Curriculum and Assessment Overview: Designing Skills

Department Name: **DT** **Year: 7**

Unit Topic: Designing Skills

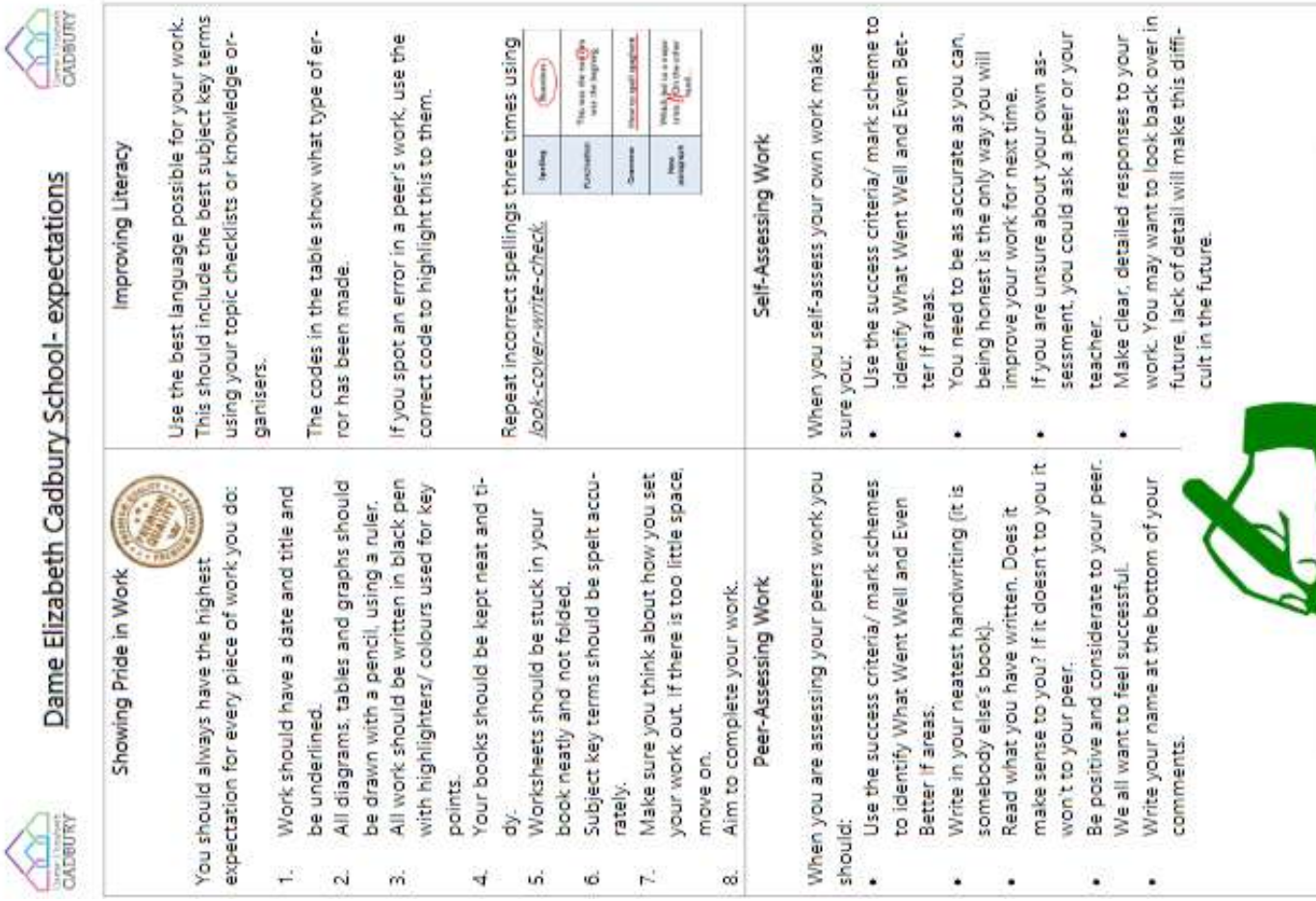
Composite Question: How do we develop and visualise our designs?

Why this and why now? This rotation builds on KS2 design by enabling students to develop a range of different design techniques such as 2D printing and card modelling, demonstrating the ability to translate 2D designs into 3D models. This unit provides the basis for other DT rotations in KS3 and later in KS4.

What am I Learning?	What do I need to know?	How will I be assessed?
1. How do we draw the basic building blocks of a design?	How to sketch simple 2D shapes that make up most design work. This includes: squares, rectangles, circles, triangles, ellipses and hexagons. Use of line thickness and tone in design (this will be set as a homework project).	Sketching will be reviewed throughout each lesson with individual feedback. Whole class review and feedback will also be given. Homework will be reviewed and assessed and feedback given. There will also be an end of topic assessment for the underlying knowledge.
2. How can I refine my designs?	The purpose of thick and thin lines and where to use them within the design How to apply a range of tones using coloured pencils to enhance the 3D form of the designs	Sketching will be reviewed throughout each lesson with individual feedback. Whole class review and feedback will also be given. Homework will be reviewed and assessed and feedback given. There will also be an end of topic assessment for the underlying knowledge.
3. Why do we card model?	The pros and cons of both designing methods with a focus on working from a 2D design to make a 3D model	3D model to be assessed with feedback given. There will also be an end of topic assessment for the underlying knowledge.
4. How can we model using card?	How to use a knife correctly. How to use card to produce a 3D design using card modelling techniques.	3D model to be assessed with feedback given. There will also be an end of topic assessment for the underlying knowledge.

Curriculum and Assessment Overview: Designing Skills

Key Term	Definition	Key Term	Definition
Sketching	A creative way of communicating your ideas through drawing.	Annotation	Written labels to support your designs. They can explain your product and your thought process
Environment	Our surroundings and conditions. Human activity has a direct impact on the environment.	Function	A products purpose (how it works)
Design development	How your designs and ideas move forward and change throughout a project.	Aesthetics	The way something looks
Oblique	A method of drawing to make shapes and objects appear 3D. Angles are drawn at 45 degrees	Consumer	A person or group of people that are likely to be interested in your product



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Curriculum and Assessment Overview: Designing Skills

