Curriculum Statement for Design and Technology

Intent

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. Design and Technology at Stoborough encourages children to become autonomous 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. Through the study of design and technology, they combine practical skills with an understanding of aesthetic, social and environmental issues, as well as functions and industrial practices. This allows them to reflect on and evaluate present and past design and technology, its uses and its impact. Design and technology helps all children to become discriminating and informed consumers and potential innovators.

Aims

The national curriculum for design and technology aims to ensure that all pupils:

♣ develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
♣ 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
♣ understand and apply the principles of nutrition and learn how to cook.

Implementation

In Early Years Foundation Stage (EYFS), Design and Technology comes under several areas of learning; 'Expressive Arts and Design' and 'Physical Development'. Planning for Design and Technology is not explicit, but is made accessible to the children through the variety of topics they are taught. It is a predominately skills based focus, for example joining and cutting.

All children at Stoborough are encouraged to be curious learners and so an emphasis on enquiry through exploring existing products and their purposes, is centre to the teaching of Design and Technology. Design and Technology lessons will focus on five key areas outlined in the National Curriculum:

- **Design**: understanding contexts, users and purposes; generating, developing, modelling and communicating ideas
- **Making**: planning; practical skills and techniques
- **Evaluating**: own ideas and products; existing products; key events and individuals
- **Technical Knowledge**: making products work
- **Cooking and Nutrition**: where food comes from; food preparation; cooking and nutrition

Children will use this iterative design process across a range sectors: home, school, leisure, culture, enterprise, industry environment and take place within contexts from other subject areas such as: English, Humanities, Science, Computing and Art.

Through carefully planned lessons, covering the three broad areas of 'Electrical Systems and Computing, Cooking and Nutrition and Structures and Mechanical systems' teachers and the subject leader will ensure there is full coverage of the Design and Technology curriculum across the school with an age appropriate progression of skills.

Design and Technology projects will take place once each term. These may be blocked lessons or taught weekly over a half-term.

Evidence of learning will be collected in Design and Technology books, which may include QR Code links to video demonstrations of working projects in action or child oral evaluations.

At Stoborough School, we have an agreed set of effective teaching principles for all lessons:

1. Previous learning is reviewed to develop fluent recall.
2. To avoid overloading working memory, material is presented clearly in small steps with opportunities for pupils to practise, eventually leading to independence – 'I do, we do, you do.'
3. Effective questioning – helps children to practise new information and make connections with prior learning as well as checking understanding.
4. Teachers provide scaffolds so all learners can achieve and so they can have a wider impact in the class.
5. Teachers check for understanding and give systematic feedback

How are *all* learners supported to make progress?

We ensure that *all* children at Stoborough receive quality first teaching, including:

- Clearly designed lesson plans
- Appropriate use of modelling, explaining and questioning to engage with higher levels of critical thinking skills
- Many opportunities to discuss and rehearse orally before writing
- High expectations for all, including an expectation that pupils will accept responsibility for their own learning and work independently
- Regular use of encouragement and authentic praise to engage and motivate pupils
- Challenges to further their knowledge through verbal feedback
- Targeted scaffolding for children who need more support, including: writing frames; word banks with key vocabulary; sound mats
- Key vocabulary on display (used in class and explained) and also on knowledge organisers

Impact

In Early Years Foundation Stage (EYFS) observational assessments are completed at the end of the reception year under the areas of 'Expressive Arts and Design' and 'Physical Development' with a focus on exploring and using tools, media and materials and being imaginative. Children are assessed against the Early Years Foundation Stage profile.

In Key stage 1 and 2, through formative teacher assessment, monitoring practical work and written/oral evaluations, class teachers will be able to gauge progress and identify next steps in learning. After every 'making' stage, child-led evaluations using success criteria will demonstrate to the child if they have been successful and will highlight areas they need to develop.

The subject leader will monitor outcomes regularly to ensure age-related progression of skills are evident, children are experiencing opportunities to complete all areas of the iterative process of designing, making and evaluating, as well as improving technical knowledge through topic specific vocabulary. Monitoring will also make sure cooking and nutrition projects are being carried out ensuring safety and hygiene checks are made. The subject leader will also gather pupil voice through conferencing to assess the effectiveness of Design and Technology lessons.