

Weekly RMT Revision Plan

W/B	Topic	Review	Revise	Practice
8 th Jan	Materials: Metals, timber, plastics, composites, smart and nanomaterials	Create mind maps for each of the following material groups.		
		<ul style="list-style-type: none"> • <i>Hardwoods, Softwoods, Manufactured Boards,</i> • <i>Ferrous Metals, Non- Ferrous Metals, Alloys</i> • <i>Thermo Plastic, Thermosetting Plastic</i> 		
		Use colour to help differentiate between the tiers.		
		<ol style="list-style-type: none"> 1. Start with the group name in the middle (e.g. Thermo Plastic) 2. Material names on first tier (e.g. Acrylic/PMMA) 3. Appearance (e.g. coloured and colourless, Shiny or Matte) 4. Properties and uses/applications on the third tier (children's toys, shop signs) 5. Pros/cons on the fourth tier (e.g. chemically resistant, self-finishing, brittle, mouldable) 		
15 th Jan		Find five products at home/school made from each of the material groups. Sketch them, name the material used and explain why it was used.		
		Explain why <i>GRP</i> is used to make boats hulls and kit cars		
22 nd Jan		Explain two uses for <i>Carbon Fibre Reinforced plastic</i> .		
		Define a <i>Smart Material</i> , give some examples		
		Explain why <i>Smart Materials</i> and <i>Nanotechnology</i> are used for products.		
		Describe what <i>KEVLAR</i> is and a use for it		
29 th Jan	Components, Adhesives and Applied Finishes	Create flashcards for <i>knockdown fixings</i> , other <i>mechanical components</i> and <i>adhesives</i> , one per card		
		<ol style="list-style-type: none"> 1. Name and image on front side 2. Application/how to use on other side 		
		Use notes and sketches to describe how you would apply gloss paint to a softwood door which contains knots.		
5 th Feb	Design and Market Influences	Create a poster which shows the key facts and products made by the following designers: <i>Alvar Aalto, Philippe Starck, Marcel Breuer, Charles Rennie Mackintosh, Harry Ferguson, Sir Frank Whittle</i> and <i>Sir Norman Foster</i> .		
		List the design eras and their key style details		
Half Term		Research and create moodboards for the following creatures; frog, cobra, armadillo. Create designs for a piece of jewellery inspired by these creatures.		
		Define <i>Antropometrics</i> , and <i>Ergonomics</i>		
		Explain what is meant by <i>5th</i> and <i>95th</i> percentile in terms of anthropometrics.		
		Break down the following acronym into its full meaning; <i>ACCESSFM</i>		
		Explain the term <i>Market Pull Technology Push</i> , use example products to illustrate your explanation		
		Make a list of all of the products that have been developed as a result of technology push.		
		Illustrate the lifecycle, Cradle to Grave for Wood, Metals and Plastics		
19 th Feb	Sustainability of design Social and cultural influences on the consumer market	Find out what plant based plastics are available and their common uses		
		Explain the term 'Sustainable'.		
		Produce two case study cards which outline the sustainability of a:		
		<ol style="list-style-type: none"> 1. Razor 		
		Supermarket carrier bag		
		Break down the <i>6 Rs</i> into their separate components		
	Describe the responsibilities to sustainability for the following groups:			
	<ol style="list-style-type: none"> 1. Consumers 2. Designer/Manufacturers 			
	Explain what the law says about sustainability of products.			

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	Consumer choice Consumer rights legislation, product maintenance and codes of practice	Consider a mountain bike; make a table with three columns:		
		<ol style="list-style-type: none"> Column 1 list of the maintenance operations required on it Column 2 State whether the operation is cleaning, adjustment, or replacement Column three describe how the designer has made the maintenance possible 		
		Search the web for images of cars from the following groups:		
		<ul style="list-style-type: none"> Sports car Family car Off road vehicle Disabled access car 		
		Identify and explain the features that make these cars unique		
		Explain the CE mark refers to and what it means.		
Draw the BSI kitemark and explain what it means				
Define <i>inclusive design</i> and <i>exclusive design</i>				
26 th Feb	Processes and Manufacture	List the tools used for measuring and marking out, state the materials they are used on.		
		Using sketches and notes explain how you would measure/mark, cut, shape and finish a simple metal hook		
		Explain what sort of joints are used to make a: <ol style="list-style-type: none"> Wooden picture frame Foot rests on a chair. 		
5 th March		Create four revision cards which explain the way of joining metals, include suitability and pros /cons: <ol style="list-style-type: none"> Soft soldering Hard soldering Welding Mechanical fixing 		
		Create a poster which explains the process for: <ol style="list-style-type: none"> Sand casting Die casting 		
		Explain what is meant by the term <i>laminating</i>		
12 th March		Create a Venn diagram which shows the difference and commonalties between <ol style="list-style-type: none"> Hot forming metals Cold forming metals Include the use of folding and press forming.		
		Create a diagram which show the steps of <i>vacuum forming</i>		
		Describe any other methods used in the moulding of plastics		
19 th March	Health and Safety Issues	Create a table with three columns: <ol style="list-style-type: none"> Column 1 Identify five risks in the school workshop. Column 2 Identify PPE that may be used Column 3 explain how the risk has been managed wither through the use of PPE or by other means. 		
26 th March		Draw the commonly used hazard symbols for: <ol style="list-style-type: none"> Flammable Toxic Harmful Corrosive Irritant 		
		Translate the acronym <i>COSHH</i>		

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		Draw and label two pieces of workshop equipment. In a different colour label any special safety features of the equipment		
Easter	Task analysis	Make a mindmap using the task issued on the Pre Release Material.		
16 th April	Research and analysis	Create a moodboard of relevant products Analyse using ACCESSFM, at least three of the products		
23 th April	Product specification	Write a list of things you think this product should do and a short explanation of why		
30 th April	Initial Designs	Generate 12 mini designs for this product bearing in mind the specification points you previously wrote		
7 th May	Development of ideas	Develop two of these designs further. Add notes explaining: <ol style="list-style-type: none"> 1. Construction 2. Materials used 3. Three dimensions 4. Features 		
14 th May	Evaluation of ideas	Evaluate your two designs against your original product specification		
21 st May	Industrial systems for batch or volume production	List the different scales of production Explain the applications and pros/cons for each.		
Half term		Draw a jig that would be suitable for each of the following processes, to create a batch of 100 identical pieces of acrylic: <ol style="list-style-type: none"> 1. Bending 2. Cutting a shape 3. Drilling several holes 		
4 th June	CAM Systems	Define <i>jig</i> Define <i>template</i> .		
	Industrial use of CAD and CAM	On a flashcard write the word <i>CAM</i> on one side and its meaning on the reverse		
	Mechanical systems	On another card write the same for <i>CAD</i>		
	Quality control systems	Describe 5 pieces of CAM equipment and their uses		
11 th June	CAM Systems	Create a table which lists the advantages and disadvantages of using CAM		
	Industrial use of CAD and CAM	Create a table which lists the advantages and disadvantages of using <i>CAD</i>		
	Mechanical systems	Use arrow diagrams to show the four types of motion: <ol style="list-style-type: none"> 1. Rotary 2. Linear 3. Reciprocating 4. Oscillating 		
	Quality control systems	Create three revision cards with drawings of the following cams: <ol style="list-style-type: none"> 1. Circular 2. Pear 5. Snail 		

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	Electrical systems	Draw the symbols for: 1. 9 volt battery 2. Rocker switch 3. Push switch 4. LED 5. Motor 6. Resistor		
		3. Draw a simple circuit schematic diagram using no less than three of the above symbols		
Exam Thursday 14th June 2018				