

Design & Technology Curriculum Aims

Intent of KS4 Curriculum:

Design and Technology is a perfect example of head and hands working together. For pupils, having to think about specific purposes and users for their products is much more demanding than simply following instructions to make something. Pupils have to think, decide and plan, as well as go and create.

Through studying Design and Technology through a wide variety of activities and processes, pupils use of a broad range of knowledge, skills and understanding which helps prompt engagement and nurtures creativity and innovation. They design and make functional products that solve real and relevant problems through a range of contexts via an array of different materials. It encourages pupil's to think about important issues and explore the designed and made world in which we all live and work.

Some of the benefits of studying Design and Technology

1. How to be creative
2. How to solve real problems
3. Learn skills that to can be used in a future job
4. Learn about materials, processes and tools
5. Learn about the effect of products on the environment & people
6. Make and manipulate things with different materials
7. Learn practical skills that can help yourself
8. Apply knowledge from other subjects
9. Make a finished product to take home and be proud of

Through the curriculum pupils go through the design process in order to acquire and apply knowledge and understanding of materials and components, design skills, existing products, practical skills, quality and health and safety.

The skills learned in D&T also help with learning across the curriculum. Knowledge about the properties of materials helps in science and the practice of measuring accurately helps in maths. These skills help in IT through the pupils use of computers and naturally, in art and design.

Design and Technology provides opportunities for pupils to develop their capability. By combining their design and making skills with knowledge and understanding they learn to create quality products.

D&T brings learning to life. It is a motivating context for discovering literacy, mathematics, science, art, PSHE and ICT.

Pupils are exposed to the design process to develop their practical, designing and creative ability to solve real and relevant problems within a variety of contexts.

This is achieved through three Design & Technology subject areas:

- **Resistant Materials/Product Design**
- **Textiles**
- **Graphics**

Through evaluation of past and present Design and Technology, pupils will develop a critical understanding of its impact on daily life and the wider world around them.

Implementation of Skills & Concepts:

Students enter KS3 with a mixed variety of existing skills due to the differing amount of exposure in KS2. Within the first lessons students are taught the key health and safety expectations whilst in the design and technology department. Health and safety is paramount and students are consistently reminded of the expectations whilst in the subject area. Students have to sign a health and safety contact at the start of each new rotation cycle in order for them to carry out practical work in that subject area.

Skills are delivered through the following subjects on a rotation of 8 week blocks:

- **Resistant Materials/Product Design**
- **Textiles**
- **Graphics**

Impact

The Design and Technology Department will assess the impact of key concepts, skills and content throughout the year via regular assessments, marking and student feedback, book scrutiny and learning walks. This will be evident through the department QA folder and department tracking document (found within the department shared drive).

In order to support literacy, the pupil's booklets contain key words (as well as on the teaching power points) as well as key literacy tasks built into each project booklet.

As the pupils rotate their marks are recorded on to the department tracking sheet and an average mark is awarded for each project. Over the course of the year a clear picture of their progress can be seen.

In year 8 pupils will build upon some of the key skills techniques and knowledge already learned, but will also be introduced to new skills techniques and knowledge in order to fully prepare them for their op

Aims and background of the Project:

- Be able to use specialist materials, techniques, equipment and processes in response to client briefs
- Be able to record formal elements within specialist pathways.

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Design & Technology Curriculum Aims

UNIT 2: – Creative Project in Art and Design (External):

- To develop creative ideas, skills and intentions in response to a project brief
- To produce final outcomes that meet the requirements of the brief.

