Design and Technology Learning Journey Year 7 2026-27

Autumn Term

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	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	H

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Topic	**Welcome To D&T BASELINE ASSESSMENT**	**Block Bot Baseline project-**	**Block Bot Baseline**	**Block Bot Baseline**	**Block Bot Baseline project-**	**Block Bot Baseline project-**	**Block Bot Baseline**	

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		FPT	project- FPT	project- FPT	FPT	FPT	project- FPT	

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		Project introduction	Block Bots 1: Accuracy & Preparation – Tools and equipment	Block Bots 2: Complete designing- Manufacture & Assembly	Block Bots 3: Manufacture & Assembly - Finishing	Block Bots 4: Finishing & Evaluation	Assessment and feedback	

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Challenge Objective and	Introduction to Design and Technology.	Brief, mind-mapping and introduction to designing.	***Practical lesson-*** *Workshop Health & Safety*	*Finish designing and guide pupils on Annotation.*	***Practical lesson-***	***Practical lesson-***	Evaluation of block bot practical and design.	

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Content (for all learners)	*Baseline assessment task. Workshop*	Challenge: Can you list 8 ideas for a Block Bot?	PPE, workshop routines, risk assessment	***Practical if time allows***	*Block Bots* – Sawing, shaping, drilling, joining, quality control,	Surface finishing, testing, evaluation	Introduction to ACCESS FM.	

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	expectations, Health and safety in the	Introduction to designing	Introduction to Block bots- FPT- Measuring, accuracy, marking out	*Block Bots* – Sawing, shaping, drilling, joining,	resilience *Block Bots – Assembly*	Sanding, finishing, testing, self and peer evaluation,	**CQ: How can I be reflective and identify**	

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	workshop – Introduction	**Challenge: Why is it**		quality control, resilience	Joining, drilling, quality control	complete maths challenge and key vocabulary.	**improvements?**	

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		important to be able to communicate your ideas clearly and	Design thinking, technical vocabulary, PPE, workshop rules, risk awareness	***Challenge: Why is it important to be able***	Complete cutting, drill where appropriate, assemble Block	**CQ: How do I finish a product to a high quality?**		

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	CQ: **What does it mean to think like a designer?**	**accurately?**	***CQ:*** **Why does every millimetre matter?**	***to communicate your ideas clearly and accurately?***	Bot.			

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					CQ: How can I make a successful product?			

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Inspire Opportunities	*IQ: Why is safety one of the most important*	*IQ: How is a three-dimensional drawing*	*IQ: How do designers turn simple materials into*	*How could your design be developed so that it is unique*	*IQ: What quality control and quality assurance measures*	*IQ: What makes a high-quality product?*	*IQ: What makes a high-quality product?*	

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	design skills?	*useful?*	*quality products?*	*and challenges your making skills?*	*can you plan which will ensure your final Block Bot is like your*			

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					plan?			

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Assessment	Summative baseline assessment-Teacher		Oracy - Design thinking discussion.		Formative - Practical skills observation Accuracy check prior to cutting		Summative – Teacher assessment of Final	

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Opportunities	Marked test paper- Establish prior learning		Ability to identify users, problems, needs and possible solutions				practical outcome- Making skills assessment	

	and understanding		Quiz- Workshop expectations check. Understanding of safety				Formative – Student reflection and evaluation against success criteria	

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			responsibilities and professional behaviour				Quiz- Maths/technical vocabulary task	

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	Week 1-2	Week 3-4	Week 5-6	C

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Topic	**Introduction to Design and Technology** Isometric rendering	**Design Communication**	**Design Communication**	

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		(exploded views)	(exploded views) Annotation	

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Challenge Objective and	CQ: How can a designer communicate an	CQ: How can a designer communicate an idea	CQ: How can a designer communicate an idea without	

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Content (for all learners)	idea without using words?	without using words?	using words?	

