

Topic	Confidence Level		
	Red	Amber	Green
<b><u>D&amp;T: Resistant Materials</u></b>			
<b><u>Materials/Properties of materials</u></b>			
Woods: hardwoods, soft woods, manufactured boards Metals: Ferrous, non-ferrous, alloys Plastics: thermoplastics, thermosetting plastics New/Smart Materials <b><u>Online Resources</u></b> <a href="http://www.technologystudent.com">www.technologystudent.com</a> <a href="http://www.bbc.co.uk/education/subjects">www.bbc.co.uk/education/subjects</a> <a href="http://www.design-technology.info">www.design-technology.info</a> <a href="http://www.youtube.co.uk">www.youtube.co.uk</a> <a href="http://www.doddlelearn.co.uk">www.doddlelearn.co.uk</a> Revision Materials Revision App (69p) Android or Apple			
<b><u>Scales of production</u></b>			
One-off, Batch, Mass, continuous, just in time <b><u>Online Resources</u></b> Student Shared Area :- <b>Student Shared &gt; Technology &gt; KS4 &gt; Resistant Materials\exam Revision</b>			
<b><u>Mechanisms</u></b>			
Gears, cams, levers, linkages pulleys chain and sprocket			
<b><u>Modelling</u></b>			
Why do we model? Different modelling techniques Prototype card Solid – ICT e.g. sketch up techsoft2d <b><u>Online Resources</u></b> CGP GCSE D&T Resistant Materials AQA Specification – The Revision Guide – ISBN 97818476235			
<b><u>Quality Assurance</u></b>			
Testing, tolerances, Quality Assurance, Quality Control			
<b><u>Health and Safety</u></b>			
In the workshop Symbols Risk assessment			
<b><u>Environmental Issues</u></b>			
Sustainable design/6 R's repair Reuse Recycle Re-think Reduce Refuse			

Product life cycle Would the product have detrimental impact on the environment?			
<b><u>Manufacturing processes</u></b>			
Metals: Casting, welding, soldering, riveting Plastics: injection moulding, extrusion, blow moulding, compression moulding, vacuum forming, line bending			
<b><u>ICT in design and production</u></b>			
CAD/CAM – What is it? Why is it an advantage Examples: CNC machines, router, miller, laser cutter, 3d printer Other forms of ICT in production – CIM (computer integrated manufacturing), Internet, cameras, word processing, spreadsheets, scanner, etc			
<b><u>Joining Materials</u></b>			
Wood joints Knock down fittings Screws and bolts Adhesives			
<b><u>Finishes for different materials</u></b>			
Paint Varnish Shellac Dip coating Polish			
<b><u>Forming and bending</u></b>			
Sheet metal folder Bending jigs Forging metal Laminating strips of wood Strip heater			
<b><u>Hand and power tools</u></b>			
Saws Planes Drills Chisels Lathe Disc/belt sanders Routers			
<b><u>Ergonomics, Anthropometrics</u></b>			
How well does a product work and fit the user?			