



CURRICULUM CORE KNOWLEDGE PLAN

SUBJECT: Design Technology

YEAR GROUP: 11

DATE: 2024/2025

Term and unit	Core knowledge	Core skills	Revisiting prior knowledge	Links to Walney Ways & Employability skills/Careers
Contextual challenge investigation Autumn Term	Communicating design ideas Explore and develop their ideas, testing, critically analysing and evaluating their work in order to inform and refine their design decisions thus achieving improved outcomes The importance of testing and evaluating ideas. Continuously reviewing and critically analysing work as it develops to improve the final design outcome. Design strategies Investigate factors, such as environmental, social and economic challenges, in order to identify opportunities and constraints that influence the processes of designing and making Designing should not take place in isolation but there are wider needs to be considered. Ergonomics - how the design of a product interacts with the user. Anthropometrics - how anthropometric data can be used to make decisions on the final sizes of a product. Environmental - consider the use of materials and the impact of these materials on the environment. Social - the need to consider the views of others. Economic - be aware of the costs of materials and scales of production.	AO1 and Ao2 Contextual challenge investigation Preliminary ideas Evaluation and design movement research Primary research Existing product Analysis Develop and design brief	Product Analysis to inform and develop design ideas (implemented throughout Ks3 and year 10) Testing and evaluating design ideas (implemented throughout KS3 and year 10 during practical and design lessons and end of unit assessments) Environmental, social and economic challenges (implemented in year 10 and year 7)	Walney Ways Wider thinking Self motivated Communicative Aspirational Curious Resilient Employability. Customer/ client service and commercial business awareness. Organisation, planning and timemanagement. Self awareness Problem solving



	Explore and investigate existing products, situations before deciding upon whether there is a real need for a product. Primary research data: collecting data and using this to explore and aid further work. Secondary research data: collecting existing data and using this to explore and aid further work. Investigate and analyse the work of past and present professionals and companies in the area of design and technology in order to help inform their own ideas. • Investigate and analyse the work of past and present designers and companies, including: engineering design fashion and textiles product design Company Apple Laura Ashley, Airbus, Designers James Dyson, Shigeru Miyamoto, Stella McCartney, Orla Kiely, Bethan Gray Writing a design brief and specifications Investigating challenges Demonstrate an ability to write a design brief and specifications from their own and others' considerations of human needs, wants and interests Write design briefs for specific needs, wants or interests. Write specifications that are derived from their own investigations, the needs and wants of clients. Identifying and understanding user needs identify the needs and wants of the end user. Suggest possible design problems from the contexts.	Ao1 Specification	Pop art bag for life, year 8 sustainable speaker lesson, year 9 sustainable fashion) Anthropometrics and ergonomics covered in year 10. Environmental factors- covered in year 7 Pop art bag for life, year 8 sustainable speaker lesson and year 9 sustainable fashion Primary research- covered in year 10 NEA and KS3 research lessons. . Specification- implemented throughout KS3	
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Autumn Term 2	Use different design strategies, such as collaboration, user-centred design and systems thinking, to generate initial ideas and avoid design fixation Use of design strategies such as: Collaboration – Discover, Define, Develop, Deliver User-centred design- Contexts, Requirements, Design Solutions, Evaluate, and Iteration. Systems thinking. (g) Develop, communicate, record and justify design ideas, applying suitable techniques Formal and informal 2D and 3D drawing. • System and schematic diagrams. • Annotated sketches. • Exploded diagrams. • Fashion illustrations or fashion drawings	AO2 Design development	Design strategies implemented throughout KS3- Sketching, one and two point perspective, orthographic drawing, sketch up and 2D design. Annotated sketches- implemented throughout KS3 and year 10.	Walney ways Problem solving Self motivated Wider thinking Communicative Employability. Communication Customer/client service and commercial business awareness. Organisation, planning and time management Problem solving Entrepreneurial skills
Spring Term 1	Models Presentations. Written notes. Flow diagrams Working drawings. Schedules. Audio and visual recordings	Ao2 Cutting list Manufacturing specification Modelling	Modelling- impletmented throughout KS3 in the Spring and summer term.	Walney Ways Aspirational Communicative Self motivated Employability. Communication



	Mathematical modelling. Computer-based tools.	Cad Development Final design and orthographic projection Manufacturing evidence Final product	Production plans- Implemented in all practical lessons in KS3 across both textiles and Design Technology. Visual recordings at the end of projects and year 10 practical lessons.	Customer/client service and commercial business awareness. Organisation, planning and time management Problem solving Entrepreneurial skills
Spring Term 2	AO2 Making decisions Make informed and reasoned decisions, respond to feedback about their own prototypes (and existing products and systems) to identify the potential for further development and suggest how modifications could be made Respond thoughtfully and make informed judgements when evaluating their own prototype. Act on the views of others. Make suggestions for improvements of their own prototype and how these modifications could be made. Respond to feedback from others or clients and suggest improvements/modifications of their prototype	AO2 Does the product meet the Specification? Testing Evaluation Exam Revision	Self assessment and peer assessment- KS3 and year 10. Modifications and improvements through evaluations at KS3 and year 10.	Walney Ways Aspirational Communicative Self motivated Wider thinking Employability. Communication Customer/client service and commercial business awareness. Organisation, planning and time management Problem solving