Year 8 Overview 2025-26 – *D&T*

Date	Wk	Week	Units Studied (12 weeks - 6 double lessons) & Learning Outcomes	Key Concepts & Assessment
Each unit taught in a rotation 3 units contained in 6 double lessons, once a fortnight over the year. Each unit contains a SoL to accompany the lesson by lesson Powerpoint with teachers notes and resources that will be required.				
Tues 2-Sep$	A	1	Polymers	*Parent and Carers month/Black History month* *3/9 World afro day* *23/9 International day of sign languages* *10/10 world mental health day* *5/10 world teachers day* *6/10 World cerebal palsy day*
8-Sep	B	2		
15-Sep*	A	3		
22-Sep	B	4		
29-Sep	A	5		
6-Oct	B	6		
13-Oct	A	7		
20-Oct	B	8		
Half-Term				
3-Nov	A	9		*Mens health awareness month/disability confident month* *1/11 Diwali* *12/11 Remembrance Sunday* *13/11-19/11 Transgender awareness week* *14/11 World Diabetes Day* *1/12 World AIDS day* *25/12 Christmas Day*
10-Nov	B	ST1		
17-Nov	A	ST1		
24-Nov	B	12		
1-Dec	A	13	Mixed Materials (Electronics, Polymers and Textiles)	
8-Dec	B	14		
15-Dec	A	15		
Christmas Holiday				
5-Jan	B	16		*LGBT+ History month* *27/1 Holocaust memorial day* *1/2 World Hijab Day* *6/2-12/2 Children's mental health week.* *7/2 Safer internet day* *10/2 Chinese New Year*
12-Jan	A	17		
19-Jan	B	18		
26-Jan	A	19		
2-Feb	B	20		
9-Feb	A	21		
Half-Term				
23-Feb	B	22		Women's history month *Ramadhan begins 1/3* *21/3 World Down Syndrome day* *31/3 Transgender day of visibility*
2-Mar	A	23		
9-Mar	B	24		
16-Mar	A	25		
23-Mar	B	ST2		
30-Mar*	A	ST2		
Easter Holiday				
20-Apr	B	28	Food Preparation and Nutrition	*Good Friday 18/4 Easter Sunday 20/4* *Autism and stress awareness month.* *25/4 World Malaria Day* *26/4 Lesbian visibility day* *UK national walking month.* *1/5-7/5 Deaf awareness week* *23/05 Vesak*
27-Apr	A	29		
4-May*	B	30		
11-May	A	31		
18-May	B	32		
Half-Term				
1-Jun	A	33		*LGBTQ+ pride month.* *Gypsy, Roma and Traveller history month.* *12/6 world day against child labour* *18/6 autistic pride day* *20/6 World refugee day*
9-Jun	B	34		
16-Jun	A	35		
23-Jun	B	36		
30-Jun	A	37		
7-Jul	B	38		
14-Jul	A	39		