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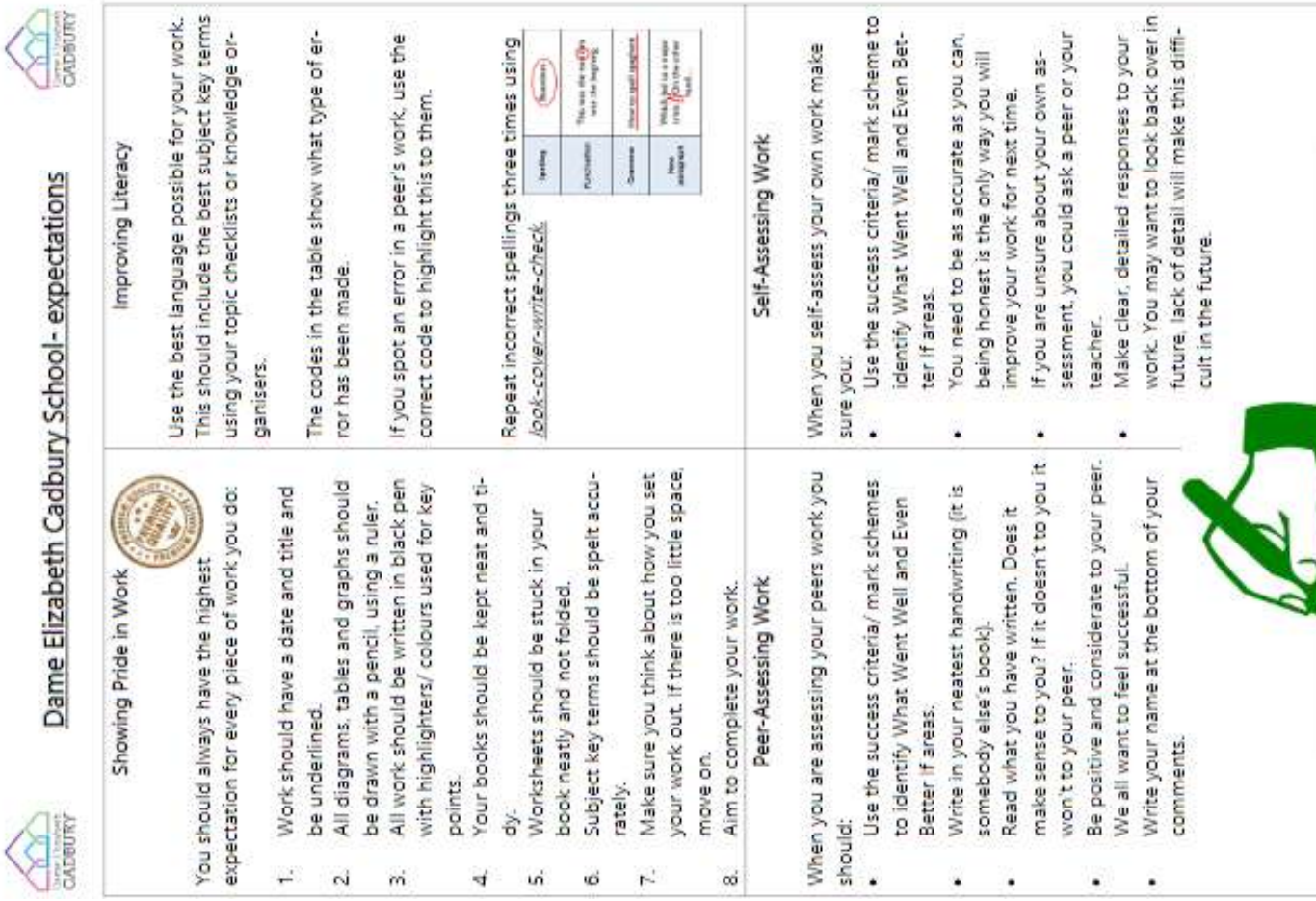
Design development	How your designs and ideas move forward and change throughout a project.	Aesthetics	The way something looks
Oblique	A method of drawing to make shapes and objects appear 3D. Angles are drawn at 45 degrees	Consumer	A person or group of people that are likely to be interested in your product



Curriculum and Assessment Overview Rotation

Department Name: Food Year: 7

Unit Topic: Introduction to Food Technology

Composite Question: How we make basic food dishes in Food Technology

Why this and why now? It is important to learn the basics in any subject. By exploring recipes and cooking techniques you can then proceed to create basic dishes. Cooking is a life skill that can be developed, explored and perfected.

Our Learning Journey

What am I Learning?	What do I need to know?	How will I be assessed?
1 We will be learning about the 4 C`s and how they are relevant to food preparation and cooking. We will also be learning about basic food hygiene in the kitchen as well as exploring the importance of a healthy and balanced diet	• What the 4C`s are and their relevance in a kitchen: Cooking, Cleaning, Cross Contamination and Chilling • The importance of food hygiene to prevent food poisoning • Why is a healthy diet important	• Knowledge retention starter in following lesson - CFU
2 Practical 1- To learn how to create a Flapjack Product using an array of ingredients	• To understand the melting method • Accurately weigh out ingredients to ensure a consistent recipe • Effective teamwork/organisation	• Self Assessment and peer assessment of product • WWW/EBI HWK task
3 We will be learning about where our food comes from. We will also look at how the Red Tractor Scheme ensures food safety.	• To define what Grown, Reared and Caught are in the food industry. • To evaluate how well meat with the red tractor assured standard label are guaranteeing animal welfare and quality.	- Knowledge retention starter - -CFU
4 Practical 2- To learn how to create a Chocolate Concrete Product using an array of Ingredients	• To correctly using the melting method • To effectively combine and layer ingredients • To bake product in the oven	Self and peer assessment as well as verbal teacher feedback – all against the success criteria on the verbal feedback sheet • WWW/EBI HWK task
5 Practical 3- To learn how to create a flatbread pizza with additional toppings	• Key Skills to utilize: weighing of ingredients • Kneading • To bake product in the oven	• Self and peer assessment • Formal assessment to take place following lesson • WWW/EBI HWK task

6 We will be learning about Macro Nutrients and the impact these nutrients can have on our physical and mental health	Identify the different Macro Nutrients and explain what they have in common Evaluate the advantages and disadvantages of each Macro Nutrient	- Knowledge retention tasks - Summative assessment feedback
7. Practical 4- To learn how to make a batch of Chocolate Chip Cookies using an array of ingredients	• The Mixing Method • Effective use of the rolling pin • Accurate weighing of ingredients	Self & Peer assessment CFU Verbal Feedback
8. We will be learning about different types of grain and their uses. We also be learning about different functions of certain ingredients	Identify different types of grain, where they are grown and their main uses. Explain the steps used in processing wheat grain to flour. Functional – functions of ingredients	Knowledge retention starter Verbal feedback CFU
9. During this rotation we will be taking a trip to Attwell Farm- Date TBC	Focusing on Seasoning and Seasonality	

Key Term	Definition	Key Term	Definition
Cross-Contamination	The movement of harmful bacteria from uncooked to cooked foods	Food Miles	The distance/journey a food product has travelled before reaching a consumer
Fair Trade	An organisation set up to ensure a fair and stable price for the producer of a product	Hygiene	Ensuring our environment and the individual is clean to avoid the spread of bacteria
Bacteria	Organisms that can spread and grow causing a risk to health	Measuring	The weighing of ingredients to ensure correct amounts
Melting	Reducing a product from solid to liquid	Baking	The action of cooking with dry heat (Oven)
Macro-Nutrients	Nutrients needed by the body in larger quantities	Cleanliness	The state of being clean or being kept clean
Organisation	Ensuring an individual or workspace is kept on task or in a workable condition	Seasonality	Time of year a food product is available

Curriculum and Assessment Overview Rotation

Department Name: Food **Year: 8**

Unit Topic: Foods from around the world

Composite Question: Where does our food come from and what impact does food have on our bodies?

