Subject Year Curriculum Overview-Year 9

Students will study two areas from below, each for half a term (cycle 1) and then for a term (cycle 2).

	DT		Engineering			Food		Textiles/Graphics	
Rotations/students opt for 2 areas.	**Learning Cycle 1**	**Learning Cycle 2**	**Learning Cycle 1**	**Learning Cycle 2**	**Learning Cycle 3**	**Learning Cycle 1**	**Learning Cycle 2**	**Learning Cycle 1**	**Learning Cycle 2**
Topic	Iterative Design	Specialist technical principles	Introduction to Engineering- Materials	Common Tools and Equipment used in Engineering	Demonstrating Independent working through practical work ~ Recalling and Applying knowledge of workshop techniques and processes.	Cooking & Nutrition	Cooking & Nutrition	Decorative processes Artist Research and response. Textiles – construction of a zipped case	Experimentation/ Developing ideas Textiles - Development of mark making and simple construction based on personal response to artist research.
Critical Prior Knowledge	Students will have developed some basic understanding of the tools and equipment used in the workshop and how to work safely. They will have basic drawing skills but both have been impacted during covid and what we could offer in this area. Identify the basic tools and uses such as a coping saw and tenon saw.	Students will have developed designing skills and knowledge of influential designers and art movements. They will understand the design process and have developed modelling processes through an iterative approach to design.	Basic Knowledge of Materials gained from previous projects in Yr 7 & 8	Through practical use of tools, equipment and processes that students have experienced during years 7&8	From the previous, two learning cycles. Students are to use this knowledge to enhance their practical and problem solving abilities.	The Eatwell Guide The name and function of key nutrients The role of carbohydrates in the diet How to work safely, hygienically, and efficiently in the kitchen Understand what is meant by the creaming or all-in-one cake making methods Know to use cook food using different methods: boiling and baking		Basic understanding of a range of decorative and construction processes. To understand what a decorative process is and name an example such as Tie-dye. (Graphics) To understand what a Graphic product is.	How to use an Artist/designers work to inspire your own. Decorative techniques learnt in the previous cycle. Presentation of work. Textiles – basic decorative processes

Overall Intent (Big ideas and key concepts)	To understand the term iterative design and how this process is used by designers to develop products and meet the needs of a brief/client.	All students should develop an in-depth knowledge and understanding of the following specialist technical principles: • selection of materials or components •sources and origins • using and working with materials • scales of production • specialist techniques and process	To experience using a range of different engineering materials	To be able use a wide range of engineering tools and equipment and select the correct processes	Understanding Engineering drawings. Being able to produce a production plan to allow them to make a product. To work accurately and precisely to a set tolerance.	Deepen knowledge of nutrition with a particular focus on protein Deepen knowledge of food provenance, food choice and food science Extend knowledge of a range of cooking techniques instilling a love of cooking. Learn how to carry out a practical investigation scientifically.	Deepen knowledge of nutrition with a particular focus on micronutrients, nutritional needs for different groups of people, nutritional analysis Deepen knowledge of food safety, food provenance and food choice	How to use an Artist/designers work to inspire your own. Learn a range of decorative techniques. How to present work in books with concise annotation with evaluative comments.	To work more independently as students move on to individual projects/ideas. Further practice and experimentation of decorative techniques. Learn to experiment and develop ideas into a final piece.
Essential Knowledge milestones (What students must master)	To understand that iterative design is a circular not linear design process, that research and samples/models will impact on design ideas and these will change. To use the work of past designers and art movements to inspire their own work, and to meet the needs of a brief and client. To understand the design process and develop prototypes	Students should be able to select materials and components considering the factors listed below. Functionality: application of use, ease of working. Aesthetics: surface finish, texture and colour. Environmental factors: recyclable or reused materials. Availability: ease of sourcing and purchase.	To understand materials used in engineering. To be able to identify the different materials used in Engineering.	To be able to correctly name the tools used in Engineering. To understand correct use of each tool. To understand any H&S requirements when using the tools and Equipment.	To be able to interpret engineering drawings. To then use this knowledge to select the correct engineering processes. To be able to complete practical work independently. To produce highly	Protein and protein alternatives Types of fish and the importance of fish in the diet Sensory evaluation: definition and methods How to carry out experimental work successfully by investigating the effect different types of fat have on the	Food Waste Food labelling One function & one source of the micronutrients, vitamins A, B, C, D and minerals calcium, iron, and sodium British and International Cuisine Food safety: bacteria Learn how to carry out a range of practical techniques:	Analyse artists work in order to make a personal response and demonstrate understanding of processes. Use research and critically analyse it, look at how and why it was produced and produce own samples in the style of and/or using the same processes and techniques. This will be different for each student but would expect some embroidery/felting/c	Be able to use an artist/designers work as a starting point for further development and experimentation of ideas. Be able to present work in a clear and creative way with use of independent evaluative comments. Link sections of work together through evaluative comments and stating future intentions.