Project

6 x 2hr lessons

Food Preparation and Nutrition – Food Safety

Prior	Current	Links to future tasks
Lesson 1 - Understanding where bacteria comes from. Principles of Food Safety and safe food storage.		
Basic use of the room.	Introduce High risk foods are and **Bacteria**, watch the animation. Where do bacteria come from? and look at germometer, this is a food industry concept not just in food lessons – link to GCSE curriculum. Complete work on Food poisoning bacteria.	Knowledge linked to any practical or handling of high risk foods. (Fish or fish products, meat or meat products, dairy or dairy products, eggs or egg products and cooked rice.
Lesson 2 – Cheese and Herb Scones Practical		
Recall use of equipment and room with a promotion of independence. Recall tidying and washing up procedures. Recall from year 7 - Accurate measuring. Use of oven. Use of rubbing in method. Dough making skills.	Grating for the first time, using cheese as a high risk food. Emphasis on making a dough that is not too wet.	Bread making (GCSE). Life skills handling of high risk foods. Making pastry dough in year 9 Own choice practical in year 9.
Lesson 3 – Risotto Practical		
Knowledge of working with high risk foods. Chopping into uniform pieces.	Use of hob for the first time. Cooking rice, high risk food when cooked – must be cooled and stored quickly to prevent bacterial growth. Recall safe food storage, use of high risk foods, use of hob, simmering techniques	Life skills handling of high risk foods. Using and storing high risk foods (GCSE).
Lesson 4 – Bolognese Sauce Practical		
Use of hob. Knowledge of working with high risk foods.	First practical to use raw meat so Food Safety this needs to be emphasised throughout. Judge if the meat is cooked correctly. Leave tomato based sauce to simmer to develop flavours. How to store to consume later.	Using and storing high risk foods (GCSE). Tomato based sauce (GCSE). Life skills linked with making meat based sauces and boiling and draining. Own choice practical in year 9.
Lesson 5 – Macaroni Cheese Practical		
Bridge and claw grip. Knowledge of working with high risk foods. Grating. Boiling and draining a pan.	Emphasis on the All-in-One starch sauce method and explaining gelatinisation. Use the **animation from digital book** to explain how the sauce thickens. Presentation techniques with thinly sliced tomato.	Using and storing high risk foods (GCSE). Starch based sauce (GCSE). Life skills linked with high risk foods and boiling and draining. Presentation of food products. Own choice practical in year 9.
Lesson 6 – Potato Topped Beef Practical		
Knowledge of working with high risk foods. Peeling and chopping. Bridge and claw grip. Use of the oven. Grating. Boiling and draining a pan.	How to mash and how to layer the dish. Work within tight time constraints.	Progress to working looking at foods from different cultures and countries. Selecting own dishes to present to a customer and continue to develop GCSE preparation skills linked with the GCSE curriculum.

Good
With help, identify important temperatures to keep food safe. Dough formed with some uniformity and accuracy. Products a little undercooked or a little overcooked. Safe and hygienic working practice has been followed. Vegetables chopped with some uniformity and accuracy. Rice is a little overcooked. Use a masher, kettle, pan and other equipment safely. Work with a high risk food correctly. Make a finished product. Use a sharp knife to slice with, some with uniformity and accuracy. Make a tomato and starch based sauce.

Better
Be able to identify important temperatures to keep food. Dough formed with uniformity and accuracy, dough has been cooked correctly and handled well. Good quality product is made that is suitable for sale. Chop with uniformity and accuracy. Rice has been cooked correctly and handled well. Judge yourself when meat is cooked correctly and work without much assistance from the teacher. Judge if the pasta is cooked correctly, pasta has been cooked correctly and handled well.

Excellent
Independently identify important temperatures to keep food safe. Dough is accuracy made, shaped and cooked correctly. Safe and hygienic working practice has been followed. A high quality product suitable for sale is produced and you work independently. Dressing is accurately made. Rice has been cooked correctly. Tomato is sliced with uniformity and accuracy. Pasta is cooked correctly, starch based sauce has been cooked well, it's smooth and the correct viscosity.

Key learning outcomes

Recall how to work safely and hygienically in a Food room. How to organise the practical workspace correctly and safely, work with a partner during practical sessions.
Understand what bacteria is, where it comes from and identify safe temperatures for storing food.

Use a grater and other equipment safely. Use a sharp knife to chop accurately into uniform pieces. Use a sharp knife safely and slice the tomato accurately. Mash carefully to remove lumps.

Use raising agents correctly and form and shape a dough. Use the oven safely and use safe and hygienic working practices.

Use the rubbing in method.

Judge if rice, potatoes or pasta are cooked correctly. Cook and drain rice, potatoes or pasta correctly. Use the hob safely and independently.

Make a starch based sauce demonstrating the all in one method. Make sure the meat is brown and cooked properly before adding the other ingredients.

Simmer tomato based sauce to reduce and develop flavours.

Be able to understand how they could improve and develop their skills.

Reflection on learning through assessment of each practical.