Why this and why now? It is important to learn the basics in any subject. By exploring recipes and cooking techniques you can then proceed to create basic dishes. Cooking is a life skill that can be developed, explored and perfected.

Our Learning Journey

What am I Learning?	What do I need to know?	How will I be assessed?
1 We will be learning about how bacteria multiplies and to understand the impact food poisoning can have on the human body	• How bacteria multiplies • How to reduce the risk of food poisoning • Identify high risk foods	• Knowledge retention starter revisiting key learning from Year 7 - CFU
2 Practical 1- To learn how to create Sultana Scones (Scotland)	• To understand the rubbing method • Accurately weigh out ingredients to ensure a consistent recipe • Effective teamwork/organisation	• Self Assessment and peer assessment of product • WWW/EBI HWK task
3 We will be learning about the importance of a variety of nutrients and the impact they have on our bodies	• Importance of Micro-Nutrients • Importance of Vitamins/minerals	- Knowledge retention starter - -CFU
4 Practical 2- To learn how to create a simple Macaroni and Cheese (USA)	• To correctly using the roux method • To effectively combine ingredients • To bake product in the oven	Self and peer assessment as well as verbal teacher feedback – all against the success criteria on the verbal feedback sheet • WWW/EBI HWK task
5 We will be learning about a range of different cuts of meat and what the customer will need to consider when purchasing meat	• Explain the benefits and qualities of a range of cuts of meat. • Identify considerations consumers make when purchasing meat? • To know why carcass meat is prepared into cuts, joints and mince?	• Knowledge Retention Starter • CFU

6 Practical 3- To recreate the dish of stir fry from Year 7 this time with added protein (China)	• To effectively use the Bridge and Claw method • To use the wok method correctly • To ensure Chicken is correct cooked (consider Danger zone)	- Pupils to be assessed for summative assessment - CFU - VF
7. We will be learning about food safety including animal welfare	• Describe how different foods can be traced for safety • Explain how animal welfare and safety is maintained in the UK • Know consumer considerations when buying food	Summative Assessment CFU Verbal Feedback
8. Practical 4- To create the Dish of hunters chicken (France)	• To ensure raw meat is handled correctly • Create a simple BBQ sauce • Cook ingredients to the correct temperature	Verbal feedback CFU
9. Explore further into Food Miles and seasonal ingredients	• Define what food miles are • Describe how food miles increase based upon where food comes from • Explain how buying seasonal food can be more sustainable and better for the environment	- Knowledge recall starter - CFU - VF

Key Term	Definition	Key Term	Definition
Cross-Contamination	The movement of harmful bacteria from uncooked to cooked foods	Food Miles	The distance/journey a food product has travelled before reaching a consumer
Roux	a combination of flour and fat commonly used as a thickening agent in cooking of sauces	Hygiene	Ensuring our environment and the individual is clean to avoid the spread of bacteria
Bacteria	Organisms that can spread and grow causing a risk to health	Measuring	The weighing of ingredients to ensure correct amounts
Melting	Reducing a product from solid to liquid	Baking	The action of cooking with dry heat (Oven)
Micro-Nutrients	Nutrients needed by the body in smaller quantities	Cleanliness	The state of being clean or being kept clean

Curriculum and Assessment Overview: Designing Skills

Department Name: **DT** **Year: 8**

Unit Topic: Designing Skills

Composite Question: How do we further develop and refine our designing skills?

Why this and why now? This rotation builds on Year 7 design skills by enabling students to develop their design skills through material rendering and clay modelling – these are more advanced ways of creating and enhancing designs. This unit provides skills for other DT rotations in KS3 and later in KS4.

What am I Learning?	What do I need to know?	How will I be assessed?
1. Recap One point perspective and how we can apply this to our designs	• One point perspective drawings consist of: one vanishing point, a horizon line and converging lines (that meet the vanishing point). • Drawing in this way creates distance, volume and form.	Verbal feedback to be given. Progress to be reviewed throughout project and application of skill in design task assessed
2. Recap Two point perspective and how we can apply this to our designs	• Two point perspective drawings consist of: two vanishing points, a horizon line and converging lines (that meet the appropriate vanishing point) • Drawing in this way creates distance, volume and form • It also allows us to see two sides of the product more clearly	Verbal feedback to be given. Progress to be reviewed throughout project and application of skill in design task assessed
3. Material rendering – how to make our designs look as though they're made from everyday materials	• Material rendering is the application of drawing tools to create the effect of materials. • Rendering makes our designs look more convincing. • You will learn how to render wood, metal (flat and curved), plastic (flat and curved) and glass. • You will need to use pencils in a variety of ways to create these techniques.	Verbal feedback to be given. Progress to be reviewed throughout project and application of skill in design task assessed
4. Clay modelling – how to use clay as another design method	• Clay modelling is still used in the car manufacturing industry • Clay modelling allows us to make adaptations and to see the volume of our design. • Clay needs to be wedged before we use it. • When sticking two pieces of clay together, we need to score and slip both pieces.	Clay modelling to be assessed with marks and feedback given

Curriculum and Assessment Overview: Designing Skills

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Curriculum and Assessment Overview: Designing Skills

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Key Term	Definition	Key Term	Definition
Sketching	A creative way of communicating your ideas through drawing.	Annotation	Written labels to support your designs. They can explain your product and your thought process
Material Rendering	Creating the effects of everyday materials in your designs	One point perspective	Drawing in this way creates distance, volume and form
Design development	How your designs and ideas move forward and change throughout a project.	Two point perspective	Drawing in this way creates distance, volume and form It also allows us to see two sides of the product more clearly
Oblique	A method of drawing to make shapes and objects appear 3D. Angles are drawn at 45 degrees	Consumer	A person or group of people that are likely to be interested in your product
Aesthetics	The way something looks	Function	A products purpose (how it works)

Dame Elizabeth Cadbury School- expectations

Showing Pride in Work

You should always have the highest expectation for every piece of work you do:

1. Work should have a date and title and be underlined.
2. All diagrams, tables and graphs should be drawn with a pencil, using a ruler.
3. All work should be written in black pen with highlighters/ colours used for key points.
4. Your books should be kept neat and tidy.
5. Worksheets should be stuck in your book neatly and not folded.
6. Subject key terms should be spelt accurately.
7. Make sure you think about how you set your work out. If there is too little space, move on.
8. Aim to complete your work.

Improving Literacy

Use the best language possible for your work. This should include the best subject key terms using your topic checklists or knowledge organisers.

The codes in the table show what type of error has been made.

If you spot an error in a peer's work, use the correct code to highlight this to them.