15 Week s	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15	10hrs off timetable
Learning Aims	Design Brief & User Profile	Artist research & Mood-boards	Artist research & Mood-boards	Product Analysis	Wider issues in Design	Research summary & Specification	Initial ideas	Developments	Compare ideas & developments against spec	Modelling	Modelling	Modelling	Materials Chart	Gantt chart & CAD work	CAD work	Practical
Learning outcomes	I can describe using <u>simple sentences</u>	I can describe using <u>simple sentences</u>	I can describe using <u>simple sentences</u>	I can describe using <u>simple sentences</u>	I can describe using <u>simple sentences</u>	I can describe using <u>simple sentences</u>	Develop ideas from a starting point in response to the brief, <u>describing</u> creative intentions.	. Develop ideas from a starting point in response to the brief, <u>describing</u> creative intentions.	Develop ideas from a starting point in response to the brief, <u>describing</u> creative intentions.	Develop ideas from a starting point in response to the brief, <u>describing</u> creative intentions.	Develop ideas from a starting point in response to the brief, <u>describing</u> creative intentions.	Develop ideas from a starting point in response to the brief, <u>describing</u> creative intentions.	Develop ideas from a starting point in response to the brief, <u>describing</u> creative intentions.	Develop ideas from a starting point in response to the brief, <u>describing</u> creative intentions.	Develop ideas from a starting point in response to the brief, <u>describing</u> creative intentions.	Produce a personal outcome that <u>responds</u> to the requirements of the brief.
	I can explain using <u>full sentences</u>	I can explain using <u>full sentences</u>	I can explain using <u>full sentences</u>	I can explain using <u>full sentences</u>	I can explain using <u>full sentences</u>	I can explain using <u>full sentences</u>	Use appropriate skills to develop designs and ideas in response to the brief, <u>explaining</u> creative intentions.	Use appropriate skills to develop designs and ideas in response to the brief, <u>explaining</u> creative intentions.	Use appropriate skills to develop designs and ideas in response to the brief, <u>explaining</u> creative intentions.	Use appropriate skills to develop designs and ideas in response to the brief, <u>explaining</u> creative intentions.	Use appropriate skills to develop designs and ideas in response to the brief, <u>explaining</u> creative intentions.	Use appropriate skills to develop designs and ideas in response to the brief, <u>explaining</u> creative intentions.	Use appropriate skills to develop designs and ideas in response to the brief, <u>explaining</u> creative intentions.	Use appropriate skills to develop designs and ideas in response to the brief, <u>explaining</u> creative intentions.	Use appropriate skills to develop designs and ideas in response to the brief, <u>explaining</u> creative intentions.	Produce a personal outcome <u>that meets</u> the requirements of the brief.
	I can <u>justify choices</u> by giving <u>full reasons for all my opinions</u>	I can <u>justify choices</u> by giving <u>full reasons for all my opinions</u>	I can <u>justify choices</u> by giving <u>full reasons for all my opinions</u>	I can <u>justify choices</u> by giving <u>full reasons for all my opinions</u>	I can <u>justify choices</u> by giving <u>full reasons for all my opinions</u>	I can <u>justify choices</u> by giving <u>full reasons for all my opinions</u>	Explore and refine diverse designs and ideas in response to the brief, <u>analysing</u> creative intentions.	Explore and refine diverse designs and ideas in response to the brief, <u>analysing</u> creative intentions.	Explore and refine diverse designs and ideas in response to the brief, <u>analysing</u> creative intentions.	Explore and refine diverse designs and ideas in response to the brief, <u>analysing</u> creative intentions.	Explore and refine diverse designs and ideas in response to the brief, <u>analysing</u> creative intentions.	Explore and refine diverse designs and ideas in response to the brief, <u>analysing</u> creative intentions.	Explore and refine diverse designs and ideas in response to the brief, <u>analysing</u> creative intentions.	Explore and refine diverse designs and ideas in response to the brief, <u>analysing</u> creative intentions.	Explore and refine diverse designs and ideas in response to the brief, <u>analysing</u> creative intentions.	Produce a personal outcome <u>showing a cohesive exploration</u> , in meeting the requirements of the brief.
							Synthesise a <u>diverse range of designs and ideas</u> which <u>imaginatively</u> explore the requirements of the brief, <u>justifying creative</u> intentions.	Synthesise a <u>diverse range of designs and ideas</u> which <u>imaginatively</u> explore the requirements of the brief, <u>justifying creative</u> intentions.	Synthesise a <u>diverse range of designs and ideas</u> which <u>imaginatively</u> explore the requirements of the brief, <u>justifying creative</u> intentions.	Synthesise a <u>diverse range of designs and ideas</u> which <u>imaginatively</u> explore the requirements of the brief, <u>justifying creative</u> intentions.	Synthesise a <u>diverse range of designs and ideas</u> which <u>imaginatively</u> explore the requirements of the brief, <u>justifying creative</u> intentions.	Synthesise a <u>diverse range of designs and ideas</u> which <u>imaginatively</u> explore the requirements of the brief, <u>justifying creative</u> intentions.	Synthesise a <u>diverse range of designs and ideas</u> which <u>imaginatively</u> explore the requirements of the brief, <u>justifying creative</u> intentions.	Synthesise a <u>diverse range of designs and ideas</u> which <u>imaginatively</u> explore the requirements of the brief, <u>justifying creative</u> intentions.	Synthesise a <u>diverse range of designs and ideas</u> which <u>imaginatively</u> explore the requirements of the brief, <u>justifying creative</u> intentions.	Produce a creative outcome, <u>showing an imaginative</u> exploration in meeting the requirements of the brief.