Links to GCSE Specification
3.1 Food Preparation skills
Skill 1: General practical skills – Recall from year7.
Skill 2: General knife skills - Recall from year7.
Skill 3: Preparing vegetables – Mash, grate, peel, shape.
Skill 4: Use of the cooker - Using the oven (recall from year7). Using the hob.
Skill 6: Cooking methods - Water based methods using the hob – boiling, simmering. Dry heat and fat based methods using the hob – shallow frying.
Skill 7: Prepare, combine and shape - Demonstrating the technical skill of preventing cross contamination and handling high risk foods correctly.
Skill 8: Sauce making - Emulsion - Make an emulsion sauce such as a salad dressing, demonstrating an understanding of how to stabilise an emulsion. Reduction - Reduction sauce to show how evaporation concentrates flavour. Eg tomato pasta sauce, to show how evaporation concentrates flavour and changes the viscosity of the sauce. Starch Based - Sauce demonstrating starch gelatinisation: all in one. How starch/liquid ratios affect viscosity.
Skill 10: Dough - Recall from year7.
Skill 11: Raising agents - Chemical raising agents - The use of self-raising flour, baking powder.
3.4.1.4 Bacterial contamination - the different sources of bacterial contamination, the main sources and methods of control, the general symptoms of food poisoning.
3.4.2.1 Buying and storing food - Temperature control: freezing: -18°C, chilling: 0 to below 5°C, danger zone: 5 to 63°C, cooking: 75°C, reheating: 75°C, ambient storage, temperature danger zone
3.4.2.2 Preparing, cooking and serving food - Personal hygiene, clean work surfaces, separate raw and cooked foods, appropriate care with high risk foods.

Links to history and culture:
Development of manufacturing/retailing of food.
Favourite family foods.
Use of food/recipes from other countries and cultures.
TV chefs and personalities/ TV shows.

Subject links:
Maths – Measurement, fraction, division, ratios.
Science – Bacterial growth and dangerous levels, starches, function/reactions of ingredients together, use of gas and electricity.
EFL – Healthy eating guidelines.
PE - Healthy eating guidelines.
Geography – sourcing of foods, countries of origin.

Careers that can be discussed:
Chef/Baker/Confectioner etc
Dietician/Nutritionist
Farming/Food manufacturing
Restaurant ownership and Management
Food retail
Food technologist
Food journalist
Nurse/Nursey nurse
Environmental Health Officer

Key words for their learning (Apart from equipment names):
Carbohydrate
Protein
Starch
Gelatinisation
Bacteria
Microorganism
Food Poisoning Bacteria (Campylobacter, Staphylococcus aureus, Salmonella, E.coli, Listeria)
Ambient
Dormant

How will we know they have learnt it?
After the first rotation-Reflect on levels and EBI advice from last unit looking at progress towards meeting/exceeding targets.
Homework – Research Food Poisioning Bacteria and complete chart using digital book and google classroom.
Q&A during first lesson on Bacterial growth, Food Poisoning and Food Safety.
Assessment on completion.
Constant verbal feedback and EBI's given whilst doing practical activities, record these on their blue sheet.
Practical evidence (recorded through photographs in their book of each practical).
Questioning throughout lessons.
End of year exam.
Understanding/familiarisation at the start of the next unit.
Formal feedback: after third practical and at end of project.

Common misconceptions
Use of incorrect terminology - cooking not food, food tech not FPN etc
Misuse of sieve and colander
Not understanding cooked rice is a high risk food.