Repeat incorrect spellings three times using *look-cover-write-check.*

Peer-Assessing Work

When you are assessing your peers work you should:

- Use the success criteria/ mark schemes to identify What Went Well and Even Better If areas.
- Write in your neatest handwriting (it is somebody else's book).
- Read what you have written. Does it make sense to you? If it doesn't to you it won't to your peer.
- Be positive and considerate to your peer. We all want to feel successful.
- Write your name at the bottom of your comments.

Self-Assessing Work

When you self-assess your own work make sure you:

- Use the success criteria/ mark scheme to identify What Went Well and Even Better If areas.
- You need to be as accurate as you can, being honest is the only way you will improve your work for next time.
- If you are unsure about your own assessment, you could ask a peer or your teacher.
- Make clear, detailed responses to your work. You may want to look back over in future, lack of detail will make this difficult in the future.

Curriculum and Assessment Overview: Pencil Cases

Department Name: **Design and Technology** **Year: 7**

Unit Topic: Fashion and Textiles – Pencil cases

Composite Question: How do we make basic products in Fashion and Textiles?

Why this and why now? It is important to learn the basics in any subject. By learning key equipment and processes used in Fashion and Textiles you can then build on those 'foundations' in every year and subsequent project.

What am I Learning?	What do I need to know?	How will I be assessed?
1. How to safely use tools and equipment in Fashion and Textiles	• Key equipment including needles, pins and unpickers • Safe working practices in a workshop environment	• Your practical work will be assessed using success criteria.
2. How to make basic products in Fashion and Textiles	• Key processes including tie dye, applique and the use of templates.	• Your practical work will be assessed using success criteria • Individual feedback will be given and you will have opportunities to improve your mark.
3. Different ways of designing products	• How to create a moodboard and how this informs our design process. • What ACCESSFM means, how and why we use it. • How to design simple products in Fashion and Textiles	• Your design will be assessed using success criteria • Individual feedback will be given and you will have opportunities to improve your mark.

Curriculum and Assessment Overview: Pencil Cases

Key Term	Definition	Key Term	Definition
Needle	a very fine slender piece of polished metal with a point at one end and a hole or eye for thread at the other, used in sewing.	Seam	a line where two pieces of fabric are sewn together in a garment or other article.
Pin	a thin piece of metal with a sharp point at one end and a round head at the other, used for fastening pieces of cloth, paper, etc.	Thread	a long, thin strand of cotton, nylon, or other fibres used in sewing or weaving.
Running Stitch	a simple needlework stitch consisting of a line of small even stitches which run back and forth through the cloth without overlapping.	Moodboard	an arrangement of images, materials, pieces of text, etc. intended to evoke or project a particular style or concept.
Blanket Stitch	a buttonhole stitch used on the edges of a blanket or other material too thick to be hemmed.	Template	a shaped piece of rigid material used as a pattern for processes such as cutting out, shaping, or drilling.
Measuring Tape	a length of tape or thin flexible metal, marked at graded intervals for measuring.	Zip	a device consisting of two flexible strips of metal or plastic with interlocking projections closed or opened by pulling a slide along them, used to fasten garments, bags, and other items.
Applique	ornamental needlework in which pieces of fabric are sewn or stuck on to a larger piece to form a picture or pattern.	Cotton	textile fabric made from cotton fibre.
Tailors Chalk	hard chalk or soapstone used in tailoring and dressmaking for marking fabric.	Cross Stitch	a stitch formed of two stitches crossing each other.
Tie Dye	produce patterns in (a garment or piece of cloth) by tying parts of it to shield it from the dye.	Unpicker	A seam ripper is a small sewing tool used for cutting and removing stitches.

Curriculum and Assessment Overview: Fashion Design

Department Name: **Design and Technology** **Year: 8**

Unit Topic: Fashion and Textiles – Fashion Design

Composite Question: How can we express our design ideas using different methods and media?

Why this and why now? It is important to look at different ways we are able to design in order to choose the method which is right for you. This means not only finding the method you enjoy the most, but also the method in which you communicate your ideas best. We are doing this now as it builds on the design work you completed in year 7 Fashion and Textiles and year 7 Product Design but also prepares you for any further design elements within Design and Technology in year 9 and at GCSE.

What am I Learning?	What do I need to know?	How will I be assessed?
1. How to use templates to support your design ideas.	• How to use figure outline to support your design ideas and produce outcomes quickly	• Verbal feedback will be given based on the content of your designs and their creativity. • ACCESS FM annotations will also have verbal feedback given.
2. How to use collage combined with templates to generate design ideas.	• How to design demonstrating consideration of texture and creativity.	• Written individual feedback part way through the process based on the amount of creativity used in your designs and your use of texture. • Opportunity for DIRT time.
3. How to use Harumika dolls to create garment designs.	• How to design in 3D considering shape and form.	• Verbal feedback on creativity of design.
4. Group activity; How to create a full-scale newspaper garment design in collaboration with peers.	• Continuing to develop your designing skills in 3D. • How to work as part of a design team to finish a design within a deadline.	• Verbal feedback given throughout the design process. • Final 'showcase' of the class' designs.
5. How to use laser cut outlines to design using photography.	• How to take photographs which enable you to generate design ideas.	• Verbal feedback during the design process.

Curriculum and Assessment Overview: Fashion Design

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Key Term	Definition	Key Term	Definition
Mannequin	A human dummy often to used to display clothing in a shop window. Can be used to create design ideas.	Harumika Dolls	Small Scale Mannequins used with paper or fabric to create clothing designs.
Template	a printed shape or outline used to aid designing.	Collage	Layering paper and other materials to create a design idea considering colour and texture etc.
3D Design	Designing a using a physical 3D shape forcing you to con	Laser Cut outlines	Pieces of card with outlines of clothing shapes laser cut out of it. This is used so that the background can be seen to form part of the design.
ACCESS FM	A tool used to annotate design ideas. This consists of questions for you to consider such as colour, size, shape etc.	Collaborative Design	Working with others as part of a team to create a design outcome.

Curriculum and Assessment Overview: Fashion Design

Dame Elizabeth Cadbury School

Curriculum and Assessment Overview: Electronic Systems

Department Name: **Design and Technology** **Year: 7**

Unit Topic: Electronic Systems

Composite Question: How and why electronic devices are used in everyday products?

Why this and why now? From games consoles to TV's, from cars to toasters, the world is full of electronic devices. This unit of work is designed to explain many of the everyday objects that we take for granted. It is studied in year 7 so that it builds on work from year 5 and feeds into key stage 3 Science.

