

Autumn Term

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
Topic	Welcome back. Design Task	Introduction to perspective drawing	Introduction to perspective drawing	Completion of perspective drawing	Light Box	Light Box	Light Box	Light Box
Challenge Objective and Content (for all learners)	Welcome back. Recap on H&S expectations Information about the year ahead Design activity. Challenge: How will you copy and adapt ideas from the images provided to sketch a new product?	Introduction to 1pt perspective drawing. Drawing a range of cubes above and below the vanishing line. Challenge: <i>What happens when you draw the cubes in different places in relation to the horizon line?</i>	<i>Introduction to 2 pt. perspective drawing.</i> Challenge: <i>What shapes can you draw using 2-point perspectives?</i>	Applying skills in 1pt and 2pt perspective drawing to draw light box including rendering. Challenge: Can you work independently to apply the skills you have learnt to draw a light box.	Introduction to Year 9. Theory – Softwood and hardwood. Properties and characteristics of natural timber Challenge: what is the advantage and disadvantages of using softwood	Start manufacture. Mark out timber for light box. Challenge: <i>Why is it important for your pieces to be the correct lengths and be sanded accurately?</i>	Manufacture. Cut timber and sand to correct length. Assemble box Challenge: <i>Why is important that your pieces are accurate?</i>	Manufacture. Cut timber and sand to correct length. Assemble box. Challenge: <i>How will you ensure your timber pieces are the correct length?</i>
Inspire Opportunities	<i>How will you take inspiration from the images without being too "literal"?</i>	<i>What are the disadvantages of drawing your designs using one-point perspective?</i>	<i>What are the disadvantages of drawing your designs using one-point perspective?</i>	<i>What are the disadvantages of using perspective drawing for D&T compared to isometric?</i>	<i>How does the choice of timber-based materials effect the price, aesthetic and function of a product?</i>	<i>What is the impact to a company when accuracy is poor?</i>	<i>Can you identify quality control and quality assurance measures or simple techniques which will make your box precise?</i>	<i>How will you consider the grain when arranging the timber ready to assemble your box?</i>
Assessment Opportunities	Header Sheet will be used by teacher and pupil for both formative and summative assessment throughout activities.	Header Sheet will be used by teacher and pupil for both formative and summative assessment throughout activities.	Header Sheet will be used by teacher and pupil for both formative and summative assessment throughout activities.	Header Sheet will be used by teacher and pupil for both formative and summative assessment throughout activities.	Header Sheet will be used by teacher and pupil for both formative and summative assessment throughout activities.	Header Sheet will be used by teacher and pupil for both formative and summative assessment throughout activities.	Header Sheet will be used by teacher and pupil for both formative and summative assessment throughout activities.	Header Sheet will be used by teacher and pupil for both formative and summative assessment throughout activities.

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	EASTER
Topic	Mini NEA Project – Reinventing Noughts and Crosses	Mini NEA Project – Reinventing Noughts and Crosses	Mini NEA Project – Reinventing Noughts and Crosses	Mini NEA Project – Reinventing Noughts and Crosses	Mini NEA Project – Reinventing Noughts and Crosses	Mini NEA Project – Reinventing Noughts and Crosses	
Challenge Objective and Content (for all learners)	Introduction to metal clay. <i>Challenge: what are the advantages of metal clay compared to traditional metals?</i>	Introduction to metal clay. <i>Challenge: what are the advantages of metal clay compared to traditional metals?</i>	Specification. Using research to write a specification to focus intentions. <i>Challenge: What points can you develop from your mind map to write your specification?</i>	Design and annotate. Using annotation to explain ideas in more depth. <i>Challenge: How can you adapt the games you have seen to develop your own version? You need to use your drawing skills to communicate ideas clearly.</i>	Design and annotate. Generating and communicating design ideas using traditional design techniques. <i>Challenge: How can you adapt the games you have seen to develop your own version? You need to use your drawing skills to communicate ideas clearly.</i>	Prototype. Exploring the benefits of prototyping a product before manufacture. Continuing metal clay exploration. <i>Challenge: What are the benefits of making a model before making the final product?</i>	
Inspire Opportunities	What is the difference between a smart and modern material?	What is the difference between a smart and modern material?	<i>How you will achieve your specification points and why they are important?</i>	Can you use annotation to link back to the needs of the client and the customer?	<i>Is your noughts and crosses game completely unique – what new element could you add?</i>	What are the benefits of using CAD to model a product? Especially something large like a submarine?	
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Summer Term