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	Lesson 1 –2 — Isometric	**Lesson 2 — Rendering**	**Lesson 3 — Communicating a product**	

	• What is isometric drawing? • 30° lines	• Light source • Tone	**isometric drawing + rendering + annotation**	

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	• Cubes/cuboids • Combining shapes	• Highlight/shadow • Wood, metal, plastic		

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Inspire Opportunities	How to apply knowledge of isometric to draw an exploded drawing of a Trinket box.	How to apply knowledge of isometric to draw an exploded drawing of a Trinket box.	What is the connection between drawing isometric cuboids and drawing products for Design and	

		Challenge: *Can you use the techniques that you have been shown to create an "exploded drawing" independently?*	Technology?	

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	Challenge: *Can you use the techniques that you have been shown to create an "exploded drawing"*			

	independently?			

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Assessment Opportunities	Formative and summative feedback will be undertaken by pupils and teacher throughout.	Formative and summative feedback will be undertaken by pupils and teacher throughout.	Formative and summative feedback will be undertaken by pupils and teacher throughout.	

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Spring Term

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	Week 1-2	Week 3-4	Week 5-6	H

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Topic	Trinket Box. An introduction to Timber based materials	Trinket Box. An introduction to Timber based materials	Trinket Box. An introduction to Timber based materials	

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Challenge Objective and	Introduction to project. Header sheet. Exploring the client & brief and mind mapping ideas. (applying materials and tools	Introduction to design brief and specification. Writing a simple specification	Designing with focus on annotation. Introduction to planning the making.	

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Content (for all learners)	knowledge from Block Bot)	**Challenge:** Can you write simple what / why statements for your product.	**Challenge:** Can you add sentences which explain your ideas in more detail and identify problems/ solutions?	

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	Theory lesson on Natural Timber and Manufactured Board. Definitions and examples in book.	Designing the shape of the Trinket box and how lid will look and function. Drawing and shading skills.		

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	***Challenge**: Can you identify and explain the differences between natural timbers and manufactured board*	**Challenge:** Can you think of a range of ideas and communicate clearly through drawing?		

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	Challenge: *Can you explore a range of relevant ideas and expand these into sentences?*			

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Inspire Opportunities	*What are the differences between the needs of the customer and the client?*	*Can you identify the different uses for the different timbers and boards and explain why?*	Can you use annotation to link back to the needs of the client and the customer?	

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	Week 7-8	Week 9-10	Week 11	

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Topic	Trinket Box. An introduction to Timber based materials	Trinket Box. An introduction to Timber based materials	Trinket Box. An introduction to Timber based materials	

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Challenge Objective and	Planning of making. Identify the order of production and the tools required.	Manufacturing: Making central part of box.	Pause manufacture for Lid Development. Pupils introduced to concept of modelling and then applying this to explore different	

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Content (for all learners)	**Challenge:** What are the correct steps when making the Trinket box and what tools will you need?		ways lid could look/ function. (pivot hinge/ traditional hinges/ choice of materials)	

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	Manufacturing: Introduction to the making. Demonstration of marking out tools and recap of sawing / drilling	***Challenge:*** *How will you use the saw/ drill accurately to make a successful box?*		

	techniques		***Challenge:*** *Can you develop one alternative lid idea to the one you have been shown?*	

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	***Challenge**: How will you use the saw/ drill accurately to make a successful box?*			

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Inspire Opportunities	*What quality control and quality assurance measures can you plan which will ensure your final Block Bot is like your*	*What strategies can you use to plan for accuracy?*	*What does "working within tolerance mean"?*	

	plan?			

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Assessment Opportunities	Formative and summative feedback will be undertaken by pupils and teacher throughout.	Formative and summative feedback will be undertaken by pupils and teacher throughout.	Formative and summative feedback will be undertaken by pupils and teacher throughout.	

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Summer Term

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	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	H

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Topic	Trinket Box. An introduction to Timber based materials	Trinket Box. An introduction to Timber based materials	Trinket Box. An introduction to Timber based materials	Trinket Box. An introduction to Timber based materials	Trinket Box. An introduction to Timber based materials	Trinket Box. An introduction to Timber based materials	

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Challenge Objective and	Manufacturing the lids based on the new knowledge from	Manufacture of Trinket box	Manufacture of Trinket box. Demonstration of how to	Manufacture of Trinket box. Finishing techniques. Sanding	Manufacture of Trinket box. Demonstration of finishing techniques – paint/ oil.	Manufacture of Trinket box. Finishing boxes, photographing boxes.	