What am I Learning?	What do I need to know?	How will I be assessed?
1. The principles of Electronic systems	• What a system is • a range of electronic devices used as input, process or output components. • how more advanced electrical and electronic systems can be powered and used in their products. • how computing and electronics can be used to embed intelligence in products that respond to inputs to control outputs, using programmable components.	• Short assessment tasks will be used in theory lessons. • Summative end of topic tests
2. How to include electronic devices in design and make projects	• how to join electronic and mechanical components to create function products. • The principles of Sublimation printing.	• Your designing and making work will be assessed using success criteria • Individual feedback will be given and you will have opportunities to improve your mark.
3. How to Solder	• How to assemble electronic systems using soldering	• Your soldering will be assessed as part of your making mark

Curriculum and Assessment Overview: Electronic Systems

Key Term	Definition	Key Term	Definition
System	A set of parts put together to perform a useful job	Input	The first part of any system
Output	The last part of any system	Process	The middle part of any system
Open Loop System	A system set up to perform a specific task	Closed loop system	A system that includes a way of adjusting the output.
Feedback	A method of providing information in a closed loop system	Block diagram	A visual method of showing a complete system
Flowchart	A visual method of showing a sequence of operations in a system	Circuit diagram	A visual method of showing the parts of an electronic system and how they are connected
Thermistor	A temperature sensing input component	Light emitting diode (LED)	An output component used in many everyday devices.
Buzzer	An output component used to make a sound.	IC (integrated circuit)	Also known as a microchip. They are complex circuits shrunk to microscopic size.
Microcontroller	A small computer embedded into everyday items like washing machines and heating systems. They can be reprogrammed easily.	Programmable Logic controller (PLC)	Digital computers used to control machines in factories
Switch	An input component used in electronic circuit. There are lots of types of switch.	Resistor	A process component used to control the flow of electricity.
Transistor	A simple electronic switch used in circuits. They are used to create logic functions in Computers.	Battery	A simple power source used in simple circuits
Battery snap	A way of attaching a battery to a circuit	Motor	An output component that converts electrical energy into rotary motion.
Probe	Any sensing device used as an input device. For example, moisture probes.	Light Dependent resistor	An input device used to sense changes in light intensity.
Circuit Wizard	A simple circuit modelling software used in schools	Soldering	The process of joining components by melting metal together.

Curriculum and Assessment Overview: Electronic Systems

Student Overview: Computer Aided Design and Manufacturing

Composite Question: How do we use computers to help us design and make products.

Why this and why now? You learnt to design through sketching, modelling and annotation in year 7. Now you get to see how modern designers use computers to help with designing.

What am I Learning?	What do I need to know?	How will I be assessed?
How to use 2D design software	• How to draw 2D and 3D shapes • How to add colour • How to contour bitmaps • How to prepare vector graphics for laser cutting	You will compete a series of tasks and verbal feedback will be given with targets for improvement. You will then have a final assessment task which will be assessed against success criteria.
How to use Onshape software	• How to draw shapes to create 3D objects • How to add fillets, rounded corners and chamfers . • How to alter colour and shadow. • How to prepare files for 3D printing.	
The advantages and disadvantages of CAD and CAM	• Benefits of Computer Aided Design to designers and manufacturers. • Benefits of Computer Aided Manufacturing to manufacturers. • Negative aspects of both CAD and CAM to designers, manufacturers and employees.	

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Key Vocabulary:
Computer Aided Design and Manufacturing

Key Term	Definition	Key Term	Definition
Computer Aided Design (CAD)	Designing products using Computer based drawing software	Computer Aided Manufacturing (CAM)	Making product using machines controlled by computer
Computer Numerical Control (CNC)	The method used by computers to control machines	Drawing exchange format (DXF)	The file format for transferring vector graphics to the laser cutter
OBJ. file	The file format for saving Onshape drawings for 3D printing	2D design	Basic vector graphic software used in schools. It is ideal for laser cutting.
Onshape	Advanced 3D CAD software used to create complex drawings. Ideal for		

Curriculum and Assessment Overview Rotation

Department Name: Food **Year: 9**

Unit Topic: Baked Goods

Composite Question: Where does our food come from and what impact does food have on our bodies? Consider the impact our environment has on food growth

Why this and why now? It is important to learn the basics in any subject. By exploring recipes and cooking techniques you can then proceed to create basic dishes. Cooking is a life skill that can be developed, explored and perfected.

Our Learning Journey

What am I Learning?	What do I need to know?	How will I be assessed?
1 We will be learning about Allergies and Intolerances and the impact they can have on our diets and bodies	• Know the difference between allergy & intolerance • Know common allergens & intolerances • Explain the symptoms associated with common allergens and intolerances • Create a suitable meal for a specific allergen or intolerance	• Knowledge retention starter revisiting key learning from Year 8 - CFU
2 Practical 1- To learn how to create Sausage Rolls (Pre-made puff pastry)	• To correctly use the rolling method • Accurately weigh out ingredients to ensure a consistent recipe • Effective teamwork/organisation	• Self Assessment and peer assessment of product • WWW/EBI HWK task
3 We will be learning about the importance of nutrients in particular exploring over nutrition and malnutrition	• Impact on body of malnutrition • Impact on body of overnutrition • To understand the impact nutrients have on our bodies and why they are vital in helping our bodies to function normally	- Knowledge retention starter - -CFU
4 Practical 2- To learn how to create a batch of Bread Rolls	• To correctly using the kneading method • To effectively combine ingredients • To bake product in the oven	Self and peer assessment as well as verbal teacher feedback – all against the success criteria on the verbal feedback sheet • WWW/EBI HWK task
5 We will be learning about different types of grain and their uses. We also be learning about different functions of certain ingredients	Identify different types of grain, where they are grown and their main uses. Explain the steps used in processing wheat grain to flour. Functional – functions of ingredients	• Knowledge Retention Starter • CFU

6 Practical 3- To learn how to create Chocolate Croissants (pre-made puff pastry)	• To correctly use the rolling method • Accurately weigh out ingredients to ensure a consistent recipe • Effective teamwork/organisation	- Pupils to be assessed for summative assessment - CFU - VF
7. We will be learning about what different food assurance schemes and certifications are in place to protect the welfare of animals and the safety of food products	Food certification and assurance • Identify the different food assurance and certification schemes • Describe the reason for having food certification and assurance schemes • Explain how food assurance schemes work with different examples	Summative Assessment CFU Verbal Feedback
8. Practical 4- To learn how to make Home made Jam Tarts	• To correctly use the rolling method • Accurately weigh out ingredients to ensure a consistent recipe • Effective teamwork/organisation	Self and peer assessment as well as verbal teacher feedback – all against the success criteria on the verbal feedback sheet CFU
9. We will be learning about the impact that the weather and climate has on food growth and availability	Impact of the weather and climate • Define the words weather and climate • Describe the difference between weather and climate • Know different climate types, terrains and explain how they affect food growth • Evaluate the impact of climate change on food growth and availability	- Knowledge recall starter - CFU - VF

Key Term	Definition	Key Term	Definition
Cross-Contamination	The movement of harmful bacteria from uncooked to cooked foods	Assurance	a positive declaration intended to give confidence; a promise.
Climate	The weather conditions prevailing in an area in general or over a long period.	Hygiene	Ensuring our environment and the individual is clean to avoid the spread of bacteria
Bacteria	Organisms that can spread and grow causing a risk to health	Measuring	The weighing of ingredients to ensure correct amounts
Melting	Reducing a product from solid to liquid	Baking	The action of cooking with dry heat (Oven)
Nutrients	Essential for the maintenance of life and for growth.	Cleanliness	The state of being clean or being kept clean

Curriculum and Assessment Overview: Tote Bag

Department Name: **Design and Technology** **Year: 9**

Unit Topic: Fashion and Textiles – Day of the Dead Tote Bag

Composite Question: How can we design and make a Tote bag inspired by the Day of the Dead theme?

