

## Revision Tips for Yr. 11 Design & Technology- Useful guide for Pupils and parents

The GCSE Design and Technology course is a new course that had its first exam in June 2019. The course encompasses all the strands of resistant materials (plastic, metal and Woods) & graphic products. This exam counts for 50% of the GCSE grade. The other 50% comes from the Non Examined Assessment project that they have been working on since September. This document is available electronically on the school system- Resources- Design & Technology- Yr. 11- Exam preparation. Or email Mr Roberts [RobertsD518@hwbcymru.net](mailto:RobertsD518@hwbcymru.net) to request a copy.

1. Work hard in class and ask questions when unsure. It is essential that pupils make the most of every lesson from now until the end of yr. 11. In addition to this the after school catch up sessions on Wednesday nights are a great opportunity to have some more 1:1 support.
2. The syllabus can be found on <https://www.wjec.co.uk/qualifications/design-and-technology/r-design-and-technology-gcse-from-2017/wjec-gcse-d-t-spec-from-2017-e.pdf>. This explains all the areas that pupils need to know about.
3. Click onto the website [www.technologystudent.com](http://www.technologystudent.com). Click onto the new D&T GCSE section and this covers all the areas in depth and includes video clips as well as animations and questions that pupils can work through.
4. Practice papers are a great way to prepare. As the course is so new the only exam paper that the WJEC exam board have produced has already been done as part of the Christmas exam in yr. 11. Below are some other practice papers from TechnologyStudent.com along with their mark schemes. In the papers there are also links into that particular section of technology student.com theory notes.  
[www.technologystudent.com/pdf15/new\\_gcse\\_exam1.pdf](http://www.technologystudent.com/pdf15/new_gcse_exam1.pdf)  
[www.technologystudent.com/pdf15/new\\_gcse\\_exam1\\_marksheet.pdf](http://www.technologystudent.com/pdf15/new_gcse_exam1_marksheet.pdf)  
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[www.technologystudent.com/pdf15/new\\_gcse\\_exam3\\_marksheet.pdf](http://www.technologystudent.com/pdf15/new_gcse_exam3_marksheet.pdf)
5. GCSE BBC bitesize has useful information and quizzes on the different topics.
6. Another way to revise is to use images & visual prompts to help understand key topics. There are 2 examples attached in this pack.
7. Look at real life items around the house and try to work out how they have been made in terms of processes, joining methods and materials. Consider why these materials have been used.
8. Watch the “you tube” clips Useful You-tube clips to help revise different topics that pupils need to know for the exam. Some indicate the specific minutes that are worth watching. Pupils should write notes as they watch these.

