

DEEP DIVE:

Curriculum area: Science



'Excellence Every day'



INTRODUCTION

Our curriculum is at the heart of our educational provision, offering a broad and exciting daily offer to ignite a love of learning in all of our pupils.

Our vision is focused on ambition, aspiration and progression and this is delivered through our curriculum model.

All of our pupils have the opportunity to experience hands-on learning and experiences which enrich their classroom activities. This may be through trips, external visitors to the schools or virtual experiences as well as workshops. Our aim is to close the gap in disadvantage and offer all pupils an inspiring provision which gives equal access to all.

Learning in **Illuminate Minds Trust schools** is more than the acquisition of skills and knowledge. It is also the chance to widen opportunities and expose pupils to a world beyond their lived experiences. We see our role as preparing children and young people for life and society, helping to build sustainable communities where people care about each other and the world around them.

Every subject area has a curriculum which is constructed carefully around sequential learning, revising prior learning and recognising the links between this and future steps. Embedded within each area are enrichment experiences, references to career choices and links to cultures and backgrounds which reflect our pupil population.

Choice is central to our learning offer. Our schools want to equip pupils with the confidence to make their own choices and exposure to experiences which inform those choices. You cannot consider a path in life of which you are unaware.

In order to grow and develop, it is vital that our pupils have the confidence and motivation to accept challenges and recognise that learning is not always easy. We want our pupils to face challenges without fear and know that they can make mistakes, because life will throw things at them and they have the ability to solve problems and overcome them. Success breeds success. Having confidence through actually seeing you can achieve and you can find a way through difficulties is key in continually building the self-awareness and resilience which will enable our pupils to manage themselves through life. Recognising the value of education and knowing that life is about continual learning means that loving learning from the outset is vital. Our curriculum in every subject is shaped to take children on that journey....

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Intent

Across Illuminate Minds, our vision within the science curriculum is to foster inquisitive life-long learners, who continue to explore the world around them. We encourage our children to confidently ask questions and investigate in order to develop a deeper understanding of the world in which we live. We aim to equip our children with the knowledge and skills to take personal ownership of their learning, which will enable them to make inter and intra personal links. To achieve this, it involves exciting and practical hands-on experiences that encourage curiosity and questioning. Through this challenging and stimulating curriculum we aim to inspire and excite our children and foster a thirst for knowledge, which delves into the scientific world around them. In addition, the teaching of science promotes and develops transferable skills such as observation, communication and teamwork and allows mathematical skills to be applied.

Implementation

We believe that through our implementation of the science curriculum children will have the opportunities to:

- Develop scientific knowledge and conceptual understanding through the specific disciplines of Biology, Chemistry and Physics.
- 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.
- Develop an enthusiasm and enjoyment of scientific learning and discovery.
- Take part in a wide range of extra-curricular activities, visits, trips and visitors to complement and broaden the curriculum. These are purposeful and link with the knowledge being taught in class.



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Impact

We believe that these opportunities will enable the children to be able to talk about their science learning confidently and enthusiastically. We want to encourage the children to challenge scientific theories and encompass the skills required to question their findings through research and investigations. We endeavour to unlock pupils' potential for future life choices and share with them the many possible career options available to them within the field of science. Through the teaching of science at our trust, the children will be motivated to continue to explore the world around them, beyond the classroom and even beyond their time at primary school.

Cultural Capital

Throughout the year, trips and workshops are mapped out across all year groups so children are able to apply their learning across various topics. Children visit museums or local areas and conduct scientific investigations based on topics they have covered over the year. Children are exposed to a range of scientists linked to their topics and identify as that area of science. For example, in Y4, when they learn about Sound, they refer to themselves as 'Acousticians.' Science Week is celebrated by hosting our own Science Fairs alongside our wider community and parents and carers participating. Children use the second summer term to complete the CREST Awards, completing investigations linked to topics they have learnt over the past year.

Equality and Diversity

Children are exposed to a range of scientists from all backgrounds. They learn about diverse scientists linked to their termly topics and dedicate lessons or parts of their learning to their achievements.

Our SEND Approach

Children begin each lesson with retrieval practice, allowing them to make connections to previous knowledge. By planning lessons with practical, hands-on elements, all children are able to apply their knowledge by working individually or collaboratively. Teachers use Quality First Teaching to ensure all children are included and are able to succeed and use adaptation where appropriate to support and challenge.