Why this and why now? It is important designers to design products with the client in mind but also to make a product which fits its intended purpose. We are doing this now as it builds on the design work completed in year 7 and 8 Fashion and Textiles and year 7 Product Design but also prepares you for any further design elements if you choose GCSE DT. You will also experience the sewing machines in preparation for GCSE through the final construction of your bag.

What am I Learning?	What do I need to know?	How will I be assessed?
1. How to create a moodboard and use this to help design a product.	• How to find relevant images that will support your designs.	• Verbal feedback will be given based on your moodboard.
2. How to design using your moodboard and keeping the client in mind.	• Why we identify a client and the information we require from them to design products with are fit for purpose. • How to use ACCESSFM to enable our ideas to be fully explained.	• Individual written feedback will be given based on the content of your designs and their creativity. • ACCESS FM annotations will also have feedback given.
3. How to complete decorative techniques such as tie dye and applique.	• How to tie dye so that the fabric is fully saturated with dye. • How to use CAD/CAM to create applique shapes which are then sewn on using a variety of hand stitches.	• Verbal feedback continually throughout the process based on the amount of creativity used in your applique and tie dye. • Opportunity for DIRT time.
4. How to construct a Tote bag using the sewing machines	• The importance of seam allowance and safe use of the sewing machines	• Verbal feedback on accuracy of machine stitching.
5. Evaluations using client feedback based on your final product.	• How to conduct slient feedback of a final product. • How to evaluate your design and use this and your clients opinions to create an improved design idea.	• Verbal feedback given throughout the process. •

Curriculum and Assessment Overview: Tote Bag

Dame Elizabeth Cadbury School

Key Term	Definition	Key Term	Definition
Template	a shaped piece of rigid material used as a pattern for processes such as cutting out.	ACCESS FM	A tool used to annotate design ideas. This consists of questions for you to consider such as colour, size, shape etc.
Needle	a very fine slender piece of polished metal with a point at one end and a hole or eye for thread at the other, used in sewing.	Seam	a line where two pieces of fabric are sewn together in a garment or other article.
Pin	a thin piece of metal with a sharp point at one end and a round head at the other, used for fastening pieces of cloth, paper, etc.	Thread	a long, thin strand of cotton, nylon, or other fibres used in sewing or weaving.
Running Stitch	a simple needlework stitch consisting of a line of small even stitches which run back and forth through the cloth without overlapping.	Moodboard	an arrangement of images, materials, pieces of text, etc. intended to evoke or project a particular style or concept.
Applique	ornamental needlework in which pieces of fabric are sewn or stuck on to a larger piece to form a picture or pattern.	Cotton	textile fabric made from cotton fibre.
Tailors Chalk	hard chalk or soapstone used in tailoring and dressmaking for marking fabric.	Cross Stitch	a stitch formed of two stitches crossing each other.
Tie Dye	produce patterns in (a garment or piece of cloth) by tying parts of it to shield it from the dye.	Unpicker	A seam ripper is a small sewing tool used for cutting and removing stitches.

Curriculum and Assessment Overview: Mechanical Systems

Department Name: **Design and Technology** **Year: 9**

Unit Topic: Electronic and Mechanical Systems

Composite Question: How and why are electronic and mechanical devices used in everyday products?

Why this and why now? From games consoles to TV's, from cars to toasters, the world is full of electronic and mechanical devices/ This unit of work is designed to explain many of the everyday objects that we take for granted. It is studied in year 9 so that students can apply their designing skills from years 7 and 8 in a new context.

What am I Learning?	What do I need to know?	How will I be assessed?
1. The principles of Mechanical systems	• the four main types of motion and how these to relate to mechanical systems. • a range of mechanical systems used in everyday applications and be able to identify the parts of each.	• Homework research tasks • Summative end of topic test
2. How to include simple mechanical devices in practical projects.	• how to use cams and cranks in design and make projects	• Your practical work will be assessed using success criteria • Verbal feedback on progress will be given each lesson.

Curriculum and Assessment Overview: Mechanical Systems

Key Term	Definition	Key Term	Definition
		Mechanism	A device that changes an input motion and force into and output motion and force.
Motion	Another word for movement	Rotary	Motion that travels a full circular movement.
Linear	Motion that travels in one direction only	Oscillating	Motion that swings in a curved movement.
Reciprocating	Motion that moves up and down or side to side in a straight line	Lever	A rigid beam that pivots on a fulcrun
Mechanical Advantage	The ratio of input force compared to output force in a mechanical system	Load	The weight of the object being moved by a lever
Fulcrum	The point that a lever pivots on	Effort	Where the lever is moved to move the load
1st class/order	A lever with the fulcrum in the middle	Cam and follower	A mechanical device used to transfer rotary motion to reciprocating
2nd class/order	A lever with the load in the middle	Gear	A mechanical device used to transfer rotary to rotary motion
3rd class/order	A lever with the effort in the middle	Pulley	A mechanical device used to transfer rotary to rotary motion
Velocity ratio	The ratio of input speed to output speed in a pulley system	Gear ratio	The ratio of input speed to output speed in a gear system

Curriculum and Assessment Overview Rotation 1

Department Name: Product Design **Year: 9**

Unit Topic: Where in the World?

Composite Question: How can I be influenced by nature within design?

Why this and why now? Students will apply knowledge of design to the theme of biomimicry. Students will show inspiration from nature and allow this to influence their design ideas.

What am I Learning?	What do I need to know?	How will I be assessed?
1 What is biomimicry and how can I draw inspiration from nature?	✓ Definition of biomimicry ✓ What a mood board is ✓ How to create a mood board	Self and peer assessment as well as verbal teacher feedback – all against the success criteria on the board.
2 How can I design a product from a photograph of nature?	✓ What is a design idea? ✓ How to include recognisable characteristics from an image within a design ✓ How to sketch effectively	Self and peer assessment as well as verbal teacher feedback – all against the success criteria on the board.
3 What is a design brief and specification and how can I create my own?	✓ What is a design brief? ✓ What is a design specification? ✓ What are the key components of both of these? ✓ What must you include when creating your own brief/spec?	Self and peer assessment as well as verbal teacher feedback – all against the success criteria on the board.
4 How can I use effective sketching and rendering techniques in my design?	✓ What product do I want to design? ✓ What am I going to be influenced by? ✓ What are effective sketching techniques? ✓ What is rendering? ✓ How can I include rendering in my design?	Self and peer assessment as well as verbal teacher feedback – all against the success criteria on the board. Teacher assessed - formative
5 How can I translate my design sketch to card modelling (product design) or collage (textile design)?	✓ Health and safety – card modelling ✓ What is collage? ✓ How to collage effectively? ✓ How to card model effectively?	Self and peer assessment as well as verbal teacher feedback – all against the success criteria on the board. Teacher assessed - summative

