

3Cert Design & Technology Curriculum Overview

Year 7		Year 8	
Autumn Term – first three weeks	<ul style="list-style-type: none"> What is D&T? How to work safely in the D&T workshops The design process Understanding the performance of structures 	Simple electronics	<ul style="list-style-type: none"> Simple systems and control (including feedback loops) Circuits; simple switches and how to incorporate sensors) Properties of plastics Cutting and shaping plastics
Toys, toys, toys	<ul style="list-style-type: none"> Research of user needs Reformulating design problems Safety rules and procedures for the workshop Using basic workshop tools to shape wood and plastic Understanding the properties of wood and plastic Evaluation of products made by others The impact of DandT on people and the environment 	Street food	<ul style="list-style-type: none"> Safety and hygiene related to cooking products to sell Foods from around the world Nutrition related to needs of groups Mass production of food products Sources of food products (protein foods) Properties of ingredients (protein foods)
Creature feature	<ul style="list-style-type: none"> Research of user needs Generating ideas Developing ideas through modelling Safety rules and procedures for the workshop Using basic workshop tools to shape, join and finish wood Analysis of products made by others Understanding basic mechanical systems 	What's in a box?	<ul style="list-style-type: none"> Reformulating design problems Developing specifications Safety rules and procedures for the workshop Using workshop equipment to cut, shape, join and finish wood Understanding the properties of wood Modelling and creating new ideas
CAD / CAM	<ul style="list-style-type: none"> Benefits of CAD and CAM 	CAD / CAM	

	<ul style="list-style-type: none"> • Using CAD to draw and manipulate simple shapes • Learning how to set CAD drawings for transfer to CAM • Understanding the performance of structures • Using the laser cutter 		<ul style="list-style-type: none"> • Benefits of CAD and CAM • Using CAD to draw and manipulate simple shapes • Learning how to set CAD drawings for transfer to CAM • Understanding the performance of structures • Using the laser cutter
Cooking & Nutrition	<ul style="list-style-type: none"> • Safety and hygiene related to cooking • Healthy eating guidelines • Nutrient sources and function • Sources of food products (fruits, vegetables and cereals) • Heat transfer related to cooking • Properties of ingredients (flour and raising agents) 	Autumn Term - end	<ol style="list-style-type: none"> 1. Careers related to D&T 2. Option choices for KS4

All year 7 students will study the structures unit in the first 3 weeks of the year at the end of which they will take a baseline test. The results of the test, along with KS2 results will be used to set students. In D&T we have a top set and three mixed ability sets in each half of the year. Students will study the four remaining units in a different order depending on which class they are in. They are assessed formally at the end of each unit.

More in-depth information and support for parents is available for every subject in the following documents:

- Termly 'I can' statements for each 3Cert course
- Course handbooks for every subject

All 3Cert courses are assessed formally through exams at the end of each term. These dates are in the Academy calendar.