# Curriculum Intent Statement for Science

## Intent

Science at George Mitchell School is designed to ignite curiosity within students to understand the world around them.

Our Science curriculum allows students to:

- Understand everyday experiences scientifically
- Develop practical and mathematical skills by working scientifically
- Understand the uses and implications of Science in the world around them
- See connections between subject areas and become aware of the big ideas underpinning scientific knowledge.

## Implementation

### EYFS

Science in EYFS is intertwined with the Early Learning Goals, focusing on the Understanding the World area of the EYFS Curriculum. Children are constantly encouraged to explore, predict, observe, think and problem solve through appropriate questioning and child-led learning. Use of scientific vocabulary in context is modelled and applied in the environment.

### KS1

Science in KS1 follows the National Curriculum and is taught for a minimum of 1-1.5 hours a week. Our KS1 curriculum is rich and broad, following the United Learning programme of study. This supports the children to ask simple questions, make observations, perform simple tests, identify and classify and gather and record data.

### KS2

Science in KS2 follows the National Curriculum and is taught for a minimum of 1-1.5 hours a week. Our KS2 curriculum builds upon and extends our KS1 curriculum by encouraging students to make systematic and careful observations and, where appropriate, take accurate measurements using standard units. Findings are recorded and reported in presentations by using drawings, labelled diagrams, keys, bar charts, and tables. We continue to use the United Learning resources to support delivery of our curriculum.

### KS3

Key Stage 3 follows the National Curriculum and is taught in mixed ability groups over 6 hours per fortnight. Students build on their maths, literacy and working scientifically skills which are vital for Key Stage 4 success. We follow a contextual approach to Biology, Chemistry and Physics with working scientifically integrated throughout.

### KS4

KS4 follows the AQA GCSE exam board specification and is taught in mixed ability groups over 8 hours per fortnight. Students follow either the Combined or Separate Science route and obtain two grades in Combined Science or three grades in Separate Science. They continue to build on their knowledge and working scientifically skills across Biology, Chemistry and Physics.

# Assessment

**Primary**

Pupils complete pre-assessments at the start of each unit to baseline their knowledge. During the unit, they complete informal retrieval quizzes at the start of each lesson to support teachers' formative assessment. At the end of the unit, they complete a post-unit assessment. Teacher assessments, based on National Curriculum statements, are recorded termly on SONAR. At the end of KS2, pupils are assessed as either having met the Expected Standard (EXS) or not having met the standard (HNM). These judgements are sent to the DfE as part of KS2 statutory assessment requirements.

**Secondary**

Baseline assessments take place to determine starting points of all pupils. Formative assessments take place during the lesson and may be seen as questions, tasks, quizzes or more formal assessments. Units of work end with summative assessments to measure what a pupil has achieved at the end of a period of time. Teachers are able to feed-forward based on identified misconceptions and gaps identified in knowledge or skills.

# Enrichment Opportunities

Children have the opportunity to take part in science trips across the key stages. These include, visiting the Walthamstow Wetlands, the Science Museum and the Royal Observatory. At primary, teachers hold many science-based enrichment classes on Fridays across the year where children are encouraged to create their own key questions to solve their enquiries.

# Supporting your Child

KS3 Revision guides are available from the school at a discounted price of £8.

Combined Science revision guides are also available through the school at this discounted price of £8. Single Science revision guides are also available at £4 each. With a greater focus on application of knowledge, it is also recommended that students purchase workbooks. These can be bought together with revision guides for £16.

Additional resources include individual access to Active Learn and GMS Edmodo pages.

# Where could Science take you next?

Possible careers in Science can be – Construction, Energy and Utilities, Pharmacist, Arboriculture, Vet, Forensic Scientist, Civil Engineer and more!