

Curriculum Intent

Each year of KS3 students at Witchford Village College will be exposed to a range of materials and design contexts that are designed give a broad understanding of the iterative process design (design, make and evaluate). A key focus of the of the curriculum is to actively teach Creative thinking as a skill set rather than an innate ability. Where possible the work is linked to key design influences from a range of design eras, this is explicit within the project-based work. Students will be provided with design opportunities that surpasses space and cost limitations through some 'Design Concepts' projects that will focus on the design proposal and modelling rather than a working prototype.

Food technology is included where possible to enrich the design ability but with an added focus that Explores Nutrition and Healthy eating as a key element of the KS3 program. The structure differs slightly towards a practical applied skill set.

Throughout the discrete subjects Health and safety is conveyed as paramount with students taking an 'active' part in risk identification and mitigation (guided heavily by teaching staff)

How does the KS3 curriculum build on that from KS2?

Pupils at Key Stage 2 tend to experience DT as part of creative 'making' tasks that have less of an impact and link to the creative design industries. Products are limited in scope and tend to be directly linked to a local context. – Moving beyond this happens in all areas of the DT curriculum building on prior knowledge.

Project Briefs are taken further away from focused practical tasks and have greater elements of real-world problem solving. One key area of this is Identifying design issues (development) and using research actively to solve the arising design issues.

Materials and tools are increased in complexity and range to give students a broader ability draw on beyond the Key Stage. Combining these skills with accuracy is a mark of high ability and is rewarded in the grading systems.

Recording and developing ideas in a range of ways; including exposure to CAD, Isometric, orthographic and rendering techniques is built into most projects along with a modern digital record keeping process that will supports students' ability to move to the next key stage successfully as needed.

The **Food Technology** curriculum has a heavier focus on the need to be able to cook and manage a diet at the end of KS3 giving access to the skills needed for safe selfcare but includes design and creative skills as practically applicable. This will also support the knowledge and skills needed to progress confidently to the next Key stage.

What do students do with their acquired knowledge and skills?

This Falls into to distinct categories:

- 1) Practical elements and knowledge will enable the grass root skills to be developed that are applicable to use in a wider context of life, making, building fixing, preparing (food). This practical understanding of how materials, resources and tools are used will enable wiser decisions later in life. It will also prepare them for development to the next Key stage if they choose to take it.
- 2) Theoretical wider design knowledge will support students to have a strong cultural understanding of design and manufacture in the context of industry, this will also support them in progression in Design and Engineering careers.

How does the curriculum align to and go beyond the National Curriculum?

Students at Witchford Village College are given greater access to digital resources and working methods then would be typical of key stage 3 secondary education encouraging larger scale, organised record keeping that is more typical of KS4 (by the end of the key stage).

By teaching Creativity as a skill set that can be controlled and mastered by the student, we enable a greater access to this area of study then students would receive on a standard KS3 course. This holistic skill will support confidence in a wider range of career opportunities beyond the key stage limits of DT.

We are proud of the built-in links to design eras, influences and industry that support a wider subject awareness – Giving student greater wisdom then the KS3 national curriculum directs and supporting the students to understand how other subjects are integral a range of demanding design careers.

What new knowledge are students taught?

Term	Year 7	Year 8	Year 9
Autumn/ Spring (Project 1)	(Design concepts) Lego Superhero's: Iterative design process. Commercial Branding + how companies control this, Research processes (Primary and secondary), Creative thinking basics – (avoiding design fixation), how to products develop an idea. Short term batch manufacture products. Paper and card modelling techniques.	<ul style="list-style-type: none"> • n/a (In development) 	(Design concepts) Plectical –Creativte design. Using materials and finishes to give the illusion of a product that does not exist. - Creative thinking. ACCESS FM Analysis and evaluation. Orthographic Final design. Material and manufacture Planning. Prototype design outcome, One off manufacture. Process testing (finishes and functionality)

Autumn/ Spring (Project 2 +3)	Food Hygiene (or Upcycling chimes and mobiles) Food Tech: Hygiene + safety – safe use of tools in the kitchen and the kitchen environment, Eatwell guide – how much food do we need and what types of food should we eat, Fruits and vegetables – looking at seasonal products and how this might effect cost and taste.	<ul style="list-style-type: none"> n/a 	Food – preventing food waste – portion size, shopping habits. Avoiding food poisoning – high risk food scenarios, food storage and management. Enhancing vitamin intake.
Summer (Project 2 + 3)	Hard Materials: Coat hooks, Natural materials. Wood grain strength, cutting woods and metals. The Space age design movement Basic material identification and properties. Client based design Isometric final design drawing. Working within a material cutting list limit.	<ul style="list-style-type: none"> n/a 	Hard Materials: Lamp design/ Monster project. Post modern design era. Aesthetic functional design. Manufacturing standards and manufacturing tolerance. Basic electrical circuits CAD Final design. Batch manufacture (Jigs and templates) Plastics, forming over moulds and combining with other materials.
	<i>Over the year all groups should access all units except for 'Upcycling' which is in place currently due to staffing restriction. Each of the projects are recorded by the students digitally and each one introduces new concepts along side the products, looking at the industrial applications.</i>		

How and where do students build knowledge through KS3?

The sequencing of units and lessons allow for a logical progression of skills in a safe manner – many units have a research and style focus the enables a wide knowledge of the development of design. Each project targets new knowledge and skills discreetly within the consistent use of the design process.

We use a standardised design assessment criteria which helps to ensure students development is tracked across the years and gives students a static ground to measure progress and improvements.

We aim to give students practical application of skills wherever possible to support long term knowledge retention, building on theoretical concepts.