### Processes

<https://www.youtube.com/watch?v=KkNkQRC0czc> rotation moulding home made

<https://www.youtube.com/watch?v=JftSV3ug0fk> rotation moulding factory

<https://www.youtube.com/watch?v=y1Zhpdx-XtA> lego injection moulding

<http://www.youtube.com/watch?v=NE4c1gwzPb4> Blow moulding


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<a href="https://www.youtube.com/watch?v=T01i_vp2mJE">https://www.youtube.com/watch?v=T01i_vp2mJE</a>	plastic bottles	
<a href="http://www.youtube.com/watch?v=yh2jx0xqlzU">http://www.youtube.com/watch?v=yh2jx0xqlzU</a>	vacuum forming bath tubs	
<a href="http://www.youtube.com/watch?v=QoNHsWvLkWO">http://www.youtube.com/watch?v=QoNHsWvLkWO</a>	press moulding cups/knives forks	
<a href="https://www.youtube.com/watch?v=Lhigu23NQlw">https://www.youtube.com/watch?v=Lhigu23NQlw</a>	plastic from potatoes	
<a href="http://www.youtube.com/watch?v=6eCt0VDg-Kc">http://www.youtube.com/watch?v=6eCt0VDg-Kc</a>	how plastic is made	
<a href="http://www.youtube.com/watch?v=SwxinbpQ9B4">http://www.youtube.com/watch?v=SwxinbpQ9B4</a>	timber production	
<a href="http://www.youtube.com/watch?v=mRA6RY2o9Lg">http://www.youtube.com/watch?v=mRA6RY2o9Lg</a>	steel forging	
<a href="http://www.youtube.com/watch?v=qitenYvpSx4">http://www.youtube.com/watch?v=qitenYvpSx4</a>	various plastic processing	
<a href="http://www.youtube.com/watch?v=9I7JqonyoKA">http://www.youtube.com/watch?v=9I7JqonyoKA</a>	steel start to finish	
<a href="http://www.youtube.com/watch?v=n1eU7tGo7yc">http://www.youtube.com/watch?v=n1eU7tGo7yc</a>	veneers	
<a href="http://www.youtube.com/watch?v=EgCZoYX7WTg">http://www.youtube.com/watch?v=EgCZoYX7WTg</a>	ply wood	
<a href="http://www.youtube.com/watch?v=Yt2rmu2OmrS">http://www.youtube.com/watch?v=Yt2rmu2OmrS</a>	plywood	
<a href="https://www.youtube.com/watch?v=53gjegCuWmU">https://www.youtube.com/watch?v=53gjegCuWmU</a>	sustainable timber Australia	
<a href="https://www.youtube.com/watch?v=qitenYvpSx4">https://www.youtube.com/watch?v=qitenYvpSx4</a>	–MDF and CAD/CAM	
<a href="https://www.youtube.com/watch?v=1UO_A5a25U4&amp;index=3&amp;list=PL5363C9618C1990D2">https://www.youtube.com/watch?v=1UO_A5a25U4&amp;index=3&amp;list=PL5363C9618C1990D2</a>	– noreboard- Manufactured board	
<a href="http://www.youtube.com/watch?v=TeBX6cKKHWY">http://www.youtube.com/watch?v=TeBX6cKKHWY</a>	arc welding	
<a href="http://www.youtube.com/watch?v=DWJQudCiUes">http://www.youtube.com/watch?v=DWJQudCiUes</a>	Acetylene welding	
<a href="http://www.youtube.com/watch?v=Cl5RsAzSonY">http://www.youtube.com/watch?v=Cl5RsAzSonY</a>	mig weld	
<a href="http://www.youtube.com/watch?v=I_NU2ruzyc4&amp;index=3&amp;list=PLDBB5FE749A7FD773">http://www.youtube.com/watch?v=I_NU2ruzyc4&amp;index=3&amp;list=PLDBB5FE749A7FD773</a>	soldering	
<a href="http://www.youtube.com/watch?v=KnyB9btIhS8">http://www.youtube.com/watch?v=KnyB9btIhS8</a>	hot air mass production	
Timber conversion		
<a href="https://www.youtube.com/watch?v=5f_FjflQQfo">https://www.youtube.com/watch?v=5f_FjflQQfo</a>	Logging 1920's	0-4.00
<a href="https://www.youtube.com/watch?v=FJDD9VCSfpY">https://www.youtube.com/watch?v=FJDD9VCSfpY</a>	Log drive	0-2.36
<a href="https://www.youtube.com/watch?v=jMcZ0MYRokY">https://www.youtube.com/watch?v=jMcZ0MYRokY</a>	Modern equipment	0-4.00
<a href="https://www.youtube.com/watch?v=yphYtfSK-8c">https://www.youtube.com/watch?v=yphYtfSK-8c</a>	Air drying	
<a href="https://www.youtube.com/watch?v=oxNBjv7_Kvg">https://www.youtube.com/watch?v=oxNBjv7_Kvg</a>	Kiln dried wood	
<a href="https://www.youtube.com/watch?v=9sK2kwA89cw">https://www.youtube.com/watch?v=9sK2kwA89cw</a>	Slash sawn	1:30-2.30
<a href="https://www.youtube.com/watch?v=VvUPJPFg4wM">https://www.youtube.com/watch?v=VvUPJPFg4wM</a>	Quarter Saw	
<a href="https://www.youtube.com/watch?v=wkJY5rt7roY">https://www.youtube.com/watch?v=wkJY5rt7roY</a>	planer	0-1.00
<a href="https://www.youtube.com/embed/rKRPFlyUBDU">https://www.youtube.com/embed/rKRPFlyUBDU</a>	Sustainability wood	
Recycling		
<a href="http://www.youtube.com/watch?v=TpKEkRBcTEk">http://www.youtube.com/watch?v=TpKEkRBcTEk</a>	Food waste recycling Scotland	
<a href="http://www.youtube.com/watch?v=6ZZfsSs3E98">http://www.youtube.com/watch?v=6ZZfsSs3E98</a>	Food waste carton American	
<a href="http://www.youtube.com/watch?v=m4fhpimT8bg">http://www.youtube.com/watch?v=m4fhpimT8bg</a>	Waste Ireland	
<a href="http://www.youtube.com/watch?v=xmbEHqOySxI&amp;feature=related">http://www.youtube.com/watch?v=xmbEHqOySxI&amp;feature=related</a>	Waste UK 9mins	
<a href="http://www.youtube.com/watch?v=3cp1ITBghx8">http://www.youtube.com/watch?v=3cp1ITBghx8</a>	Food Composting 2min	
<a href="http://www.youtube.com/watch?v=LbRiA3svFjc&amp;feature=fvwrrel">http://www.youtube.com/watch?v=LbRiA3svFjc&amp;feature=fvwrrel</a>	Food Rap 3min	
<a href="http://www.youtube.com/watch?v=uP9Tcf0CaV0&amp;feature=related">http://www.youtube.com/watch?v=uP9Tcf0CaV0&amp;feature=related</a>	Hydrogen power 40 sec	
<a href="http://www.youtube.com/watch?v=pC1u6rJkyzA&amp;feature=related">http://www.youtube.com/watch?v=pC1u6rJkyzA&amp;feature=related</a>	Landfill cartoon 3mins	
Quality Control and Assurance		
<a href="https://www.youtube.com/watch?v=XRnt33txsl8">https://www.youtube.com/watch?v=XRnt33txsl8</a>	health org	
<a href="https://www.youtube.com/watch?v=CgEeuZGmUvw">https://www.youtube.com/watch?v=CgEeuZGmUvw</a>	lifestyle	
Social/environmental Issues		
<a href="https://www.youtube.com/watch?v=QJC2GtM56rc">https://www.youtube.com/watch?v=QJC2GtM56rc</a>	Animation-sustainable energy 'the future'	
<a href="https://www.youtube.com/watch?v=Ptp6JGAF3o0">https://www.youtube.com/watch?v=Ptp6JGAF3o0</a>	waste 2 energy	
<a href="https://www.youtube.com/watch?v=BT0kzF4A-WQ">https://www.youtube.com/watch?v=BT0kzF4A-WQ</a>	cultural differences nat geogr	
<a href="https://www.youtube.com/watch?v=GOHvMz7dl2A">https://www.youtube.com/watch?v=GOHvMz7dl2A</a>	hsbc	