							<u>Apply</u> materials, techniques and processes, in relation to creative intentions.	<u>Apply</u> materials, techniques and processes, in relation to creative intentions.	<u>Apply</u> materials, techniques and processes, in relation to creative intentions.	<u>Apply</u> materials, techniques and processes, in relation to creative intentions.	<u>Apply</u> materials, techniques and processes, in relation to creative intentions.	<u>Apply</u> materials, techniques and processes, in relation to creative intentions.	<u>Apply</u> materials, techniques and processes, in relation to creative intentions.	<u>Apply</u> materials, techniques and processes, in relation to creative intentions.	<u>Apply</u> materials, techniques and processes, in relation to creative intentions.	<u>Apply</u> materials, techniques and processes, in relation to creative intentions.
						<u>Select and apply appropriate</u> materials, techniques and processes, exploring creative intentions.	<u>Select and apply appropriate</u> materials, techniques and processes, exploring creative intentions.	<u>Select and apply appropriate</u> materials, techniques and processes, exploring creative intentions.	<u>Select and apply appropriate</u> materials, techniques and processes, exploring creative intentions.	<u>Select and apply appropriate</u> materials, techniques and processes, exploring creative intentions.	<u>Select and apply appropriate</u> materials, techniques and processes, exploring creative intentions.	<u>Select and apply appropriate</u> materials, techniques and processes, exploring creative intentions.	<u>Select and apply appropriate</u> materials, techniques and processes, exploring creative intentions.	<u>Select and apply appropriate</u> materials, techniques and processes, exploring creative intentions.	<u>Select and apply appropriate</u> materials, techniques and processes, exploring creative intentions.	
						<u>Select and apply diverse</u> materials, techniques and processes, analysing how they support creative intentions.	<u>Select and apply diverse</u> materials, techniques and processes, analysing how they support creative intentions.	<u>Select and apply diverse</u> materials, techniques and processes, analysing how they support creative intentions.	<u>Select and apply diverse</u> materials, techniques and processes, analysing how they support creative intentions.	<u>Select and apply diverse</u> materials, techniques and processes, analysing how they support creative intentions.	<u>Select and apply diverse</u> materials, techniques and processes, analysing how they support creative intentions.	<u>Select and apply diverse</u> materials, techniques and processes, analysing how they support creative intentions.	<u>Select and apply diverse</u> materials, techniques and processes, analysing how they support creative intentions.	<u>Select and apply diverse</u> materials, techniques and processes, analysing how they support creative intentions.	<u>Select and apply diverse</u> materials, techniques and processes, analysing how they support creative intentions.	
						<u>Select and apply diverse materials, techniques and processes, evaluating</u> how they enhance and support creative intentions.	<u>Select and apply diverse materials, techniques and processes, evaluating</u> how they enhance and support creative intentions.	<u>Select and apply diverse materials, techniques and processes, evaluating</u> how they enhance and support creative intentions.	<u>Select and apply diverse materials, techniques and processes, evaluating</u> how they enhance and support creative intentions.	<u>Select and apply diverse materials, techniques and processes, evaluating</u> how they enhance and support creative intentions.	<u>Select and apply diverse materials, techniques and processes, evaluating</u> how they enhance and support creative intentions.	<u>Select and apply diverse materials, techniques and processes, evaluating</u> how they enhance and support creative intentions.	<u>Select and apply diverse materials, techniques and processes, evaluating</u> how they enhance and support creative intentions.	<u>Select and apply diverse materials, techniques and processes, evaluating</u> how they enhance and support creative intentions.	<u>Select and apply diverse materials, techniques and processes, evaluating</u> how they enhance and support creative intentions.	