Project	**Polymers -** Clock unit			Key learning outcomes
6 x 2hr lessons	**Prior**	**Current**	**Future learning**	Research into a designer, design movement, brand names and retailers to inform and inspire design ideas. Some mention of Equality Diversity and Inclusion whilst doing this. Research homework on the properties and use of acrylic. Recall knowledge of oblique drawing, developing to create a more 3D prototype to suit design brief and design idea. Recall knowledge of rendering to show the material acrylic. Annotation is more in-depth, informed by research. Understand volumes of production (one off, batch & mass) giving real life examples, comparing to level of production for the clocks. What are they producing, how would it be done on a larger scale? Create own set of manufacturing aids (templates) and how they can be used to minimise material wastage. Workspace health and safety. Recalling of name and uses of tools and equipment. Choosing the correct tools and equipment for specific tasks. Develop and refine cutting and shaping skills as well as edge finishing, choosing and using the correct tools and equipment. Use of the strip heater as another manufacturing method to manipulate acrylic. CAD - use of 2D Design (some may recall from masterclass) to add details such as numbers and letters to the clock. Introduce CAM – using guidance to use vinyl cutter for details. Quality control and assurance. Reflection on learning through diary of making. Be able to understand how they could improve and develop their skills. Evaluation.
	Lesson 1 – Analyse a task and research designers, design movement, brand names, retailers.			
	Year 7 - Analysing a task, basic research skills. Drawing and rendering skills for title. Use of Google Classroom.	Introduce design brief. Analyse task and use as foundation for research. Research into design movement etc Homework to research properties and uses of acrylic.	Develop analysis skills in year 9. Look at the work of others at GCSE level.	
	Lesson 2 – Design process – Generate ideas, annotation and rendering.			
	Year 7 – 3D drawing in oblique. Rendering techniques. Basic annotation (materials and tools used). Title rendered in L1. Research on chosen designer.	Generate two creative design ideas based on research (inspired by design movement), sketched in 3D and rendered. Ideas should be more innovative (3D) Annotate ideas in detail, greater understanding for materials and tools used giving justified reasons.	Year 9 – develop design process to include orthographic and isometric. Produce a more complex range of design ideas.	
	Lesson 3 – Manufacturing aids and Manufacture of prototype.			
	H&S in a workshop, recall names and use of tools and equipment safely. Template making.	Make accurate manufacturing aids (template production). Discuss minimising material wastage. Develop their use of the Fret/Coping saws to cut & shape acrylic. Understanding different types of production (one off, batch, mass) Reflect on learning through diary of making.	Year 9 – independent use of machine tools (fret saw). More quality control measures put in place. Advantage of a laser cutter when understanding levels of production. Tessellation to reduce material wastage.	
	Lesson 4 – Continuation of manufacture			
	Recall of H&S in a workshop. Recall names and use of tools and equipment safely. Some may recall knowledge of using pillar drill from Masterclass.	Cutting and shaping of acrylic, focusing on quality control. Recall the use of emery cloth, wire wool and buffing machine for edge finishing techniques. Safe use of specialist glues. Reflect on learning through diary of making.	Year 9 – independent use of machine tools (fret saw). More quality control measures put in place – edge finishing.	
	Lesson 5 – Continuation of manufacture, CAD/CAM production.			
	Recall of H&S in a workshop. Recall names and use of tools and equipment safely. Recall knowledge of 2D Design and vinyl cutter from masterclass. Use of specialist glues	How to use 2D Design to add details to the prototype. Edge finish of acrylic parts. Line bending Acrylic Parts for stand. Use of the vinyl cutter to add detail. Reflect on learning through diary of making.	CAD/CAM production. Use of 2D Design to develop component manufacture. Use of DXF files and import/export, use of laser cutter, tessellation.	
	Lesson 6 -			
	Recall knowledge of 2D Design and vinyl cutter. Year 7 and previous topic(s) (if applicable) – evaluation process.	Complete assembly of prototype. Photograph for evaluation. Discussion on their learning against success criteria. Evaluate practical skills and complete prototype.	Year 9 – Evaluation to show a deeper understanding of the design and manufacture process.	

Good
Collect some information on chosen design movement, basic analysis of information. Some understanding of the polymer acrylic, origins and uses. A range of ideas that have been attempted in 3D with some basic annotation. Basic templates produced to allow production to begin. Some accuracy when cutting & shaping with a coping/fret saw. Some quality control is applied through the manufacturing process including edge finish and assembly. Accurate bending using the Strip Heater. Basic understanding of 2D design and how a vinyl cutter works, can use with guidance. A complete clock which can clearly show time.

Better
Detailed analysis of research gathered to help inform design ideas. Acrylic investigated as a material – origins, uses and properties. Appropriate design ideas sketched accurately in 3D, with annotation that explains how it will be made. Accurate templates produced for all parts of the clock, some Precision when cutting & shaping with a coping/fret saw. Good understanding of 2D design & vinyl cutter and can somewhat independently use. A well-made clock showing a good range of skills.

