Science and Technology - Here at Middleton School the teaching of Science and Technology allows pupils to have a practical hands on approach to learning. Within this curriculum area pupils can develop investigative, problem solving and exploratory skills which prepares them for the challenges of life ahead of them. Pupils work collaboratively to achieve positive learning outcomes and develop a reflective approach to learning.

Everyone at Middleton is safe and Happy

Ofsted Outstanding Provider

INTENT – To develop practical and critical thinking skills that will enable pupils to function as independently as possible. Key areas of intent include;

- Practical and safe use of tools.

- Developing and extending vocabulary.

- Problem solving and thinking skills.

- Use of technology to function in the community.

- To be pushed outside of their comfort zones and develop interest outside of their normal experiences.

- Collaborative working skills.

- To develop accurate measuring skills.

- To develop the ability to make informed predictions.

- Creativity.

- To acquire knowledge which assists them in maintaining good personal health.

- To acquire knowledge which assists them in self sufficiency as young adults.

- To use the 'Plan-Do-Review' learning cycle in daily activities.

- To develop a love of learning.

- To gather knowledge from and communicate with others in the wider world.

- Risk awareness and safety in the community.

- Building resilience through persisting with challenging tasks.

- To develop skills in both giving and receiving feedback.

- To develop awareness of health and safety.

- To prepare pupils for the next steps within their learning journey.

Pupils will explore the full breadth of content as outlined in the National Curriculum with regard to Science, Information Technology and Design Technology.

Implementation –

Teaching and learning opportunities are planned with reference to the Science and Technology M scales, and skills taught are sequential in nature..

Science

- Taught in class groups by class teachers in lower and middle school. Upper school is taught in ability groups.
- Additional science lesson taught in Lower School and Middle School by subject specialist teacher.
- Learning is differentiated to meet the needs of the pupils.
- Kinaesthetic, sensory and practical approach learning.
- Use of visual resources to support communication during learning eg. symbol, sign and real object.
- Breadth of coverage dictated by curriculum overviews which refer to content prescribed by the National Curriculum.
- A spiral curriculum with increasing complexities through the key stages.

ICT

- Pupils receive at least one discreet ICT lesson per week delivered by subject specialist.
- Access to full range of resources to meet the needs of all pupils, including touch-screens and IPads.
- Focus upon online safety and responsible online conduct.
- Teaching and learning is led by an agreed scheme of work which is sequential in skill development.
- ICT taught in a cross curricular manner in addition to discreet ICT lessons.

Food Technology

- All pupils participate in a food technology lesson every week.
- Food Technology lessons promote the acquisition and practise of skills from multiple curriculum strands.

Design and Technology –

- The delivery of the curriculum promotes the 'Design, make and evaluate' aspects of this subject.
- In Upper School pupils receive a weekly Design Technology lesson. In Lower School and Middle School it is taught as part of a thematic approach but all skills outlined in the programme of study are covered over the year.
- Pupils are encouraged to be reflective and to deploy knowledge and skills acquired in other areas of the curriculum when engaging in learning.

Impact –

- Pupils make good and outstanding progress when assessed against the M Scales for Science, Information CommunicationTechnology and Design Technology.

- Pupils develop investigative and explorative mindsets.

- Pupils become more adept at problem solving and develop resilience.

- Pupils are prepared for the next steps on their learning journey.

- Pupils increase in independence and have a greater understanding of their own safety and personal risks.

- Pupils use the skills an knowledge acquired through this subject and apply them to learning within other areas of the curriculum.

- Pupils develop an interest in the world around them and display a desire to interact with this world.

Enrichment Opportunities -

Extra curricular clubs eg; computer club, cooking club, Visits to museums etc, visiting educational groups into school, Jolly Time activities eg; photography, baking, /modelling, IPads, outdoor learning opportunities eg gardening, woodland walk, wildlife trail.