Required Skills	Analysis skills, extended writing	Research skills, <u>Use of ICT</u>	Research skills, <u>Use of ICT</u>	<u>Research skills, Use of ICT</u> , analysis skills, extended writing	<u>Research skills, Use of ICT</u> , analysis skills, extended writing	Research <u>skills, Use of ICT</u> , analysis skills, extended writing, compare and contrast	<u>Compositional techniques</u> . Exploring line, tone, form, shape, pattern, colour, texture.	<u>Compositional techniques</u> . Exploring line, tone, form, shape, pattern, colour, texture.	<u>Use of ICT, analysis skills</u> , extended writing	Use of Design studio tools and equipment. Cutting, Joining, Shaping techniques, Development skills	Use of Design studio tools and equipment. Cutting, Joining, Shaping techniques, Development skills	Use of Design studio tools and equipment. Cutting, Joining, Shaping techniques, Development skills	Analysis Skills, extended writing, Evaluation skills, Decision making, <u>Health and safety</u>	<u>Use of ICT, CAD skills</u>	<u>Use of ICT, CAD skills</u>	Use of Design studio tools and equipment. Cutting, Joining, Shaping techniques, Development skills
Skills & content revisited	Analysis skills, extended writing	Research skills, Use of ICT	Research skills, Use of ICT	Research skills, Use of ICT, analysis skills, extended writing	Research skills, Use of ICT, analysis skills, extended writing	Research skills, Use of ICT, analysis skills, extended writing, compare and contrast	<u>Compositional techniques</u> . Exploring line, tone, form, shape, pattern, colour, texture.	<u>Compositional techniques</u> . Exploring line, tone, form, shape, pattern, colour, texture.	Use of ICT, analysis skills, extended writing	Use of Design studio tools and equipment. Cutting, Joining, Shaping techniques, Development skills	Use of Design studio tools and equipment. Cutting, Joining, Shaping techniques, Development skills	Use of Design studio tools and equipment. Cutting, Joining, Shaping techniques, Development skills	Analysis Skills, extended writing, Evaluation skills, Decision making, Health and safety	Use of ICT, CAD skills	Use of ICT, CAD skills	Use of Design studio tools and equipment. Cutting, Joining, Shaping techniques, Development skills
Assessment	Open & Directed questions. Department booklet assessment and feedback. BTEC summative assessment.	Open & Directed questions. Department booklet assessment and feedback. BTEC summative assessment.	Open & Directed questions. Department booklet assessment and feedback. BTEC summative assessment.	Open & Directed questions. Department booklet assessment and feedback. BTEC summative assessment.	Open & Directed questions. Department booklet assessment and feedback. BTEC summative assessment.	Open & Directed questions. Department booklet assessment and feedback. BTEC summative assessment.	Open & Directed questions. Department booklet assessment and feedback. BTEC summative assessment.	Open & Directed questions. Department booklet assessment and feedback. BTEC summative assessment.	Open & Directed questions. Department booklet assessment and feedback. BTEC summative assessment.	Open & Directed questions. Department booklet assessment and feedback. BTEC summative assessment.	Open & Directed questions. Department booklet assessment and feedback. BTEC summative assessment.	Open & Directed questions. Department booklet assessment and feedback. BTEC summative assessment.	Open & Directed questions. Department booklet assessment and feedback. BTEC summative assessment.	Open & Directed questions. Department booklet assessment and feedback. BTEC summative assessment.	Open & Directed questions. Department booklet assessment and feedback. BTEC summative assessment.	Open & Directed questions. Department booklet assessment and feedback. BTEC summative assessment.
Literacy	Analysis, Compare, Contrast, Target Audience, Client	Mood-board, design movements, Style, Aesthetics	Mood-board, design movements, Style, Aesthetics	Product Analysis, Environmental, sustainability, Target Audience	Environmental, sustainability, global slavery, culture, society	Design brief, Specification, Target audience, Environmental	Form, Texture, Tone, Contour, Ergonomics, Anthroplarmetrics, Target Audience, Client	Form, Texture, Tone, Contour, Ergonomics, Anthoplarmetrics, Target Audience, Client	Design brief, Specification, Target audience	Cutting, Shaping, removing, Waste, Technique, Equipment, Tools, Materials, Maquettes, Modelling, Experimentation, CAD	Cutting, Shaping, removing, Waste, Technique, Equipment, Tools, Materials, Maquettes, Modelling, Experimentation, CAD	Cutting, Shaping, removing, Waste, Technique, Equipment, Tools, Materials, Maquettes, Modelling, Experimentation, CAD	Health and safety, Storage, Materials	<u>Sanit Chart</u> , CAD, Target audience, design brief	CAD, Target audience, design brief	Cutting, Shaping, removing, Waste, Technique, Equipment, Tools, Materials, Maquettes, Modelling, Experimentation, CAD
Numeracy	N/A	N/A	N/A	N/A	N/A	N/A	<u>Marking out and measuring</u>	<u>Marking out and measuring</u>	<u>Marking out and measuring</u>	<u>Marking out and measuring</u>	<u>Marking out and measuring</u>	<u>Marking out and measuring</u>	N/A	<u>Calculating Timeline</u>	<u>Marking out and measuring</u>	<u>Marking out and measuring</u>
Resources	Pencil crayons, Pencils, Ruler, Eraser	ICT	ICT	Pencil crayons, Pencils, Ruler, Eraser	Pencil crayons, Pencils, Ruler, Eraser	Pencil crayons, Pencils, Ruler, Eraser	Pencil crayons, Pen, Pencils, Ruler, Eraser	Pencil crayons, Pen, Pencils, Ruler, Eraser	Pencil crayons, Pencils, Ruler, Eraser	Modelling Materials, Design Studio tools & equipment	Modelling Materials, Design Studio tools & equipment	Modelling Materials, Design Studio tools & equipment	Pencil crayons, Pencils, Ruler, Eraser	ICT	ICT	Modelling Materials, Design Studio tools & equipment