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Content (for all learners)	the modelling lesson. Demonstration of band facer.	***Challenge:*** *How will you use the tools and processes*	make the pivot hinge and stopper	and finishing boxes	**Challenge**: What preparation/ techniques could	Completing a costing exercise.	

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	***Challenge**: Can you use knowledge from the modelling*	*accurately to make a successful box?*	***Challenge**: How will you use the tools and processes*	**Challenge**: What preparation/ techniques could you use to make sure your	you use to make sure your box is finished to a high standard?	**Challenge:** Are there any final changes you can make	

	lesson to make a unique and interesting lid?		*accurately to make a successful box?*	box is finished to a high standard?		to improve the standard of your box?	

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Inspire Opportunities	*Can you develop your box so it challenges your making*	*How are you going to plan for accuracy?*	*How are you going to plan for accuracy?*	*What QC checks could you make to check the standard of your box?*	*Why is a high-quality finish important to the client and the customer?*	*What QC checks could you make to check the standard of your box?*	

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	skills?						

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Assessment Opportunities	Formative and summative feedback will be undertaken	Formative and summative feedback will be undertaken	Formative and summative feedback will be undertaken	Formative and summative feedback will be undertaken	Formative and summative feedback will be undertaken	Formative and summative feedback will be undertaken	

	by pupils and teacher throughout.	by pupils and teacher throughout.	by pupils and teacher throughout.	by pupils and teacher throughout.	by pupils and teacher throughout.	by pupils and teacher throughout.	

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Design and Technology Learning Journey Year 7 2026-27

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	S

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Topic	Trinket Box. An introduction to Timber based materials	Aluminium Dog Tag. An introduction to working with metal.	Aluminium Dog Tag. An introduction to working with metal.	Aluminium Dog Tag.	Aluminium Dog Tag.	Aluminium Dog Tag.	

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				An introduction to working with metal.	An introduction to working with metal.	An introduction to working with metal.	

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Challenge Objective and	Introduction to evaluation. Pupils identifying strengths and weaknesses of their	Introduction to tag project. Simple engineering drawings.	Demonstration on how to cut and file aluminium. Including	Demonstration on how to drill aluminium and how to use	Demonstration on how to anneal aluminium and shape aluminium using a former	Maths task:	

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Content (for all learners)	product and asking for peer feedback.	Aluminum theory – material properties and characteristics	cross filing, draw filing and removal of burrs.	letter stamps correctly and with accuracy.	***Challenge:*** *Can you explain what work hardening is?*	**Challenge:** Can you use your maths knowledge to calculate how many tags can be cut	

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	Challenge: Why is evaluation important and when should it be used?	***Challenge:*** *What are the main characteristics of aluminum?*	***Challenge:***	***Challenge:*** *Can you use a range of letters and decorative techniques to*		from a single piece of aluminium?	

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			Can you apply your prior knowledge of sawing wood to successfully sawing metal?	*create an interesting and successful key tag?*			

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Inspire Opportunities	*What tips and advice would you give to a Year 7 who was*	*Is aluminium a Ferrous Metal or Non - Ferrous metal?*	*What QC checks could you make to check that the burrs*	*How are you going to plan for accuracy?*	*Why does heating metal make it easier to shape?*	*What do the terms nesting and tessellation mean and why are they important?*	

	about to complete this project?		*have been removed?*				

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Assessment Opportunities	Formal subject knowledge assessment.	Formative and summative feedback will be undertaken	Formative and summative feedback will be undertaken	Formative and summative feedback will be undertaken	Formative and summative feedback will be undertaken	Formative and summative feedback will be undertaken	

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		by pupils and teacher throughout.	by pupils and teacher throughout.	by pupils and teacher throughout.	by pupils and teacher throughout.	by pupils and teacher throughout.	

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