	to show ideas and concepts. To demonstrate safe and effective working with balsa wood/card and CAD where possible when prototyping.	Students should understand where would come from and be able to explain the difference between hard/soft and manufactured boards. Students should be able to work safely with a variety of tools/techniques and processes. Students should understand the different scales of production and name them.			accurate products to a given tolerance.	quality of shortcrust pastry. Understand the term shortening. Learn how to carry out a range of practical techniques: roux sauce, reduction sauce/layering, shaping & coating, shortcrust pastry and lining a flan dish	how to use and shape filo pastry, setting, the use of bicarbonate of soda, the use of yeast as a biological raising agent in pizza, reduction sauce, Scientific investigation into the use of raising agents in scones	onstruction/printing or dying. (Graphics) Drawing with graphic pens. Understanding composition. Tracing. Collage.	
Cultural Capital	Memphis/Bauhaus/ Modernism art movements. Video: Chairs from C1800, excellent video, scan through it, super examples from very famous designers, useful for inspiration	Students should investigate, analyse and evaluate the work of past and present designers and companies to inform their own designing. Charles Rennie Macintosh/ Louis Comfort Tiffany / Philippe Starck /William Morris. Students should investigate the work of a minimum of two of the following companies: • Alessi • Apple • Braun • Dyson • Gap • Primark • Under Armour • Zara.					Dishes from around the world.	Work of Elin Thomas & Laura Katherine McMillan (Textiles) Work of Keith Haring(Graphics)	Work of Henri Matisse and Kate Moross(Graphics) Work of Gwen Hedley (Textiles)

Mode of Retrieval	**Technical knowledge-** (artists anlaysis) written task on chosen art movement. **Practical-**Balsa wood/card model (sample and critical analysis) **Evaluation-**written task (Evaluation-next steps)	**Technical knowledge-** Written description of production of a finger joint. **Practical-**Accurate, and safely produced box with appropriate tools selected and used with skill. **Evaluation-**written task. Refine ideas against specification/ research and/or show intentions				**Technical knowledge-** Define keywords and processes. **Practical-** Formative assessment of practical tasks. **Evaluation-** Sensory evaluation using the hedonic rating test and profiling	**Technical knowledge-** Be able to name one function & one source of Vitamins and minerals. **Practical-** Formative assessment of practical tasks and summative practical assessment **Evaluation-** Sensory evaluation using the hedonic rating test and profiling	**Technical knowledge-** Develop ideas through investigations, demonstrating critical understanding of sources. (artists analysis) **Practical-**Refine work by exploring ideas, selecting and experimenting with appropriate media, materials, techniques and processes. (sample and critical analysis) **Evaluation-**skilfully record ideas, observations and insights through drawing and annotation showing intention. (Evaluation-next steps)	
ECC Student Characteristics			Resilience, Integrity, Reflective Learners, Creativity H&S = Healthy and safe R = Resilient learners including activities beyond the classroom Car = Careers and aspirations R&B = Respect and good behaviours CCS = Confidence and communication skills (including literacy, numeracy, extended writing, reading and listening CED = Mutual tolerance and awareness of cultures, equality and diversity			Integrity (Working appropriately in the kitchen) resilient individuals, creativity, power of education, embrace challenge, reflective learners			
Connection to future learning (When is this	On the second rotation students will develop design skills and knowledge of using art movements and designers as inspiration for their	The skills/techniques/processes and materials knowledge will be revisited as students start GCSE DT (if opted for)	All knowledge gained will be used for the longer rotation in year 9 where more complex engineering products will be produced. This knowledge will also give students a head start in Engineering and Design & Technology should they choose the option in Year 10			GCSE Food preparation and nutrition course and cycle 2.	GCSE Food preparation and nutrition course.	On second rotation students will revisit all objectives to further develop knowledge and understanding in preparation for GCSE	Students should now have a sound understanding of a project template enabling students to work more independently in Year 10

developed / revisited)?	work. Evaluative and analysis skills are revisited and built upon in preparation for GCSE NEA tasks.					and independent NEA tasks.	How to develop ideas based on personal response to artist research.