

Design & Technology in Year 9

Team Leaders; Miss J Shrapnell & Mrs P Lane

Aims;

To extend the skills and knowledge developed in Year 8 by developing pupils understanding of a range of skills, concepts and processes which meet the requirements of the National Curriculum for Design & Technology. In particular work will concentrate on linking the design process and making skills to expectations at GCSE level, but will also still be based around the recently implemented 'D&T Framework' which make up the single attainment level given in Design & Technology in Year 9.

Course Description

All Year 9 pupils follow a Design and Technology programme for 3 x 1hr lessons for the whole year. The year group is divided into 6 groups of approximately 21 pupils and the following work is covered on a carousel basis:

Textile; Technology

- ✓ Design and make task – Create a Textile product to raise awareness of recycling
- ✓ Research existing recycled products and SMART Textiles
- ✓ Extend practical skills and use of equipment by sampling a range of decorative and construction techniques
- ✓ Gain knowledge and understanding of packaging and care labels
- ✓ Highlight citizenship through considering the benefits of recycling

Food Technology

- ✓ Design and make task – A range of products to be sold from a special order section of the supermarket
- ✓ To further develop pupils knowledge and understanding of designing and making with food
- ✓ Extend practical skills and use of equipment
- ✓ Use ICT to assist diet and recipe analysis
- ✓ Gain knowledge and understanding of packaging and labelling
- ✓ Modify recipes to meet the needs of the user
- ✓ Links with citizenship through planning and organising events to fundraise for charities e.g. Macmillan cancer

Resistant Materials & Graphics

- ✓ Health and Safety practices
- ✓ Basic fabrication skills (wood joints, riveting)
- ✓ Design and make task – Create a pizza cutter or media rack for a person of your choice
- ✓ Continue to develop skills in the safe use of tools and equipment
- ✓ Understand the use of consumer data when designing
- ✓ Ensure the production of high quality products which would be retailed due to their finish
- ✓ Develop skills in graphics expected to be used at GCSE level (Layout, title blocks, borders, use of ICT and light-boxes, folder identity)

Electronics & Graphics

- ✓ Health and Safety practices
- ✓ Design and make task – Create a nightlight for a specific type of child
- ✓ To understand and learn the definitions and application of further basic electronic components, and to learn how to install them to a circuit board
- ✓ To continue to learn how electronic circuits are created and presented
- ✓ To learn the basic principles involved in designing a light sensor, and to apply them in practice
- ✓ Develop skills in graphics expected to be used at GCSE level (Layout, title blocks, borders, use of ICT and light-boxes, folder identity)

Range of activities

Pupils will have the opportunity to work individually, in pairs and in groups. Most of the lessons will be based around developing pupil understanding of key design based skills which will result in producing a quality end product. Pupils will be encouraged to take home what they produce at the end of each module in exchange for a welcomed donation of £1.00 for each product.

Homework

During each 9 week module pupils are set a minimum of 4 homework tasks which develop, extend or reinforce aspects of the design process linked to one of the 5 subject material areas. Access to ICT at home is an advantage, but ALL students are allowed entry to designated ICT rooms within the school at lunch times.

Assessment

Each piece of work will be given a comment, and key pieces of work linked to the 'Design & Technology Framework' will be fully assessed and graded to ensure pupil progress is regularly recorded in-line with national attainment levels. A final attainment level given at the end of Y9 will enable a predicted grade for any Design and Technology GCSE. Pupils will be encouraged to continue to develop self-assessment and peer-assessment skills through regularly evaluating their own and others work against given criteria.

Extra Curricular

All Year 9 pupils have the opportunity to participate in **The Rolls Royce Innovations Award** with the best group from each subject area representing the school at the University of Bath Award Day.

All pupils have the opportunity of gaining **The CREST Bronze Certificate** for Technology