Curriculum and Assessment Overview Rotation 1

Dame Elizabeth Cadbury School

Key Term	Definition	Key Term	Definition
Biomimicry	A product inspired by nature	Tone	The lightness or darkness of something
Embellish	To decorate	Render	Adding colour to design in order to make it look like a material
Volume	The amount of space that an object takes up	Collage	Sticking down various pieces of paper/materials in order to make an image
Implementing	Adding in/using	Design Brief	Written description of what a product should do/who it is for

Curriculum and Assessment Overview: Designing Skills

Department Name: **DT** **Year: 7**

Unit Topic: Designing Skills

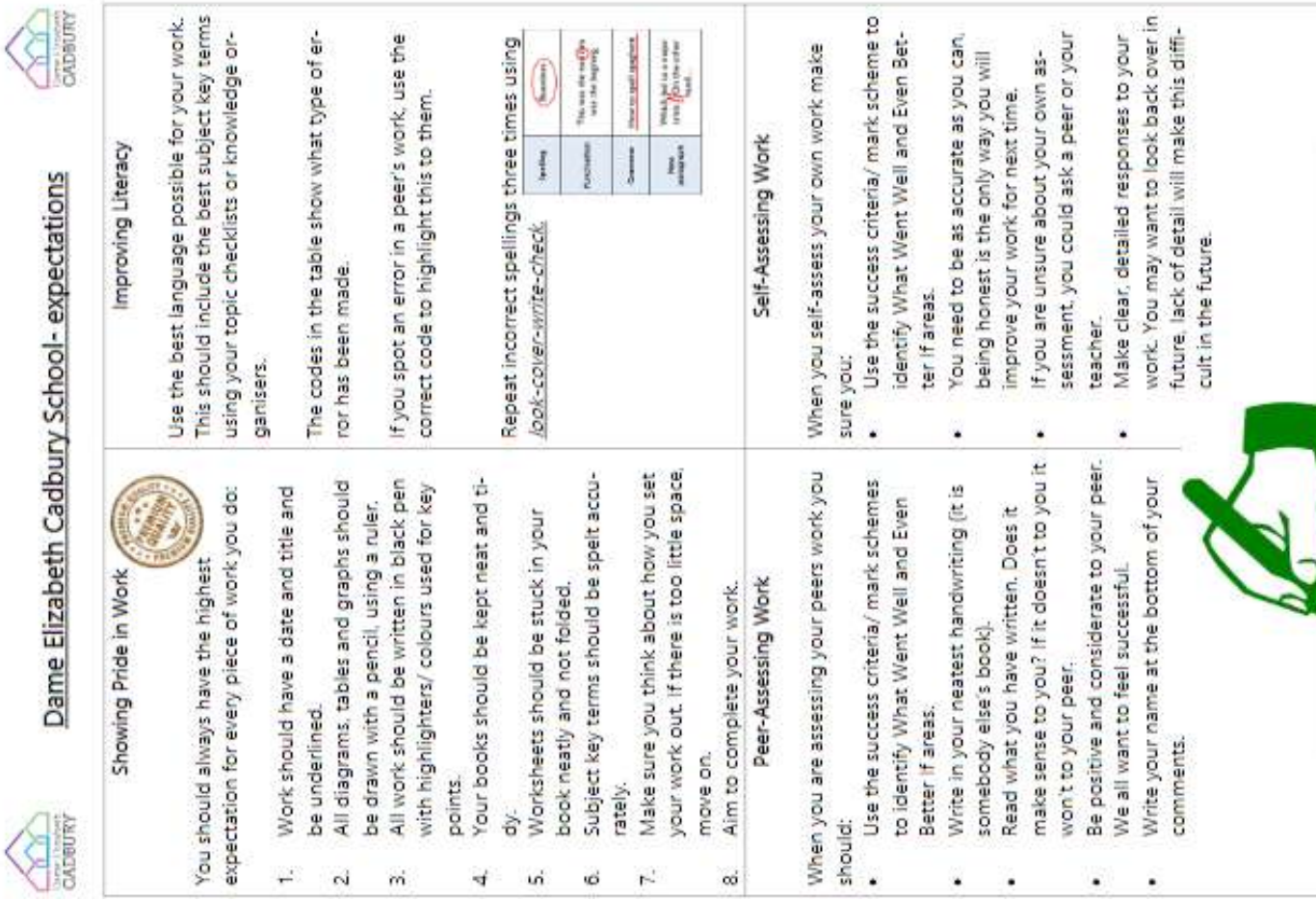
Composite Question: How do we develop and visualise our designs?

Why this and why now? This rotation builds on KS2 design by enabling students to develop a range of different design techniques such as 2D printing and card modelling, demonstrating the ability to translate 2D designs into 3D models. This unit provides the basis for other DT rotations in KS3 and later in KS4.

What am I Learning?	What do I need to know?	How will I be assessed?
1. How do we draw the basic building blocks of a design?	How to sketch simple 2D shapes that make up most design work. This includes: squares, rectangles, circles, triangles, ellipses and hexagons. Use of line thickness and tone in design (this will be set as a homework project).	Sketching will be reviewed throughout each lesson with individual feedback. Whole class review and feedback will also be given. Homework will be reviewed and assessed and feedback given. There will also be an end of topic assessment for the underlying knowledge.
2. How can I refine my designs?	The purpose of thick and thin lines and where to use them within the design How to apply a range of tones using coloured pencils to enhance the 3D form of the designs	Sketching will be reviewed throughout each lesson with individual feedback. Whole class review and feedback will also be given. Homework will be reviewed and assessed and feedback given. There will also be an end of topic assessment for the underlying knowledge.
3. Why do we card model?	The pros and cons of both designing methods with a focus on working from a 2D design to make a 3D model	3D model to be assessed with feedback given. There will also be an end of topic assessment for the underlying knowledge.
4. How can we model using card?	How to use a knife correctly. How to use card to produce a 3D design using card modelling techniques.	3D model to be assessed with feedback given. There will also be an end of topic assessment for the underlying knowledge.

Curriculum and Assessment Overview: Designing Skills

Key Term	Definition	Key Term	Definition
Sketching	A creative way of communicating your ideas through drawing.	Annotation	Written labels to support your designs. They can explain your product and your thought process
Environment	Our surroundings and conditions. Human activity has a direct impact on the environment.	Function	A products purpose (how it works)
Design development	How your designs and ideas move forward and change throughout a project.	Aesthetics	The way something looks
Oblique	A method of drawing to make shapes and objects appear 3D. Angles are drawn at 45 degrees	Consumer	A person or group of people that are likely to be interested in your product



Student Overview

Unit Topic: Thermoforming and Thermosetting Plastics

Composite Question: How and why are plastics used in everyday products?