Examples of pupil's flashcards in Design & Technology-

HARDWOODS:

- Come from deciduous (broad-leaved) trees.
- Wood grains further apart than softwoods
- Grow slower, More expensive.



<u>OAK:</u>	<u>MAHOGANY:</u>	<u>BALSA:</u>
<ul style="list-style-type: none"> <li>• Strong</li> <li>• light in colour</li> <li>• open grain</li> <li>• hard to work with.</li> <li>• Classy + elegant when treated.</li> </ul> <p><u>Uses:</u> - high-class furniture</p> <ul style="list-style-type: none"> <li>- boats</li> <li>- beams in buildings</li> <li>- veneers.</li> </ul>	<ul style="list-style-type: none"> <li>• Easy to work</li> <li>• Reddish-brown.</li> <li>• Very expensive.</li> </ul> <p><u>Uses:</u> - Expensive indoor furniture</p> <ul style="list-style-type: none"> <li>- shop fittings</li> <li>- bars</li> <li>- veneers.</li> </ul>	<ul style="list-style-type: none"> <li>• Pale white / grey</li> <li>• Distinct velvety feel</li> <li>• Exceptional weight to strength properties.</li> <li>• Lightest + softest wood</li> </ul> <p><u>Uses:</u> - light work like model making</p> <ul style="list-style-type: none"> <li>- model aeroplanes.</li> </ul>

