

Art, Design and Technology: Design and Technology Curriculum Statement

Curriculum Intent

The purpose of the Design and Technology curriculum is to develop students' creativity so that they can design and make innovative products that solve real and relevant problems.

Vision and values

Design and Technology is an inspiring, rigorous, and practical subject. Design and Technology encourages children to learn to think and intervene creatively to solve problems both as individuals and as members of a team. At Stantonbury, we encourage children to use their creativity and imagination, to design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants, and values. We aim to, wherever possible, link work to other disciplines such as mathematics, science, engineering, computing, and art. The children are also given opportunities to reflect upon and evaluate past and present design technology, its uses and its effectiveness and are encouraged to become innovators and risk-takers.

Planning and sequencing

Through a variety of creative and practical activities, we teach the knowledge, understanding and skills needed to engage in an iterative process of designing and making. The children design and create products that consider function and purpose, and which are relevant to a range of sectors (for example, the home, school, leisure, culture, enterprise, industry, and the wider environment).

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 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, as well as chopping and slicing) accurately.
- select from and use a wider range of materials, ingredients, and components, including

construction materials, textiles, and ingredients, according to their functional properties, aesthetic qualities and, where appropriate, taste.

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
- Understand some of the ways that food can be processed and the effect of different cooking practices (including baking and grilling).

Key skills and key knowledge for D and T have been mapped across the school to ensure progression between year groups. The context for the children's work in Design and Technology is also well considered and children learn about real life structures and the purpose of specific examples, as well as developing their skills throughout the programme of study. Design and technology lessons are also taught through a combination of Design and Make projects so that children's learning is focused throughout each unit of work. This is also supported by theoretical delivery in preparation for examination at the end of Key Stages 4 and 5.

Implementation

All our lessons follow an agreed structure with "Do Now" tasks being completed at the beginning of each lesson to facilitate retrieval and consolidation of learning. As practitioners, we also model and promote high standards of behaviour and work and hold our pupils accountable when necessary.

The curriculum is designed to reflect the NEA elements of the course through focused design and make activities and theoretical units.

We ensure the children:

- 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



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and make high-quality prototypes and products for a wide range of users and 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. Children will design and make a range of products. A good quality finish will be expected in all design and activities made appropriate to the age and ability of the child

Students learn how to take risks, becoming resourceful, innovative, enterprising, and capable citizens. Through the evaluation of past and present design and technology, they 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.

Lessons are planned carefully to ensure they offer a plethora of learning opportunities, varying from independent learning to collaborative and group learning. This helps pupils regulate themselves and take control of their learning. We collectively draw upon the faculties commercial and industrial experience to enhance the students understanding of working in this field and the opportunities for further and higher education.

Homework is used effectively to further promote engagement and independent learning, alongside an effective use of IT sources. Pupils are expected to create innovative solutions. Homework is also utilised as a flip-learning tool to prepare students for the sequence of work and a smooth transition through in iterative design process.

Trips, gallery visits, guest speakers and exposure to the world of industry are also important in terms of offering students an enriched experience that engages and supports their studies.

The teaching of geography at Stantonbury School aims to ensure that all pupils develop an understanding and a curiosity about the world around them. With them having contextual knowledge about the location of globally significant places. Our values are to give our students the tools and skills they need to be responsible global citizens in an ever-changing world.

Students will also develop an understanding of the different characteristics of physical and human geography. Key geographical skills will be embedded across the key stages. For example: the collection and analyse of data, the ability to present data that is gathered through fieldwork as well as communicate geographical information in a variety of ways, including through maps, numerical and quantitative skills and writing at length. Students will be able to interpret a range of sources of geographical information, including maps, diagrams, globes, aerial photographs, and Geographical Information Systems (GIS).





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Teachers within the department are all highly trained and experienced. They have a genuine passion for teaching and geography. They use this experience to create engaging units of work that both challenge and motivate students.

Students are encouraged to seek out answers to their own questions through independent research and study. They are also encouraged to ask their own questions that can widen their knowledge and prepare them for geographical and other studies in the future.

The team work closely together and in cooperation with colleagues in other departments we work collaboratively to develop materials that are both challenging and appropriate for our learners. Differentiation is built into the curriculum and students are given help and encouragement which will allow them to achieve their short term and long-term goals.