Why this and why now? We all interact with a wide range of plastics every day, from our toothbrushes to bank cards, mobile phones to clothing. It is impossible to spend a day without some plastic in our lives. This unit of work builds on prior knowledge from KS3 by looking at more specific plastics than just Polyester and Acrylic and more manufacturing processes than laser cutting. It also builds on KS3 Science and Geography by looking in more depth at the environmental issues related to the use of plastics.

What am I Learning?	What do I need to know?	How will I be assessed?
Thermoforming and Thermosetting Polymers.	• Difference between Thermoforming and Thermosetting Polymers. • Names, properties and uses of a range of Thermoforming and Thermosetting Polymers. • Stock forms of a range of Thermoforming and Thermosetting Polymers. • Environmental factors related to a range of Thermoforming and Thermosetting Polymers.	Short assessment tasks will be used in theory lessons. Summative end of topic tests
School based manufacturing processes for Plastics.	How to safely operate: • Injection moulding machine • Vacuum former • Strip heater • Laser cutter • Sublimation printer • Heat Press • Electric iron	Your designing and making work will be assessed using success criteria Individual feedback will be given and you will have opportunities to improve your mark.

Key Vocabulary:

Materials

Key Term	Definition	Key Term	Definition
Thermoforming	A group of plastics with long chain polymers. They are recyclable, available in a range of colours, able to be moulded into complex shapes and are the most commonly used group of plastics.	Thermosetting	A group of plastics with long chain polymers that are cross-linked on a molecular level. They are not recyclable and are used for things that require heat resistance and strength.
Elastomer	A group of Thermoforming plastics that have the property of elasticity	Nylon	A Thermoforming plastic that has many different stock forms. It is used for clothing such as stockings and tights and in it's rigid form it is used for skateboard wheels and machine parts.
Polyester	A Thermoforming plastic fabric. Used for many everyday clothing items like blazers, skirts, socks, trousers and dresses. It can mixed with other fibres to improve the properties.	ABS	**Acrylonitrile Butadiene Styrene** A Thermoforming plastic used for products that need impact resistance. For example Children's toys
HDPE	**High Density Polyethylene** A Thermoforming plastic used for products that need to be tough. For example dustbins	LDPE	**Low Density Polyethylene** A Thermoforming plastic used for products that need to be tough and cheap. For example Milk bottles
PVC	**PolyVinyl Chloride** A Thermoforming plastic that has many different stock forms. It is used for guttering and clothing.	PP	**Polypropylene** A Thermoforming plastic used for products that need to be tough and cheap. For example seating, boxes, lids etc
Acrylic	A Thermoforming plastic that has many different stock forms. It is used for car tail lights, display stands and fake nails.	PS	**Polystyrene** A Thermoforming plastic that has many different stock forms. **High Impact Polystyrene** (HIPS) is used for low cost packing for things like strawberries. **Expanded Polystyrene** is used for packaging and disposable cups.
Polythene	Another form of HDPE and LDPE. This version is used for cling film and carrier bags.	Epoxy Resin	A Thermosetting plastic. It is made by mixing a resin with a catalyst to cause the polymers to cross link. It is used as an adhesive and for casting things like jewellery and floor coatings.
Urea Formaldehyde	A Thermosetting plastic. It is very tough and strong and is used for electrical fittings like plugs and sockets as well as saucepan handles.	Melamine Formaldehyde	A Thermosetting plastic. It is very tough and strong and is used for kitchen work surfaces and microwavable plastic plates and cups.
Polyester Resin	A Thermosetting plastic. It is used in the production of fiberglass boats		

Student Overview

Unit Topic: Natural and Manufactured Timber

Composite Question: How is Wood used in Design and Technology?

What am I Learning?	What do I need to know?	How will I be assessed?
What wood is, why we use it and the issues involved.	• The difference between Natural and Manufactured Timbers • Arange of Natural and Manufactured Timbers- properties and uses • The stock forms of a range of Natural and Manufactured Timbers. • The range of surface finished used with natural and manufactured timbers.	• Retention tests • Examination style questions • Retention starters • End of topic test
The environmental issues surrounding the use of Natural and Manufactured Timber.	• The environmental factors related to a range of Natural and Manufactured Timbers.	• Examination style questions • End of topic test
How to make products from Natural and Manufactured timbers	• Hand tools used for woodwork • How to independently operate the bobbin sander, jigsaw, belt sander, router, fret saw, pillar drill, battery drill and disc sander	• Verbal feedback in lesson • Written feedback using success criteria • End of topic test

Key Vocabulary:

Materials

Key Term	Definition	Key Term	Definition
Hardwood	A type of wood with a close grain. Hardwood trees grow slowly, typically lose their leaves in winter and are not **sustainable.** They are known as **Deciduous** trees. They have large **broad leaves** and have fruit.	Softwood	Atype of wood with an open grain. Softwood trees grow quickly, typically keep their leaves and are sustainable. Their leaves are like **needles** and they have **cones** to store their seeds. They are known as **evergreen** trees.
Angiosperm	**T**he scientific term for hardwood trees.	Manufactured Board	A ype of flat sheet material made from natural wood. They are cheaper than hardwoods and softwoods, more **stable** and more **sustainable.**
Oak	A common hardwood that is strong and aesthetically pleasing. It is used for furniture and construction. It is expensive and slow growing.	Mahogany	A hard reddish-brown hardwood from a tropical tree, used for quality furniture.
Meranti	A tropical hardwood similar to Mahogany but lower quality and cheaper.	Teak	A durable hardwood used in shipbuilding and for making furniture. It is resistant to acid, weathering and insect attack.
Parana Pine	A pale brown softwood that may be streaked with red, but this is sometimes absent. Used for furniture and internal joinery.	Scots Pine	A sustainable softwood that is strong and easy to work with. It is not naturally resistant to weathering but takes preservatives well.
Spruce	A lower quality softwood used in construction.	Western Red Cedar	A sustainable softwood that is resistant to weather. As a result it is used in exterior construction.
MDF	MDF means Medium Density Fibreboard. It is a flat, stable board that comes in a range of thicknesses.	Balsa	A tropical hardwood that has very straight grain. It is lightweight, soft wand easy to work. Used mainly for model making.
Chipboard	Made from wood chips and splinters, mixed with glue and pressed into sheets. Generally low cost and quality but can be laminated with melamine to create kitchen worktops.	Plywood	Made from thin sheets of natural wood called Veneers. The veneers are glued at right angles to create a stable, string sheet material used in furniture and construction.
Flexiply	Similar to Plywood but veneers are glued in way that allows the sheets to bend. Used in furntiture and shop fitting.	Beech	A hardwood that is dense, doesn't splinter, strong and durable. It is used in tool making, children toys and furntiture.
Jelutong	A hardwood that is appreciated for its uniform appearance, softness, dimensional stability, and ease of carving. It is used in pattern making.		