

DT Curriculum DESIGN TECHNOLOGY

In design technology we aim to give the children an insight into the world of designing and making, and how it affects our lives.

We analyse products, recognise problems, identify changes we would like to make and through investigation develop design ideas. Alongside this we study the properties of materials and through focused practical tasks we develop skills and incorporate them in making the designs.

The materials we use include wood, plastic, mouldable materials, food, textiles, mechanical components, card and graphic media. Quality materials are provided for the children encouraging quality products. We provide opportunities for children to use computers to draw, design and model their own ideas.

The children will be taught to use tools and equipment in an effective, safe and hygienic manner. Throughout all design and technology work the children are taught to work with consideration for others, to develop an ownership of their work, and extend their own criteria for a successful project.

Y7 DT

- Design and make a desk tidy.
Pupils learn how the design process works from the design brief through to manufacturing. They learn how designers produce a customer profile and focus on specific groups of users. Initial ideas are influenced by research and analysis of existing solutions and their developed idea is made into a cardboard mock-up before a final design is drawn up. Plans are produced using computer aided design and their final quality prototype is produced in wood and decorated to appeal to their chosen customer. Upon evaluation pupils consider how the product would be batch produced to save costs.

Y7 Food Skills

Pupils must understand the importance of hygiene and safety while working with others in base 8. The emphasis is on gaining confidence to be able to work completely independently. Pupils learn to manage the school ovens and equipment safely while making basic dishes. Pupils are shown different ways to measure including digital scales and how to use the zero setting. Dishes build on skills such as rubbing in and getting the correct consistency. Peeling and chopping skills are used for applescone. Pupils clear up their work areas in groups and take turns to wash and the equipment. At the end of each practical lesson pupils complete different activities and a written evaluation of each dish. If time allows pupils are given the chance to modify a basic recipe and trial it.

Y7 Textiles

Design and make a mini-cushion for a specific user using the process of stencilling and hand-embroidery stitches. Pupils carry out a focused practical task using simple stencilling to put their initials on the back of the cushion. Pupils use the knowledge of the process to design the front of the cushion, linking it to the user.

This must show progression, for example, a complex shape, more than one colour or mixed colours or more than one stencil. Each pupil must work out how the stencil must be used to create the required design.

Appropriate hand stitches are selected to enhance it. The sewing machine is introduced with a guiding exercise and a plain seam sample.

The mini cushion is constructed, stuffed and sewn up.

Evaluations are carried out throughout the processes and of the final outcome.

Y8 DT

- Design and make an African thumb piano.
Pupils carry out research on sub-Saharan African tribal art and produce a mood board. Research is carried out in order to solve problems such as how components can be assembled and what could make a suitable sound box or board. Pupils learn how to use cross sectional drawings to communicate ideas as well as developing their 3d drawing skills. Pupils work with natural timber, man-made board. Steel strip, aluminium bar and learn about assembling their product using non-permanent fasteners enabling adjustment and modification.

Y8 Food Skills

Y8 Food lessons build on the confidence and skills gained in Y7.

Rolling in skills are revisited to make shortcrust pastry. Pastry must be a good consistency in order to shape into cheese straws, jam tarts and mini quiches.

Knife skills are used for the mini quiches.

Different ways of producing a method are tried out, as well as assessment techniques such as a star diagram.

If time allows, pupils can carry out a design and make activity to make a hand held snack with an edible casing.

Pupils must make a plan of action and evaluate the final outcome.

Y8 Textiles

Design and make a tote bag for a specific user.

A user is identified in order to create a specification and several design ideas. Decorative techniques are then tested out to choose ones that are the most appropriate. Computer Numerically controlled can be programmed to make their design personalised.

Sewing machine skills started in Y7 are built on, starting with making the bag handles, then French seams and a hem at the top.

Emphasis is on achieving neat results by using various parts of the machine to keep the stitching straight. By the end of this project pupils will be able to use the machine independently.

Evaluations are carried out throughout the processes and of the final outcome.