



Be Brave Curriculum

INTENT – IMPLEMENTATION – IMPACT

Science

INTENT

At Hayfield Cross Church of England Primary school, we intend to inspire and enable children to become enquiry based learners through our Science curriculum. We do this by teaching scientific skills and topics through asking questions and investigating their answers by carrying out practical enquiries. Through our 'Be Brave' curriculum we aim to create and deliver inspiring, motivating and engaging learning experiences that spark curiosity and will support children to understand and embed what their learning. Inspired by our school vision (Joshua 1:9) our children are encouraged to persevere, seek challenge and be brave in their Science learning. Our intention is that children develop their scientific thinking throughout their school life and prior learning is built upon as they move through the school allowing them to make connections. By creating engaging learning experiences that build upon prior understanding, their subject knowledge will be embedded into their long term memory. All children are encouraged to question the world around them and develop their understanding and use of scientific skills such as observing, planning

IMPLEMENTATION

The teaching, learning and sequencing of the Science curriculum follows:

- Enquiry questions are posed to children to introduce scientific concepts, knowledge and skills.
- Enquiry based learning offers the children with enriched learning experiences fuelled by interest by practically exploring scientific concepts. The children become scientists by understanding and following the process of scientific enquiry.
- RED books- Reflect, Explore and Discover books are used to record practical, enquiry based learning taught throughout the year. RED books collect the thoughts and ideas the children have expressed in Science.
- Buzz points are exciting opportunities planned for each unit which can be activities to motivate children in their learning. They may be visitors, trips, reveal day, opportunities for practical enquiry etc. They may be planned to introduce a topic, compliment a part of the unit or to summarise the whole unit.
- Knowledge organisers for each scientific unit is available in the children's books so they have quick access to key vocabulary and concepts to aid understanding.
- Brain bugglers are a way of pre assessing the children's knowledge before a Science topic to assess their prior understanding which will then inform teaching. At the end of the Topic, lightbulb tasks are completed to assess how much information the children have regained from their enquiry based learning.
- Starter activities are taught at the start of each lesson to assess how much of the current topic children have learnt and retained. The activities' aims are to continually raise the profile of scientific key words and consistently remind children of knowledge they have learnt during the topic.
- Where possible, scientific knowledge is taught through practical enquiries which will support children in understanding and retaining scientific concepts.
- All children are challenged through one star, two star, three star and extension challenges which they are able to choose independently, after guidance. This will give children ownership of their learning and the ability to self-asses their learning.
- All children are encouraged to explain their thinking and apply learnt concepts to show their understanding.
- Enrichment activities such as clubs, competitions and exhibitions inspire children to be involved in scientific enquiries and activities.
- Where appropriate, visitors and trips complement children's learning and engage children with science in the world around them.
- Formative assessment occurs through starter activities, during and at the end of each science lesson. Formative assessment should be used to promote the correct use of scientific keywords and definitions. Children are encouraged at all points during a lesson, to use the correct vocabulary and spellings of keywords.
- Scientific resources such as electrical equipment, measuring equipment, mechanisms, x-rays etc should be used wherever possible to give children practical experience to build upon their understanding. This will give them an insight into how science is used in the world around them and inspire future interests.
- Science technicians are appointed in each class in Key Stage Two to inspire children to become leaders in science and take on responsibilities for practical enquiries in their classrooms.
- Progression of key skills documents along with whole school progression documents are used by teachers to plan appropriate lessons to build upon prior learning and aid formative assessment.

IMPACT

Through our 'Be Brave' curriculum we equip children with the skills to question the world around them and aspire to greatness in everything that they do. Our children will:

- Make consistent progress across their school career and where possible, meet age related expectations
- Ask questions about what they have learnt and the world around them.
- Work collaboratively and practically to investigate and experiment.
- Explain their understanding and the processes they have taken.
- Reason scientifically about scientific concepts
- Have a thirst for gaining new knowledge and developing skills
- Be curious about the world around them
- Make links and connections to build their understanding