

Subject: Design & Technology - GD Year 8&9 Ability All

Term / Date(s)	HT 1	HT 2	HT3
Topic	The importance of the design Process, branding and ACCESSFM.	Understanding the importance of nets and how they are used in packaging design.	Technical knowledge: An introduction to CAD and evaluation
Topic overview	To understand what makes successful branding by looking at existing brands.	Understanding the difference between typeface and font when design a brand name.	Understanding how a design is taken from a sketch and is then professionally drawn using CAD.
Pupils will learn...	<p>How to sketch 2D and 3D in order to convey an idea or concept.</p> <p>How to gather simple research to improve the products we use. Students will need to research existing logo's, colour schemes and graphic layout.</p> <p>Understanding the difference between typeface and font when design a brand name.</p>	<p>The students will need to understand nets and how they are used for packaging.</p> <p>The students will need to develop skills of model making by using a variety of materials such as paper, card, cardboard and plastic.</p> <p>How to conduct themselves safely in a workshop.</p>	<p>Understanding why professional CAD designers use CAD as well as traditional sketching techniques.</p> <p>Using professional packaging techniques to produce sweet packaging</p> <p>The students will have a go at producing their own sweets using professional hygiene disciplines</p> <p>How to successfully analyse their work and use WWW and EBI for future improvements.</p>
Components	<ul style="list-style-type: none"> Students to understand the importance of analysing a suitable design brief to identify considerations for the needs and wants of a user. Students should know the key features and characteristics of a successful brand and how they can use this research to influence their own brand. Students will explore and understand why a user or client have specific needs. This will be essential when tailoring a product to a specific client. The students will need to understand the legal information that needs to be on food packaging including the ingredients, nutritional values, weight and hygiene rating. Students will be able to annotate their design ideas and provide reflections and justifications suggesting ways the design could be developed in order for it to be improved using ACCESSFM. 	<ul style="list-style-type: none"> The students will need to know the difference between typeface and font and be able to identify why these factors are so important when designing a unique and successful brand. Students understand how to use a basic range of tooling and machinery to work independently in the workshop. Students will understand how to work safely while using scissors, craft knives and serrated edged cardboard whilst designing prototype packaging. Students will be able to identify the key elements of PPE that they will use for specific tasks. The students will need to dismantle existing nets and then put them back together to understand how nets are used in the real world of food packaging. The students will need to be able to draw 2D nets accurately and be able to visualize how they are folded accurately to create packaging. Students to have a basic understanding of how we source materials sustainably to ensure they understand the importance of being eco-conscious, self-sufficient citizens. 	<ul style="list-style-type: none"> Students to explore CAD by experimenting with a range of design solutions based around a given specification. Students will be able to use the basic functions of a CAD package (2D Design) to produce a final sweet packaging design. The students will look at a range of professional CAD designers and the techniques they use. The students will understand how CAD is used in industries and the careers around CAD The students will use advanced machines such as the laser cutter and vacuum former to produce professional looking packaging. The students will have the opportunity to research the correct ingredients and produce their own sweets to put in their sweet packaging. The students will need to evaluate their work and give improvements as well as praise for future designs.

What pupils should already know (prior learning components)	Using basic pencil sketches to create simple 2D designs Basic drawing and rendering (presentation) skills evident. How to annotate and explain designs, identifying key features.	Basic understanding of Health and Safety within a workshop – be able to identify simple hazards and how to reduce the risks. Using tooling safely & confidently in order to produce an outcome. Using colour schemes and drawing techniques	Using 2d design to produce CAD drawings To be able to evaluate focusing on what processes went well or didn't go well.
Golden Knowledge	Golden Knowledge: Designing Golden Threads <ul style="list-style-type: none"> • Annotation • 2D / 3D drawings (Isometric) • How to develop an idea • Brand design knowledge 	Golden Knowledge Safety, making and nets: Golden Threads <ul style="list-style-type: none"> • Health and Safety in the workshop • Safety while using card modelling tools and techniques • Safety using adhesives • How nets are created and used • How packaging is created and designed 	Golden Knowledge:CAD Golden Threads <ul style="list-style-type: none"> • What is CAD • How is CAD used in industry • Careers in CAD • Traditional techniques compared to modern CAD • Vacuum forming • Sweet manufacturing.
Transferrable knowledge (skills)	How to use the design process in order to produce a product suitable for a specific user or client. Analyse and evaluate their work. Basic use of a CAD package to produce a concept model	How to use a range of modelling tools and machinery confidently in order to keep safe in a practical environment. How to design products that are suitable for a specific user. How to make sustainable products from recycled materials.	How CAD can be used in multiple DT disciplines.
Key vocabulary pupil will know and learn	Design brief, Context, Research –branding, Initial Ideas, Computer Aided Design (CAD), rendering, Annotation, ACCESS FM.	Risk, Hazard, Brief, sustainable, Adhesives, Health & safety, templates and jigs, CAM – Computer Aided Manufacture (CAM), Acrylic, typeface, font, packaging, card, cardboard, plastic, nets, 2d, 3d, folding, double sided tape, glue.	Vacuum form, CAD (computer aided design), CAM (computer aided manufacture), 2d design, graphic designer, CAD engineer, illustrator, photoshop, hygiene.
Assessment activities	30-minute summative assessment based of the final outcome – making, at the end of the project. Formative ongoing assessment used throughout the project in the form of verbal feedback and EBI.MRIs. Along with a design ideas milestone assessment Assessment is based around design and presentation skills and covers: <ol style="list-style-type: none"> 1. Ability to use the branding research to create a series of creative designs 2. Designs are well presented with accurate rendering and detailed annotations 3. Quality of graphic communication 4. Importance of CAD/ CAM 	30-minute summative assessment at the end of the project. Formative ongoing assessments used throughout the project in the form of verbal feedback and EBI.MRIs Assessment of: <ol style="list-style-type: none"> 1. importance safe working practice. 2. identification of modelling tools, research and processes. 3. Use tool effectively and accurately. 4. Be aware of relevant health and safety issues and awareness of suitable control measures. 5. Application of finishes. 6. Final Outcome 	30-minute summative assessment at the end of the project. Formative ongoing assessments used throughout the project in the form of verbal feedback and EBI.MRIs Assessment of: <ol style="list-style-type: none"> 1. Be able to identify when to use traditional sketching techniques or modern CAD. 2. To successfully and hygienically produce sweets 3. To produce packaging that is strong and uses the learnt branding techniques 4. Final outcome.
Resources available			