

CURRICULUM INTENT: Science and DT

<p>Intent:</p> <p style="text-align: center;">WHY TEACH Science and DT?</p>	<ul style="list-style-type: none"> • The intent of Science and DT is designed to address the potential barriers as set out in Moorgate’s Curriculum Intent statement with particular reference to: <ul style="list-style-type: none"> - Shortage of valuable life experiences - Low expectations and aspirations - Vocabulary and poor communication skills - Limited parenting skills and parental support - English as an additional language • A high-quality science curriculum will provide the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. • As 21st century children it is paramount that Moorgate pupils recognise that throughout history science has changed our lives and is vital to the world’s future prosperity, and therefore all children will be taught the essential knowledge, methods, processes and uses of science. • Through building up a body of key foundational knowledge and concepts, children will be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. • Pupils will be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes. • A high-quality DT curriculum will ensure children to acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. • Using creativity and imagination, children will be exposed to design by making products that solve real and relevant problems within a variety of contexts, considering their own and others’ needs, wants and values.
<p>Implementation:</p> <p style="text-align: center;">THE MOORGATE APPROACH</p>	<ul style="list-style-type: none"> • Moorgate uses the Cornerstones Curriculum to plan science & DT through a thematic approach using a variety of teaching and learning styles within Science & DT lessons. Our principal aim is to develop the children’s knowledge, skills and understanding. We do this through a mixture of whole-class teaching and individual / group activities. • To ensure that pupils are not limited by their life experiences, all children will access an age-related curriculum regardless of their starting point. Vocabulary will be high on the agenda and a key driver within all lessons. • Through 10 topics over a 2 year period, children cover all the skills as laid out within the National Curriculum for that phase of their education. • When medium term planning, teachers will ensure that they include a broad balance of science and DT which has meaning and context based on the needs of pupils and reflected in Moorgate’s Curriculum intent. • Resourcing of the subject will be of paramount importance to ensure the children have the accessibility to the resources that will allow them

	<p>to be successful in their learning. Each year, an audit and budget plan will be produced for Science & DT.</p> <ul style="list-style-type: none"> • Written work is not always expected, evidence of experiments and/or creating things can be evidenced through photographs of the children's creations to be displayed on their topic display, or put in their books where children can then reflect and evaluate their learning. • Teachers encourage the children to ask as well as answer scientific questions. We provide a range of challenges through the provision of different resources. • The children have the opportunity to use a variety of secondary sources of information, where it will enhance learning as well as gaining first hand experiences, for example, the use of books, photographs, graphs, diagrams, models and ICT. • We look into how children can work in a range of other relevant contexts, such as the home and school, gardens and playgrounds, the local community and the wider environment.
<p>Impact</p> <p>HOW IS IT MEASURED?</p>	<ul style="list-style-type: none"> • It is important that the science and DT curriculum addresses barriers that children have in terms of life experience as reflected in Moorgate's Curriculum intent. Therefore, when evaluating success, this will be a feature of the evaluation. • Children to have a scientific curiosity about the world and phenomena's and understand how to explore a wide variety of scientific questions. • They will be able to ask questions of themselves and others and use a range of subject specific vocabulary with confidence. • Work will be evidenced in books, through photographic evidence which can be displayed and through teachers planning. • Through internal data, it will be evident that more children will achieve age-related expectations with science & DT. They will understand what being a 'scientist' means. • Beginning assessment sessions can be used so that teachers can build on their knowledge, understanding and skills, and work through misconceptions. These can be in the form of KWL (What I already know, what I want to know, what I have learnt). • Children can confidently and accurately plan and evaluate a variety of scientific experiments and DT projects. They will be able to talk about their learning and how this has impacted on the choices they have made.