

Science

'Magic is Science we don't understand yet' – Arthur C. Clarke

Article 13: Every child must be free to express their thoughts and opinions and to access all kinds of information, as long as it is within the law.



Intent, Implementation and Impact Statement

Our Intention

- To provide a high quality Science curriculum which inspires children to confidently explore and discover the world around them through stimulating scientific experiences and knowledge from EYFS to Y6, throughout their journey at Rickmansworth Park School and beyond.
- Through hands-on and enquiry-based lessons, which build a body of key foundational knowledge and concepts, we challenge the children to question, investigate and evaluate by making choices, working independently and collaboratively to see how the rules of science can predict and explain natural phenomena.
- To provide opportunities to problem solve, find patterns through analysis, analyse and present data in various forms, use comparative and fair testing, research topics of interest, make observations over time, group and classify different organisms ensuring that 'Working Scientifically' is the basis of all enquiries and builds on prior learning and vocabulary.
- To develop a caring attitude towards the environment, all living things and a lifelong respect for the world around us.
- To incorporate and consolidate cross-curricula skills in Literacy, Maths, Technology and Computing.
- To promote STEM (Science, Technology, Engineering and Maths) and possible career opportunities leading from these subjects, challenging gender and cultural stereotypes.

Our Implementation

- Science is taught every week throughout the school from EYFS to Y6.
- Every year group follows the learning objectives set out in the Primary National Curriculum for Science for the eight topic areas – *'Plants'*, *'Animals including Humans'*, *'Living Things and Habitats (Evolution)'*, *'Materials, States of Matter and Rocks'*, *'Plants'*, *'Seasonal Changes'*, *'Forces, Earth and Space'*, *'Sound, Light and Electricity'*. *'Working Scientifically'* is a central part of every lesson at every level to teach vital scientific enquiry skills.
- Rickmansworth Park has a substantial range of Science practical resources in school and subscribe to 'Developing Experts', an online Science resource with a sustained focus on skills and progression which includes lesson plans, PowerPoints, documentaries, links and news footage, differentiated and challenging for all pupils.
- Curriculum Journeys shared with each class every lesson reminds pupils of the previous learning they are building on and Vocabulary Progressions highlights new language essential for the topic.
- Lessons begin with our '3 question' structure, used across the school in all subjects. These will generally focus on retrieval of knowledge or skills from a previous lesson or a previous year group and focus on why this new knowledge or skill will be important for them going forward.
- Other Science enrichment opportunities at Rickmansworth Park include STEM ambassadors who are invited to speak to classes/the whole school on a variety of subjects relevant to the our learning, school trips, assemblies, day workshops, clubs, and lunchtime adventure sessions.
- If required, adaptations are made for children with SEND to ensure the Science Curriculum is available and engaging to all and a risk assessment has been undertaken so Health and Safety is paramount in all activities.

The Impact

- The impact of consistent Quality First Teaching ensures Science is an engaging and enjoyable lesson for all pupils. This fosters a love of Science and encourages a curiosity for the world around them where pupils make good progress in their acquisition of skills, knowledge and conceptual understanding.
- The Subject Leader and teaching staff have a sound knowledge of the Science Progression of Skills, knowledge and vocabulary the children should be demonstrating at primary and beyond in KS3.
- Key questioning by teaching staff throughout the lesson as well as observations, annotations and marking support the planning and development of future planning.
- Regular Pupil Voice interviews carried out by the Science Subject Leader reveal Science is regarded as a fun and exciting lesson that the children look forward to.
- Working collaboratively in a pair or group promotes personal and social communication skills.
- The impact of the teaching of Science at Rickmansworth Park School is measured using Subject Leader learning walks, book scrutinies, analysis of the teacher's end of year assessments and any other relevant evidence.
- The Science curriculum is reviewed annually with each year group teacher at a Subject Leader surgery, held on an INSET day. During these meetings, the planning, learning journeys and progression of skills documents are reviewed and the subject leader matches these with evidence in the curriculum books
- Staff Science CPD is refined to meet any needs highlighted during the year.
- The Science subject leader gives a presentation to the Governors (on a rolling programme with all other subjects) to report on the impact of the curriculum.