Aims and background of the Project:

- To explore 2D visual language and working practices
- To investigate how artists, craftspeople and designers communicate in 2D
- To communicate ideas using 2D knowledge and skills in response to a brief.

[illegible]

Aims and background of the Project:

- [illegible]

Design & Technology Curriculum Aims

Cultural Capital & Cross curricular links

No.	Cross Curricular Link	Examples
1	Literacy and Oracy	Reading for understanding, reading aloud, reading for pleasure, rich discussions. Writing in a range of styles and for different audiences.
2	Numeracy	Mathematical knowledge and skills. The ability to understand and work with numbers.
3	RSE **	Health and well-being, online safety, healthy relationships, sex education
4	SMSC /CITIZENSHIP*	British Values: democracy, individual liberty, mutual respect and tolerance, rule of law. Citizenship: as an individual, in the family, in the local community, on a national and international level. Political, cultural and environmental awareness and understanding. Opportunities outside of the classroom. Visits, visiting speakers, school trips, DofE, workshops.
5	Digital Competency	Word processing, programming, CAD/CAM , internet use, emails, digital presentations, spreadsheets, software and applications.
6	Careers	The world of work, career pathways, Unifrog. Linking curriculum learning to careers (GATSBY Benchmark 4)
7	Enterprise	Leadership, teamwork, resilience, presentation skills, time management, creative and innovative thinking, problem solving
8	Economic Understanding	Money and financial understanding
9	Appreciation of Sports and the arts	Opportunities for participation both in school and off site. Extra-curricular clubs.