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Year 7

# Department of Design & Technology

# OVERVIEW

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During KS3 students will rotate through 3 subject areas every year: Food Preparation and Nutrition, Product Design and Textiles, spending a term in each.

Through a variety of creative and practical activities, pupils will be taught the knowledge, understanding and skills which will enable them to take their ideas and communicate and clarify them through action.

They will work in a range of relevant contexts for example, the home, school, leisure, culture, enterprise, industry and the wider environment.

They will learn how to generate imaginative and purposeful ideas and translate them into workable solutions.

They will work in a safe and hygienic environment in order to produce high quality products.

## Skills Developed

- To work independently to problem solve and consider others needs when designing, adapting or making.
- When making learn to select from and use specialist tools, techniques, processes, equipment and machinery and to use a wider, more complex range of materials, components and ingredients.
- To investigate new and emerging technologies.
- To test, evaluate and refine ideas and products, taking into account the views of intended users and other interested groups.
- To learn about and make use of the properties of materials when making an informed choice about the products they are designing, adapting or making.
- To learn how to cook and apply the principles of nutrition and healthy eating, instilling a love of cooking in pupils. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.

## Topics covered

### Product Design:

Design and make an alien bookmark using CAD/CAM. The completed bookmark will be tested and evaluated.

Design and make a wooden box with a lid that secures to the box (not using hinges) and decorated.

The bookmark will be made from HIPs.  
CAD - 2D Design software will be used to draw the design  
CAM - the bookmark will be cut on the Roland Modela

- Sketch a range of box shapes in isometric, which could be made from the strip of pine. State which joint you will use to make each box, use dimension lines to show measurements

	<ul style="list-style-type: none"> <li>• Design 3 methods for securing a lid to your box, not using hinges, drawn in an exploded isometric. Evaluate each design and say which design you have chosen and why.</li> <li>• Select 3 paintings that you like, print a copy of each painting. Sketch your box and lid 3 times to show how the box will be decorated with each design. Colour your chosen design.</li> <li>• State how the decoration will be applied to your box designs e.g. stencilling, masking areas, painting, collage, etc. Evaluate each design &amp; say which one you have picked &amp; why.</li> </ul>
<p><b>Textiles:</b></p> <p>Design and make a 40x40cms tie dyed cushion cover for teenagers using an ethnic pattern in the surface design.</p>	<ul style="list-style-type: none"> <li>• Analysis of the task.</li> <li>• Product analysis of an existing product.</li> <li>• Research into ethnic patterns and creating a source board.</li> <li>• Setting up and using the sewing machine and other textiles equipment.</li> <li>• Research into embellishment techniques such as tie dye, applique and couching.</li> <li>• Where fabrics come from, how they are made and what we can do to ensure they are sustainable.</li> <li>• How to care for fabrics.</li> <li>• Creating a set of criteria to use in the design and development of ideas.</li> <li>• Planning, making and evaluating a quality product.</li> </ul>
<p><b>Food: practical work will include crumble, ratatouille, stir fry, pizza, salad pot, scones.</b></p>	<ul style="list-style-type: none"> <li>• Food preparation skills such as: weighing and measuring, knife skills, use of the cooker, cooking methods, making a dough and raising agents.</li> <li>• Food, nutrition and health: making informed choices for a varied and balanced diet, use of the Eat well guide, how to plan and modify recipes, meals and diets to reflect the nutritional guidelines for a healthy diet, the major diet-related health risks.</li> </ul>

- Food science: why food is cooked and how heat is transferred to food, the functions of ingredients.
- Food safety when preparing, cooking and serving food.
- Food choice: to know and understand factors which may influence food choice, sensory testing methods, how taste receptors and olfactory systems work when tasting food.
- Food provenance: where and how ingredients are grown, reared and caught, environmental issues associated with food, sustainability of food and food production.

### How we assess your daughter's progress

- In each area there will 2-3 pieces of work marked according to school policy against a given set of criteria.
- For these pieces of work your daughter is encouraged to respond to her teacher's feedback to show progress. This is often in the form of What Went Well (www) and Even Better If (ebi).
- Practical work is assessed by her teachers but also self and peer assessed.
- Testing of her knowledge is often marked out of a total and stamps used for completion and/or effort.

### Year 7 key assessments:

- An evaluation of their Food practical work (e.g. fruit crumble).
- Using their knowledge of nutrition and healthy eating to assess how balanced their diet is.
- Assessment of bookmark and wooden box ideas in terms of use of the design criteria and detailed annotation.
- Assessment of their products; an 'alien' bookmark and a wooden box using a set of criteria.
- Evaluation of their bookmark including how well it performed and possible improvements.
- Product analysis of a cushion to find out more about how and what it's made from.
- Assessment of cushion ideas in terms of use of the design criteria and detailed annotation.
- Assessment of their cushion using a set of criteria.
- Assessment of drawing and designing skills in Product Design and Textiles.
- Assessment of practical skills in Food, Product Design and Textiles.

## How we support and develop your daughter in Design and Technology

- Your daughter will receive written and verbal feedback regarding her work.
- She will be encouraged to work independently as well as in pairs or as part of a group.
- It will be suggested to her that she 'have a go' before asking for help.
- She will be able to attend lunch time and after school catch up clubs.

## What you could do to support your daughter

You could help your daughter by making sure

- She is organised and brings her overall/apron, goggles, folder and ingredients/materials to the lessons, where appropriate.
- As a safety measure in all areas, if she has long hair it should be tied back in a bun. Fringes also need to be clipped back.
- She uses her planner to help with organisation
- That she is completing her homework encouraging the use of primary research (the world around them, without sole reliance on secondary internet information).
- That in order to build her confidence you encourage her to practise the skills she is learning with us at home.
- That you review her achievements with her (refer to the progress page in her Technology booklet) and suggest ways in which she could progress through the KS3 levels.

### Support Material:

Websites:

[www.qca.org.uk/curriculum](http://www.qca.org.uk/curriculum)

[www.technologystudent.com](http://www.technologystudent.com)

[www.ergonomics4schools](http://www.ergonomics4schools)

[www.bsieducation.org](http://www.bsieducation.org)

<http://www.mapperleygames.com/Nieuwe%20map/innndex.html>

[www.online.org.uk/resources/InformationSheets/Textiles/htm](http://www.online.org.uk/resources/InformationSheets/Textiles/htm)

<http://www.style.com/>

<http://www.vogue.co.uk/>

[www.elle.com](http://www.elle.com)

<http://www.deliaonline.com>

<http://www.jamieoliver.com>

<http://www.bbc.co.uk/food/>

<http://uktv.co.uk/food/homepage/sid/423>

<http://www.bbcgoodfood.com>

Students can also access PowerPoints in the Curriculum Shared Area, on the school network.