

## Year 11 AQA Design and Technology Practice Exam Revision Nov 2020

Use this sheet to help you track your revision for the practice exam. Make sure you use the revision book or folder to help you. You may want to also use [www.technologystudent.com](http://www.technologystudent.com), [www.senecanlearning.com](http://www.senecanlearning.com) and [BBC Bitesize](http://BBC Bitesize) to support with your revision. You will need drawing equipment like a ruler, protractor and pencil. You will need a calculator. Also you must use black biro only to produce written answers. **Good Luck!**

Exam Revision				
	Red	Amber	Green	Comments
<b>As you revise use this traffic light to see where your gaps in understanding are</b>				
• What are the pros and cons of co-operatives and fair trade initiatives?				
• Composites, Smart & Modern Materials & Technical Textiles				
• List and define renewable and non-renewable energies				
• What contributes to global warming?				
• Areas of rectangles L x W. Volume L x W x T. Percentages and Fractions. You will need a calculator.				
• Working with data (mathematics) multiplication of money.				
• Renewable energy, energy storage and generation				
• What are the uses of Kevlar and how are Kevlar fibres processed.				
• What is design for maintenance? Give examples in the home.				
• General properties of manufactured boards. What is the difference between manufactured boards and oak or pine?				
• Biodegradable v Non-biodegradable materials- characteristics				
• Identify the characteristics of all the types of scales of production like one off, batch, continuous and mass production. What is JIT production, what are the pros and cons.				
• Type of card packaging suitable for sale of hot food				
• Electronics Inputs and Outputs- LDRs Switches Buzzers LEDs				
• Symbols for a flow chart; Start, Decision, Process and Decision. What does Y and N stand for.				
• Describe safe and efficient sawing, cutting, filing, laser cutting, CNC milling and sanding with reference to waste management (nesting or tessellation) and recycling.				
• What are prototypes and how do you remove waste material from prototyping with blue foam? Hot wire cutters				
• Name softwood and hardwood trees				
• Types of motion in Cam and followers- linear, reciprocating, rotary and oscillating.				
• What is lamination: lamination of paper, plastics, textiles or wood. Improves strength, stability, flexibility and possibly aesthetics. Gluing layers of veneer under pressure (clamps) with adhesive using formers. Fabric interfacing to stiffen collars and caps on clothing.				
• What is 3D printing: Applications on paper, card and textiles. Developing technologies using PLA polymer with 3D printing machines to manufacture parts/components etc. Specific additional printing techniques include screen printing.				

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<ul style="list-style-type: none"> <li>• Sewing: Hand or machine sewing. Specific sewing techniques making a seam or adding decorative stitching/embroidery e.g. running, back, chain or blanket stitching or machine stitching like zig zag or overlocking stitch.</li> </ul>				
<ul style="list-style-type: none"> <li>• Quality control method used when making a prototype. Standards, Tolerances, Fitness for Purpose, Mistake Prevention Testing for quality control- No or Go Jigs, callipers etc.</li> </ul>				
<ul style="list-style-type: none"> <li>• Forces in a structure like a chair Tension Torsion Bending Compression</li> </ul>				
<ul style="list-style-type: none"> <li>• Know where wood, plastics and metal is sourced. What process are used to turn each into a workable material. Use notes and sketches to explain processing from raw material to stock forms.</li> </ul>				
<ul style="list-style-type: none"> <li>• Define Ecological Footprint and Social Footprint The 6 Rs of Sustainability Re P.F.D.U.C.T. Mnemonic</li> </ul>				
<ul style="list-style-type: none"> <li>• What is anthropometric data? Where is it used and why?</li> </ul>				
<ul style="list-style-type: none"> <li>• Safety features for children's toys or playground features</li> </ul>				
<ul style="list-style-type: none"> <li>• What is collaboration? Why would design teams work in collaboration? Give examples in product design.</li> </ul>				
<ul style="list-style-type: none"> <li>• What safety precautions does a user need to consider when using any cutting tools design &amp; technology.</li> </ul>				
<ul style="list-style-type: none"> <li>• What are surface finishes like varnish? Why are they added for aesthetic reasons? Why are they added for functional reasons?</li> </ul>				
<ul style="list-style-type: none"> <li>• Advantages for drawing in 3D and 2D – why draw in 3D (isometric) and not in 2D (orthographic)? Who uses orthographic drawings?</li> </ul>				
<ul style="list-style-type: none"> <li>• Use an orthographic drawing- plan elevation and end view to create an isometric drawing on isometric grid paper. Have a ruler and pencil.</li> </ul>				
<ul style="list-style-type: none"> <li>• Why is testing and modelling important for designers?</li> </ul>				