff meetings where pupil’s books are scrutinised and there is the opportunity for a dialogue between teachers to understand their class’s work
* Formal reporting of standards at the end of each Key Stage