Excellent
Work Independently on research & detailed analysis of design movement. High quality presentation. Clear understanding of materials and properties. Independent 3D sketching of high quality. Annotation clearly explains the construction details and has been fully informed by research and homework. Precision & Independence when Cutting & Shaping with a Coping/fret Saw including edge finishing. Quality control has been applied throughout the manufacturing process. Independent use of 2D Design and vinyl cutter. A product of high quality showing a range of well executed skills.

Links to GCSE D&T Specification
3.1.1 New and emerging technologies Acrylic is made from a finite resource. Sustainability - taking into consideration the ecological and social footprint of materials.
3.1.6 Materials and their working properties – Polymers Research into acrylic, origins properties and uses.
3.2.8 Specialist techniques and processes – tools, equipment and processes. Variety of machine and hand tools used in the workshop.
3.3 Designing and making principles Health and safety within a workshop.
3.3.3 The work of others Research into design movements and designers to inform design ideas. (EDI)
3.2.6 Stock forms, types and sizes Efficient material use, minimising waste when using templates, thicknesses of acrylic.
3.2.7 Scales of production students to understand they are manufacturing a prototype, what other scales would be used in the industry
4.4.4.1 Section A: Identifying & investigating design possibilities Research into designers to help inform design ideas.
4.4.4.2 Section B: Producing a design brief & specification Analysis a design brief to help inform research
4.4.4.3 Section C: Generating design ideas Students create two 3D design ideas in the style of their chosen designers, rendered and annotated.
4.4.4.5 Section E: Realising design ideas Manufacture of clock prototype.
4.4.4.6 Section F: Analysing & evaluating Analysis of the design brief. Green sheet assessment, evaluation of prototype, good points and improvements.

Links to history and culture:
Designers – recognising who they are and their work.
Design houses and their historic importance.
Brand identity.
Retail market.
Manufacturing industry – levels of production and production methods.
Environment - reducing and minimising waste, impact of using polymers.

Subject links:
ICT – Word used for research, CAD software
English – Analysing
Maths – Measurements, accurate template manufacture.
Science – Classification of the types and properties of acrylic. Physical properties of acrylic related to use and knowledge applied when designing and making. Environment & sustainability.

Careers that can be discussed:
CAD Technician
Product Developer
Industrial Designer
Product Designer
Design Engineer
Watch and Clock Repairer
CNC Machinist
Design Technician
Polymer Technologist

Key words for their learning (Apart from equipment names):

Design brief	Analysis
Research	Properties
Designers	Acrylic
Oblique	Rendering
Scales of production	Manufacturing aids
Prototype	Quality control
CAD/CAM	2D Design
Environment	Evaluation

How will we know they have learnt it?
Diary of making – reflection on learning.
Research task on designers, design houses and brands.
Homework – Information on the material acrylic.
Practical evidence (recorded through photographs in their book)
Questioning throughout lessons
End of year exam Understanding/familiarisation at the start of the next unit.
Evaluation process.

Project	**Mixed Materials -** Trivia game.	Key learning outcomes
6x2hr lessons		Materials knowledge, properties, grouping, forms of supply, tools and equipment. The design process Understand why quality control checks are made throughout the manufacturing process as well as at the end. Use their imagination to formulate a set of responsive question cards. Use of google slides to produce a set of matching cards, uniformity. Have used a range of tools , Vacuum former, formers, jigs, drills, gerbil cutter files Know what a standard component is Quality control and assurance. Construction Reflection on learning. Understand the properties of the materials and the ways it can be utilised. Be able to understand how they could improve and develop their skills. 3.1.2 Energy storage. 3.1.4 systems approach 3.1.6.1 Polymers as a material/ material properties. 3.2.5 working with materials 3.2.6 Stock forms, types and sizes. 3.2.8 specialist techniques and processes 3.3.6. prototype development 3.3.9 material management 3.3.10 specialist tools and equipment. Peer assessment Links to history and culture: Remind them of development of polymers in 50's local history of ICI Sustainability/recycling Health risks from electronics! Danger to workers, 3rd world recycling of our electronics! Ancient social history people love to play games, test each other's knowledge. Famous Discovers of electrical developments. Edison, Watts etc Subject links: Maths measurement History development of materials Science their lessons on series and parallel and circuits Careers that can be discussed: Designer- of electronic systems. Tradesmen's use of materials Product designer (everything is designed by somebody) Electronics engineer/ Micro electronics engineer Mould or former maker PCB designers Games designers (operation) Key words for their learning (Apart from equipment names): Volts (why it is called that, named after the man who discovered it) Current Resistance Circuit Prototype Evaluation Component How will we know they have learnt it? Practical evidence (recorded through photographs in their book and their written explanation of the process) Questioning throughout lessons Peer teaching End of year exam Understanding/familiarisation at the start of the next unit. Evaluation process/ their ability to add to or develop their idea.

