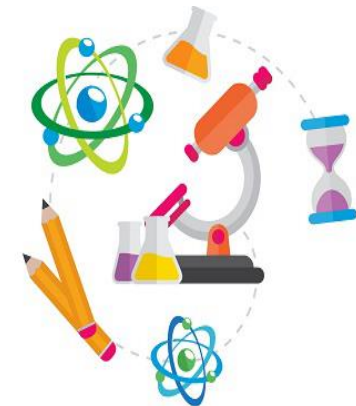




## Science Curriculum at Gaddesden Row School



### Intent

At Gaddesden Row School, we recognise the importance of Science in every aspect of daily life. Science is a core subject that is taught at primary school and the teaching and learning of science reinforces how beneficial and vital this subject is to our daily lives. Our intent is for every child to be **motivated** and **enthusiastic** when being taught science.

Our curriculum pathway ensures that the priority of scientific learning is aimed directly with increasing pupils' knowledge and understanding of our world, and with developing skills associated with Science as a process of enquiry. We want to develop the natural **curiosity** of each child, encourage **respect** for living organisms and the physical environment and provide opportunities for critical evaluation of evidence.

**At Gaddesden Row School, our science teaching offers opportunities for children to:**

- Develop scientific knowledge and conceptual understanding;
- 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 and understanding;

- Confidently 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.
- Use self-enquiry to find answers to questions and reasons for the thinking.
- Develop a respect for the materials and scientific equipment they use to carry out practical investigations and experiments;
- Develop an enthusiasm and enjoyment of scientific learning and discovery.

The National Curriculum will provide a structure and skill development for the science curriculum being taught throughout the school, which is now linked, where possible to the theme topics of our creative curriculum, which reflects a balanced programme of study.

#### **At Gaddesden Row School:**

Children have weekly lessons in Science throughout Key Stage 1 and 2, using **The White Rose Science programme of study and resources**. In Early years, science is taught through the children learning about the world around them in their learning through play. Additional opportunities are provided in Science through targeted enrichment days, a cross-curricular approach to the teaching of science and ‘wow’ moments being delivered by teachers and visitors to the school. Our intent is to ensure science is memorable for all children.

We endeavour to ensure that the Science curriculum we provide will give children the confidence and motivation to continue to further develop their skills into the next stage of their education and life experiences.

## **Statement of Implementation**

Teachers create a positive attitude to science learning within their classrooms and reinforce an expectation that all children are capable of achieving high standards in science. Our whole school approach to the teaching and learning of science involves the following:

- Science will be taught in a coherently planned manner using The White Rose Science Scheme of Work. This programme has been chosen to enable the achievement of a greater depth of knowledge;
- Through our planning, we involve problem solving opportunities that allow children to find out for themselves. Children are encouraged to ask their own questions and be given opportunities to use their scientific skills and research to discover the answers. This curiosity is celebrated within the classroom. Planning involves teachers creating engaging lessons, often involving high-quality resources to aid understanding of conceptual knowledge. Teachers use precise questioning in class to test conceptual knowledge and skills, and assess children regularly to identify those children with gaps in learning, so that all children keep up. Lessons are adapted according to gaps in knowledge so that these are filled.
- We build upon the learning and skill development of the previous years. As the children's knowledge and understanding increases, and they become more proficient in selecting, using scientific equipment, collating and interpreting results, they become increasingly confident in their growing ability to come to conclusions based on real evidence.
- Working Scientifically skills are embedded into lessons to ensure these skills are being developed throughout the children's school career and new vocabulary and challenging concepts are introduced through direct teaching. This is developed through the years, in-keeping with the topics.
- Teachers demonstrate how to use scientific equipment, and the various working scientifically skills in order to embed scientific understanding. Teachers find opportunities to develop children's understanding of their surroundings by accessing outdoor learning and workshops with experts.

## **Statement of Impact**

Our creative and engaging approach at Gaddesden Row School results in a fun, motivating, high-quality science education, that provides children with the foundations for understanding the world. Our engagement with the local environment ensures that children learn through varied and first hand experiences of the world around them. So much of science lends itself to outdoor learning and so we provide children with opportunities to experience this as much as possible. Our school has surrounding fields and rural areas and these are used to bring 'science to life' for our children. Through various workshops, trips and interactions with experts and local charities, children have the understanding that science has changed our lives and that it is vital to the future of our ever changing world.

Not only are the National Curriculum Objectives taught in science, but science is also taught through STEM (science, technology, engineering, and mathematics). Our whole-school approach to STEM results in cross-curricular learning and deeper understanding of the world we live in.

Pupil voice is key at Gaddesden Row School and is used to further develop the Science curriculum, through questioning of pupil's views and attitudes to science to support the children's enjoyment and motivation.

We want all children to achieve age-related expectations, or above, in science.