	Week 1	Week 2	Week 3	Week 4	Week 5	HALF TERM
Topic	Mini NEA Project – Reinventing Noughts and Crosses	Mini NEA Project – Reinventing Noughts and Crosses	Mini NEA Project – Reinventing Noughts and Crosses	Mini NEA Project – Reinventing Noughts and Crosses	Mini NEA Project – Reinventing Noughts and Crosses	
Challenge Objective and Content (for all learners)	Prototype. Exploring the benefits of prototyping a product before manufacture. Continuing metal clay exploration. <i>Challenge: What have you learnt from modelling your product?</i>	Manufacturing final product. Creating the board. <i>Challenge: What quality checks will you make to ensure your product is finished to a high standard?</i>	Manufacturing final product. Creating the board. <i>Challenge: What quality checks will you make to ensure your product is finished to a high standard?</i>	Manufacturing final product. Creating the counters. Access to a range of materials and CAD/ CAM. <i>Challenge: What quality checks will you make to ensure your product is finished to a high standard?</i>	Manufacturing final product. Creating the board. <i>Challenge: What quality checks will you make to ensure your product is finished to a high standard?</i>	
Inspire Opportunities	How is iterative design a useful way of making sure your product meets your specification?	What Quality Assurance strategies can you plan before starting the task?	What Quality Assurance strategies can you plan before starting the task?	What are the advantages/ disadvantages of including some CAD/ CAM into your project?	<i>What Quality Assurance strategies can you plan before starting the task?</i>	
Assessment Opportunities	Header Sheet will be used by teacher and pupil for both formative and summative assessment throughout activities.	Header Sheet will be used by teacher and pupil for both formative and summative assessment throughout activities.	Header Sheet will be used by teacher and pupil for both formative and summative assessment throughout activities.	Header Sheet will be used by teacher and pupil for both formative and summative assessment throughout activities.	Header Sheet will be used by teacher and pupil for both formative and summative assessment throughout activities.	

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	SUMMER
Topic	Mini NEA Project – Reinventing Noughts and Crosses	Mini NEA Project – Reinventing Noughts and Crosses	Packaging	Packaging	Packaging	Packaging	
Challenge Objective and Content (for all learners)	Final quality checks. Start evaluation against specification. Challenge: Why is it important that your product delivers on the specification?	Complete evaluation against specification. Challenge: Why is it important that your product delivers on the specification?	What are the four purposes of packaging? Introduction to nets/ papers and boards. Challenge: How will you package your noughts and crosses successfully?	Brand and market your game, or another game. Introduction to colour, font. Challenge: How will you brand your noughts and crosses successfully?	Manufacturing Net. Challenge: How will you choose which net is suitable for your product?	<i>Assembling Net. Costing the packaging.</i> Challenge: Does your assembled box hold your product successfully?	
Inspire Opportunities	<i>In industry, what is the consequence of not delivering against the specification?</i>	<i>What changes would you need to make to your product if it was going to be professionally manufactured/ sold in shops?</i>	<i>What would you need to consider if you wanted to keep the cost of making the packaging to a minimum?</i>	<i>What cultural awareness do you need when designing the graphics? Opportunity for pupils to create an original net</i>	<i>What others ways could you successfully package your game?</i>	<i>What others ways could you successfully package your game for different situations? I.e. outdoors/ camping?</i>	
Assessment Opportunities	Header Sheet will be used by teacher and pupil for both formative and summative assessment throughout activities.	Header Sheet will be used by teacher and pupil for both formative and summative assessment throughout activities. Exam style question paper at end of project.	Header Sheet will be used by teacher and pupil for both formative and summative assessment throughout activities.	Header Sheet will be used by teacher and pupil for both formative and summative assessment throughout activities.	Header Sheet will be used by teacher and pupil for both formative and summative assessment throughout activities.	Header Sheet will be used by teacher and pupil for both formative and summative assessment throughout activities.	