

Intent for KS3 DT

Intent

Design and Technology in our school will equip students with the knowledge, understanding and skills required to solve real world problems through a range of contexts involving design principles such as analysis, designing making and evaluating. Our curriculum will encourage students to design and make whilst enabling them to make informed decisions about a wide range of further learning opportunities and career pathways as well as develop vital life skills and future job opportunities.

KS3 Aims of learning

- To develop creativity through a range of relevant problems that are linked to an increasing technological world.
- To apply knowledge, understanding and skills to produce high quality products for a range of users.
- To understand how past and present technologies impact on the world around them.

Goal for every student

KS3

- To identify and solve their own design problems through the study of different cultures and user needs.
- To communicate ideas that allow others to understand their thinking.
- To investigate the world around them generating creative solutions to technical problems.
- To make high quality prototypes and products using a variety of technical solutions.
- To test, refine and evaluate their and other people's products and understand how technology impacts on individuals, society and the environment.

Implemented pace

KS3

The students shall be covering one topic every 6 week cycle.

Impact

- The KS3 workbook has a progress tracker on the front page on which the student has the opportunity for self-reflection and record on-going progress.
- Practical assessments are completed by all teachers throughout the topic
- Written assessments are completed by all teachers at the end of the topic cycle followed by GEM work
- GEM work based on KPIs

Moderation of assessment task marking completed during JPD session

Core Competences	How will this be achieved?		
	Year 7	Year 8	Year 9
Designing	<ul style="list-style-type: none"> • Research and explore different design context • Identify and solve their own design problems • Use communication skills to design and model ideas. • Pop-up Card design • Bookend design 	<ul style="list-style-type: none"> • Research and explore different design context • Identify and solve their own design problems • Develop a specification to inform the design of innovative, functional, and appealing products • Use communication skills to design and model ideas. • Storage Design 	<ul style="list-style-type: none"> • Research and explore different design context • Identify and solve their own design problems • Develop a specification to inform the design of innovative, functional, and appealing products • Use communication skills to design and model ideas. Incorporate links to other subjects through Mathematical modelling and scientific principles.
Making	<ul style="list-style-type: none"> • Hand skills with basic tools and machines such as scroll saws, disc sander and pedestal drills. • Use of CAM to machine a part of their project 	<ul style="list-style-type: none"> • Hand skills with basic tools and machines such as scroll saws, disc sander and pedestal drills. • Use of CAM to machine a part of their project 	<ul style="list-style-type: none"> • Working with materials using hand and machine tools • Forging • Turning • Brazing • Forming • Bending
Technical Knowledge		<ul style="list-style-type: none"> • Environmental, social and moral issues. • Future technologies 	<ul style="list-style-type: none"> • Materials and sources
Evaluation	<ul style="list-style-type: none"> • Evaluation of own work • Peer Assessment through card modelling and making of focused practical task 	<ul style="list-style-type: none"> • Evaluation of own and others work to help develop understanding 	<ul style="list-style-type: none"> • Evaluation of own and others work with the aim of further development of skills and product
Health and safety	<ul style="list-style-type: none"> • Understand the principles of, workshop safety when using hand and machine tools. 	<ul style="list-style-type: none"> • Understand the principles of, workshop safety when using hand and machine tools. 	<ul style="list-style-type: none"> • Understand the principles of, workshop safety when using hand and machine tools.

No	Practical skills/ techniques	Year 7	Year 8	Year 9
1	Safety within the workshop	Yes	Yes	Yes
2	Risk assessment		Yes	Yes
3	Safe working of hand tools	Yes	Yes	Yes
4	Safe use of modelling equipment	Yes	Yes	Yes
5	Safe working of machine tools	Yes	Yes	Yes
6	Freehand drawing	Yes	Yes	Yes
7	Oblique drawing	Yes		
8	Isometric drawing		Yes	Yes
9	Orthographic drawing		Yes	Yes
10	CAD	Yes	Yes	Yes
11	Enlarging and reducing images	Yes	Yes	
12	Typography	Yes	Yes	
13	Rendering	Yes	Yes	Yes
14	Analysis of products		Yes	Yes
15	Writing a design context		Yes	Yes
16	Writing a design specification		Yes	Yes
17	Marking out materials	Yes	Yes	Yes
18	Cutting materials by hand	Yes	Yes	Yes
19	Joining materials by hand	Yes	Yes	Yes
20	Finishing materials by hand	Yes	Yes	Yes
21	CAM	Yes	Yes	Yes
22	Forming materials		Yes	Yes
23	Bending materials		Yes	Yes
24	Moulding materials			Yes
25	Vacuum forming			Yes
26	Casting			Yes
27	forging			Yes