Prior	Current	Future learning
Lesson 1 – What is electronics, components and their uses.		
Majority have knowledge of bulb and battery from KS2. Home experiences of battery's use of electronic products in everyday life. If done later in year may recall some from science.	Questioning the electronics, they use in everyday life, what is it? why use it? Etc. Basic introduction to simple electronics and basic components and their symbols. key vocab and principles of resistance. Component selection and batteries. Contextual challenge introduction.	In their general use of the energy source. At KS4 energy production and storage, designing /problem solving using electronics. Standard components. Links back to science
Lesson 2 – Polymers and forming, cutting, drilling them.		
Names of polymers they may know from recycling lists and can recall seeing how some polymers are used	Using systems approach to designing a circuit and drawing it. Polymers and their uses, origins and working properties. Forming polymers use of vacuum former, drilling with pillar drill and PCB drill, trimming, edge finishing.	In the evaluation and further development lesson. GCSE working Ability to know the uses and limitations of the tools and equipment to work materials and use on future products. Able to work out the forming processes used on everyday products.
Lesson 3 – Conductive materials and application		
Use of fine motor skills. ICT skills. Understanding of how the who wants to be a millionaire game works.	Construction of question cards for the game using the principles of conduction and insulation of electricity. Use of google slides program, paper trimmer, hole punches, tin foil. Quality control.	Wider knowledge of conductors and insulators of electricity, heat etc at KS4. Use of publisher in yr 9 and KS4. Quality control ongoing.
Lesson 4 – Soldering and circuit construction.		
Some have constructed a bulb in a circuit by tempory connections.	Introduction to the tools and equipment used to permanently build a circuit. Use of a soldering iron, H&S, soldering skills on different gauges of metals. PCB board production/ mass production	Un understanding of how components are permanently connected in all our electronic products. Ability to use the tools and equipment independently when needed. Fine working skills.
Lesson 5 – Construction Q.C and Assembly.		
Recall from previous lesson	Construction if both circuit and polymer casing using soldering equipment Quality control measures and testing function of product.	Quality control measures and quality assurance.
Lesson 6 – Testing Evaluating and possible developments.		
Playing games, consumerism, function, development of imagination	Completion of game, consumer group testing, roles of consumer and developer evaluation leading back to the start of the design process. Concept of 'Out of the box thinking'.	A prototype is ever the end, a cycle. Problem solving used throughout life.

Good
They have followed through the process, produced a prototype and can name the majority of the equipment and techniques they have learnt about.

Better
They understand the process they have been through to help them produce a good quality prototype; it is well made showing a good degree of quality control. They can name the tools and equipment that they have used and explain what they do. They show confidence in using the equipment. They are able to suggest a number of developments for the prototype to improve its appeal to potential consumers.

Excellent
Materials understanding and knowledge is very good they understand where materials come from and our need to choose and select material for certain functions. They understand the process they have been through to help them produce a prototype, in which Quality control has clearly been applied. They can name the tools and equipment that they have used and explain what it does. They have the confidence to use the equipment by themselves. They are able to suggest a number of developments for the prototype to improve its appeal to potential consumers and are able to name components/processes which would be used to realise the developments.