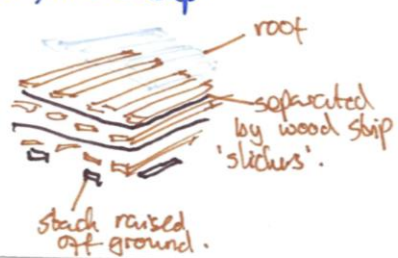
Tips for making them effective:

Use different colours for text, make them easy to follow- bullet points, add images to reinforce what is being explained

WOOD SEASONING:

- Moisture (water + sap) must be removed from wood to make it easier to work with + prevent damage to tools.
- Wood can split + crack when drying. (sliced to reduce cracking)

lighter wood easier to paint

<u>Natural</u>	<u>Kiln seasoning</u>
<ul style="list-style-type: none"> <li>- wood placed in between spacers + left outside under a roof.</li> <li>- natural air flows between wood + dries it out.</li> <li>- slow, but cheap.</li> </ul> <div style="text-align: center;">  </div>	<ul style="list-style-type: none"> <li>• Wood placed between spacers in a large oven.</li> <li>• a lot quicker, but more expensive.</li> <li>• wood more likely to crack.</li> </ul>

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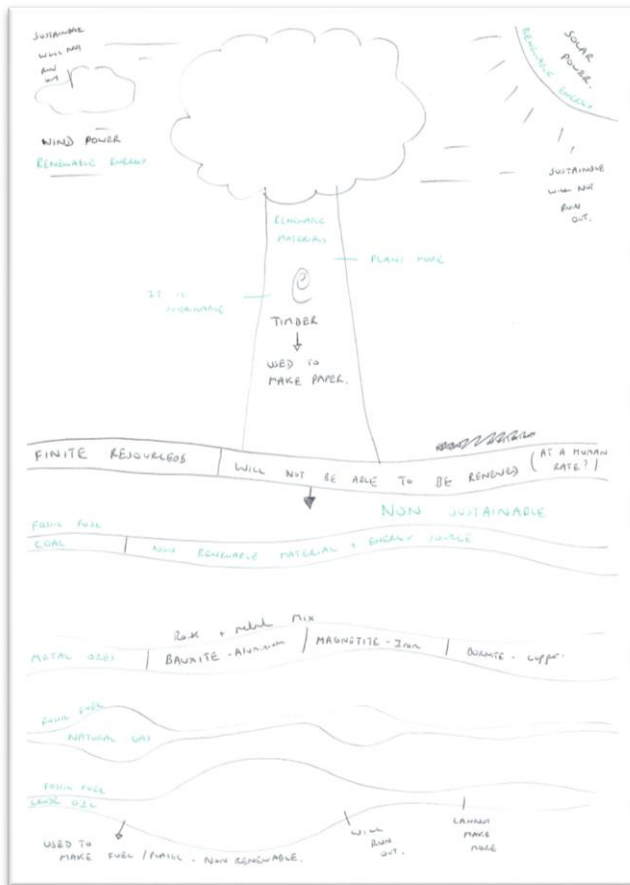
Use images & visual prompts to help you remember facts and information

Here are 2 examples:

Example 1:

This image of the tree and the layers on the ground help pupils to remember about a range of areas:

- Renewable and non-renewable sources
- Energy sources
- Primary sources of materials and where they come from
- Sustainable sources
- Definitions could be added to each section



Example 2:

The 6 fingered hand is a simple way of remembering the 6 R's of sustainability.

The idea is that within each finger pupils write examples of each one in everyday life as well as a brief definition to explain it.

Other ways this could be done: use pictures to explain step by step the journey that wood goes from being cut down, to transported, sawn/ converted, seasoned, planed and cut to size.

