

KS4 CURRICULUM: Graphics (YEAR

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 builds on the KS3 curriculum where they will have been taught to understand and apply the principles of iterative design, and the format of how to present an NEA project

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.

	Focus / Topic	Knowledge & Skills	Assessments
Autumn 1	Core Design and Technology Content <ul style="list-style-type: none"> • Mini contextual challenge: Film promotion project 	Students will develop knowledge and skills exploring: <ul style="list-style-type: none"> • Exploring contexts to inform decisions and outcomes for a design solution (1.1) • Considering why usability is important when designing prototypes (1.2) • Opportunities and constraints that influence design and making requirement (2.1) • How can design solutions be communicated to demonstrate their suitability to a third party? (4.1) • Using digital design tools when exploring and developing design ideas (7.4) 	<ul style="list-style-type: none"> • Half termly mock-exam • Maths in Technology Quiz on Google Classroom
Autumn 2		Students will develop knowledge and skills exploring: <ul style="list-style-type: none"> • Developments in Design and Technology, and their influence design decisions and practice?(2.2) • The impacts of new and emerging technologies when developing design solutions (3.1) • Choosing appropriate sources of energy to make products and power systems (3.2) • Using digital design tools when exploring and developing design ideas (7.4) 	
Spring 1	Specialist Material Categories (Graphics) <ul style="list-style-type: none"> • Mini Contextual challenge: Manufacture (Fast Food Project) 	Students will develop knowledge and skills exploring <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) • How can design solutions be communicated to demonstrate their suitability to a third party? (4.1) • Using digital design tools when exploring and developing design ideas (7.4) 	<ul style="list-style-type: none"> • Half termly mock • Maths in Technology Quiz on Google Classroom

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Spring 2		<p>Students will develop knowledge and skills exploring:</p> <ul style="list-style-type: none"> • What gives a product structural integrity (6.1) • How can materials and products be finished for different purposes? (6.2) 	<ul style="list-style-type: none"> • Half termly mock-exam • Maths in Technology Quiz on Google
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Summer 1		<p>Students will develop knowledge and skills exploring:</p> <ul style="list-style-type: none"> • Wider implications that can have an influence on the processes of designing and making (3.3) • How do designers source information and thinking when problem solving (4.2) • 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) • 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) • Quality controls for accuracy when making prototypes and products (7.3) 	<ul style="list-style-type: none"> • Half termly mock-exam • Maths in Technology Quiz on Google Classroom
Summer 2	<p>Non-exam assessment</p> <ul style="list-style-type: none"> • (Briefs released by the exam board on June 1st) 	<p>Students will develop knowledge and skills exploring:</p> <ul style="list-style-type: none"> • NEA Strand 1 – Explore (AO1) <ul style="list-style-type: none"> ○ Investigations of the context ○ Design brief ○ Investigations of user and stakeholder needs and wants and the outlining of stakeholder requirements (nontechnical specification) ○ Investigations of existing products and design practices ○ Technical specification • NEA Strand 5 – Evaluate (AO3) <ul style="list-style-type: none"> ○ Analysis and evaluation of primary and/or secondary sources 	<ul style="list-style-type: none"> • End of Year exams <p>NEA Deadlines: Explore (AO1) 1.1 to 1.6 Create DT (A02) 2.1 19/7/25</p>

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)

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- Link to Specification: [OCR GCSE \(9-1\) Design and Technology J310 Specification](#)