DT - 3I's

Intent

At Stobhillgate we believe that Design and Technology prepares children to take part in the development of tomorrow's rapidly changing world. Creative thinking encourages children to make positive changes to their quality of life. The subject encourages children to become independent and creative problem-solvers, both as individuals and as part of a team. It enables them to identify needs and opportunities and to respond by developing ideas and eventually making products and systems.

Aims

- To develop creative thinking in children and to enable them to talk about what they like and dislike when designing and making.
- To enable children to talk about how things work, and to draw and model their ideas.
- To build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users.
- Critique, evaluate and test their ideas and products and the work of others.
- To encourage children to select appropriate tools and techniques for making a product, whilst following safe procedures.
- To foster enjoyment, satisfaction and purpose in designing and making.

Implementation

We follow a broad and balanced DT curriculum that builds on previous learning and provides support and challenge for learners. The teaching of Design Technology across the school follows the National Curriculum through the use of Design and Technology Association's 'Projects On A Page' documents with pupils skills and knowledge being developed across five key areas;

- Structures
- Mechanical systems
- Electrical systems
- Textiles
- Cooking and Nutrition

Design Technology embeds the Stobhillgate values of Inspiration, collaboration and excellence. It is an inspiring and practical subject, requiring creativity, collaboration, and imagination. Pupils design and make high quality products that solve real and relevant problems within a variety of contexts. It is a very cross curricular subject and draws upon knowledge and skills within Mathematics, Science, History, Computing and Art.

When designing and making, the children are taught to:

Design

- use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
- generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional diagrams, prototypes, pattern pieces and computer-aided design

Make

- select from and use a wider range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing) accurately
- select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

- investigate and analyse a range of existing products
- evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
- understand how key events and individuals in design and technology have helped shape the world

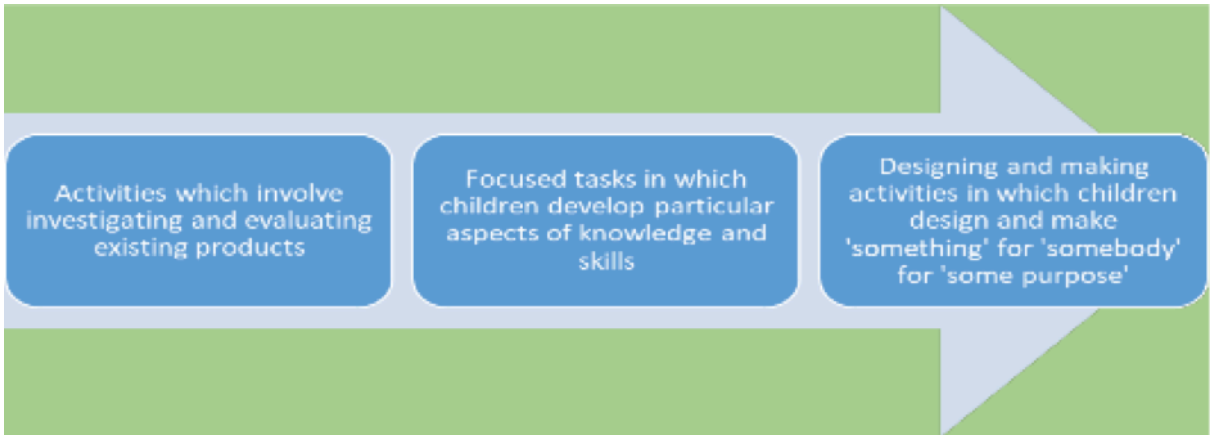
Technical knowledge

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- understand and use mechanical systems in their products
- understand and use electrical systems in their products
- apply their understanding of computing to program, monitor and control their products

Children learn to take risks, be reflective, innovative, enterprising and resilient. Through the evaluation of past and present technology they can reflect upon the impact of Design Technology on everyday life and the wider world.

Children of all abilities have the opportunities to develop their skills and knowledge in each unit and through planned progression we offer them increasing challenge as they move up through school. Teachers may select a context in which the objectives are taught. In planning, the delivery of the curriculum will be differentiated to allow for children of all abilities.

Schemes of work are set out in three main sections:



During Key Stage 1 the children learn how to think imaginatively and talk about what they like and dislike when designing and making. They build on their early childhood experiences of investigating objects around them. They explore how familiar things work and talk about, draw and model their ideas. They learn how to design and make safely and could start to use ICT as part of their designing and making.

During Key Stage 2, children work on their own and as part of a team on a range of designing and making activities. They think about what products are used for and the needs of the people who use them. They plan what has to be done and identify what works well and what could be improved in their own and other people's designs. They draw on knowledge and understanding from other areas of the curriculum and use computers in a range of ways.

Impact

Our DT curriculum is designed to ensure;

- Children will know more, remember more and understand more about Design Technology.
- The large majority of children will achieve age related expectations in Design Technology.
- As designers children will develop skills and attributes they can use beyond school and into adulthood.

Through the evaluation of past and present design and technology, children develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

Design Technology is monitored by the subject leader throughout the year in the form of book monitoring, looking at outcomes and pupil interviews to discuss their learning and understanding and establish the impact of the teaching taking place.

During DT weeks the Subject leader monitors lessons, work product and assessments. They ensure that the curriculum has been covered and that there are no gaps.

To monitor and evaluate Design Technology the Design Technology subject co-ordinator does the following:

- Purchases and organises the appropriate resources.
- Supports colleagues in the teaching of Design Technology.
- Keeps up-to-date on the use of Design Technology in the curriculum and regularly attend training for subject leaders held by the LA and feedback new information and ideas to staff.
- Conducts Topic Book scrutiny to assess the standards of Teaching and Learning through the children's work.
- Regularly reviews and updates the Design Technology Policy and contribute to the school's self-evaluation programme and School Development Plan.