

KS4 CURRICULUM: Graphics (YEAR 11)

Curriculum Aim: Learning about Design and Technology (Graphics) will encourage learners to develop design and thinking skills that open up a world of possibility, giving them the tools to create the future. This specification will excite and engage learners with contemporary topics covering the breadth of this dynamic and evolving subject. It will generate empathetic learners who have the ability to confidently critique products, situations and society in every walk of their lives now and in the future.

Link to Prior Learning: The subject continues to build on the principles of iterative design, and develops theory knowledge from Year 10

Overview

In Graphics you will learn about:

- Core design and technology principles with some emphasis on maths and science skills
- In-depth knowledge of how different materials and manufacturing processes are used to design and make products.
- Non-examination Assessment - Design and manufacture a product which reflects the contextual challenge and meets the needs of chosen stakeholders

	Focus / Topic	Knowledge & Skills	Assessments
Autumn 1	Contextual challenge: Design Thinking	<ul style="list-style-type: none"> ● Create: Design Thinking (A02) -24 marks <ul style="list-style-type: none"> ○ Generation of initial ideas ○ Design developments ○ Development of final design solution(s) ○ Critical thinking ● Create: Design Communication (A02) -16 marks <ul style="list-style-type: none"> ○ Quality of chronological progression ○ Quality of initial ideas ○ Quality of design developments ○ Quality of final design solution(s) ● Scales of production (7.5) ● New and emerging technologies, and their have an impact on production techniques and systems ● How can cost and availability of specific materials and/or system components affect their selection when designing? (Including calculations) (8.1) 	<ul style="list-style-type: none"> ● Maths formative assessment homework on Google classroom
Autumn 2		<ul style="list-style-type: none"> ● Create: Design Thinking (A02) -24 marks <ul style="list-style-type: none"> ○ Generation of initial ideas ○ Design developments ○ Development of final design solution(s) ○ Critical thinking ● Create: Design Communication (A02) -16 marks <ul style="list-style-type: none"> ○ Quality of chronological progression ○ Quality of initial ideas ○ Quality of design developments ○ Quality of final design solution(s) ● How can design solutions be communicated to demonstrate their suitability to a third party? 	<ul style="list-style-type: none"> ● Maths formative assessment homework on Google classroom ● Initial ideas deadline: 14th October 2022 ● Development deadline: 18th November 2022 ● Design Proposal deadline: 25th November 2022 <p><u>NEA Deadlines</u> Create DT (A02) 2.2 to 2.4 Create DC (A03) 3.1 to 3.4 15/12/23</p>

		<p>(4.1)</p> <ul style="list-style-type: none"> ● What are the main categories of materials available to designers when developing design solutions? (5.1) ● What factors are important to consider when selecting appropriate materials and/or system components when designing (5.2) ● Why is it important to understand the sources or origins of materials and/or system components (5.3) ● Why is it important to know the different available forms of specific materials and/or systems components (5.4) ● What gives a product structural integrity (6.1) 	
Spring 1	Contextual challenge: Create	<ul style="list-style-type: none"> ● Create: Final Prototypes (A02) -20 marks <ul style="list-style-type: none"> ○ Quality of planning for making the final prototype(s) ○ Quality of final prototype(s) ○ Use of specialist techniques and processes ○ Use of specialist tools and equipment ○ Viability of the final prototype(s) ● Materials and processes be used to make iterative models (7.1) ● Manipulating and joining materials in different ways in a workshop environment when making final prototypes (7.2) ● Developments in Design and Technology, and their influence design decisions and practice?(2.2) ● Wider implications that can have an influence on the processes of designing and making (3.3) 	<ul style="list-style-type: none"> ● Maths formative assessment test on Google classroom <p>NEA Deadlines: Create FP (A04) 4.1 to 4.5 9/2/24</p>
Spring 2	Contextual challenge Evaluate	<ul style="list-style-type: none"> ● Evaluate - (A03) - 20 marks <ul style="list-style-type: none"> ○ Analysis and evaluation of primary and/or secondary sources ○ Ongoing evaluation to manage design progression ○ Feasibility of the design solution ○ Evaluation of the final prototype(s) ● How can materials and products be finished for different purposes? (6.2) ● Introducing controlled movement to products and systems (6.3) ● Electronic systems and how they provide functionality to products and processes (6.4) 	<ul style="list-style-type: none"> ● Maths formative assessment homework on Google classroom <p>NEA Deadlines Evaluate (A05) 5.1 to 5.4 1/3/24</p> <p>Responding to feedback and final submission 2 weeks later 15/3/24</p>
Summer 1	Exam	Revision Technique	<ul style="list-style-type: none"> ● Final GCSE Exam (May/June 2024)
Summer 2	Study Leave	Study Leave	

Further Information

- Design and Technology – Component 1: Written paper (100 Marks – 2 Hours) (50% of GCSE 9-1)
- Iterative Design Challenge – Component 2: Non-exam Assessment (100 Marks - Approx. 40 hours) (50% of GCSE)
- Link to Specification: [OCR GCSE \(9-1\) Design and Technology J310 Specification](#)