



Weaverham High School

Design and Technology Department – Design and Technology 8552.



Year 9 – Preparing for GCSE

AQA DESIGN AND TECHNOLOGY-8552

You have chosen to study Design and Technology over the next two years, by combining the following information along with the resources provided you can begin your preparation for Year 10

During the remainder of Year 9 we would advise to start with learning as much as possible about the conversation and production of timber products

Another skill that is extremely important is communicating designs therefore practicing the different communication techniques listed will help massively next year

How is it assessed?

Written exam: 2 hours 100 marks 50% of GCSE

This qualification involves three Sections of study and assessment opportunities in a terminal exam 50% and also a Non-examined assessment (NEA) project 50%

Section 1 – Core technical principles (20 marks) a mixture of multiple choice and short answer questions assessing a breadth of technical knowledge and understanding.

Section 2 – Specialist technical principles (30 marks) several short answer questions (2–5 marks) and one extended response to assess a more in depth knowledge of technical principles.

Section 3 – Designing and making principles (50 marks) a mixture of short answer and extended response questions.



Non-Examined Assessment (NEA) Project: 30–35 hours approx.: 100 marks 50% of GCSE

This involves the substantial design and make task the project will require: Assessment

criteria: • Identifying and investigating design possibilities • Producing a design brief and specification • Generating design ideas • Developing design ideas • Realising design ideas • Analysing & evaluating



Section 1-Core Technical Principles

In order to make effective design choices students will need a breadth of core technical knowledge and understanding that consists of: • new and emerging technologies • energy generation and storage • developments in new materials • systems approach to designing • mechanical devices • materials and their working properties

Section 2- Specialist technical principles

In addition to the core technical principles, all students should develop an in-depth knowledge and understanding of the following specialist technical principles: • selection of materials or components • forces and stresses • ecological and social footprint • sources and origins • using and working with materials • stock forms, types and sizes • scales of production • specialist techniques and processes • surface treatments and finishes

Section 3 – Designing and making principles

Students should know and understand that all design and technology activities take place within a wide range of contexts. They should also understand how the prototypes they develop must satisfy wants or needs and be fit for their intended use. For example, the home, school, work or leisure. They will need to demonstrate and apply knowledge and understanding of designing and making principles in relation to the following areas: • investigation, primary and secondary data • environmental, social and economic challenge • the work of others • design strategies • communication of design ideas • prototype development • selection of materials and components • tolerances • material management • specialist tools and equipment • specialist techniques and processes

Support materials

Hard Copies:

- AQA GCSE (9-1) Design and Technology: Timber, metal-based materials and polymers
- Hodder Education-my revision notes
- PG Online-Design and Technology
- CGP GCSE AQA Design & Technology-The Revision Guide



On Line:

Specification: <https://filestore.aqa.org.uk/resources/design-and-technology/specifications/AQA-8552-SP-2017.PDF>

Past Exam Papers: <https://www.aqa.org.uk/subjects/design-and-technology/gcse/design-and-technology-8552/assessment-resources?f.Sub-category%7CF=Sample+papers+and+mark+schemes>

Useful information: www.weaverhamhighschool.com log in to FROG and look at all the resources in Design and Technology

<http://www.technologystudent.com/>

<https://www.bbc.co.uk/bitesize/subjects/zvg4d2p>

Focus software linked on google classrooms and FROG

<https://dev.practicalaction.org/sustainability-matters-in-design-and-technology>

Wide range of products being produced:

https://www.youtube.com/results?search_query=how+it%27s+made+uk

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

https://www.youtube.com/watch?v=T01i_vp2mJE plastic bottles

<http://www.youtube.com/watch?v=yh2jx0xqlzU> vacuum forming bath tubs

<http://www.youtube.com/watch?v=QoNHsWvLkWO> press moulding cups/knives forks

<https://www.youtube.com/watch?v=Lhigu23NQlw> plastic from potatoes

<http://www.youtube.com/watch?v=6eCt0VDg-Kc> how plastic is made

<http://www.youtube.com/watch?v=SwxinbpQ9B4> timber production

<http://www.youtube.com/watch?v=8CfL5xI2N1Q> plastic bags

<http://www.youtube.com/watch?v=mRA6RY2o9Lg> steel forging

<http://www.youtube.com/watch?v=qitenYvpSx4> various plastic processing

<http://www.youtube.com/watch?v=9I7JqonyoKA> steel start to finish
<http://www.youtube.com/watch?v=n1eU7tGo7yc> veneers
<http://www.youtube.com/watch?v=EgCZoYX7WTg> ply wood
<http://www.youtube.com/watch?v=Yt2rmu2Omrs> plywood
<https://www.youtube.com/watch?v=53gjegCuWmU> sustainable timber Australia
<https://www.youtube.com/watch?v=qitenYvpSx4> –MDF and CAD/CAM
https://www.youtube.com/watch?v=1UO_A5a25U4&index=3&list=PL5363C9618C1990D2 –nor board
<http://www.youtube.com/watch?v=TeBX6cKKHWY> arc welding
<http://www.youtube.com/watch?v=DWJQudCiUes> Acetylene welding
<http://www.youtube.com/watch?v=CI5RsAzSonY> mig weld
http://www.youtube.com/watch?v=I_NU2ruzyc4&index=3&list=PLDBB5FE749A7FD773 soldering
<http://www.youtube.com/watch?v=KnyB9btIhS8> hot air mass production

Timber conversion

https://www.youtube.com/watch?v=5f_FjfiQQfo	Logging 1920's	0-4.00
https://www.youtube.com/watch?v=FJDD9VCSfpY	Log drive	0-2.36
https://www.youtube.com/watch?v=jMcZOMYRokY	Modern equipment	0-4.00
https://www.youtube.com/watch?v=Ed-U4_Ayfwv	Red Stag Newzeland best	0-7.00
https://www.youtube.com/watch?v=YIXoZzfBJK0	New Zealand logging	0-.30, 4.40-5.30
https://www.youtube.com/watch?v=yphYtfsK-8c	Air drying	
https://www.youtube.com/watch?v=oxNBjv7_Kvg	Kiln dried wood	
https://www.youtube.com/watch?v=9sK2kwA89cw	Slash sawn	1:30-2.30
https://www.youtube.com/watch?v=VvUPJPfG4wM	Quarter Saw	
https://www.youtube.com/watch?v=wkJY5rt7roY	planer	0-1.00
https://www.youtube.com/watch?v=yuxUtyLISEM	truck accident	
https://www.youtube.com/embed/rKRPFlyUBDU	Sustainability wood	

Sustainability

http://www.youtube.com/watch?v=y8WGi5N_KXo
<http://www.youtube.com/watch?v=TpKEkRBcTEk>
<http://www.youtube.com/watch?v=6ZZfsSs3E98>
<http://www.youtube.com/watch?v=m4fhpimT8bg>
<http://www.youtube.com/watch?v=xmbEHqOySxl&feature=related>
<http://www.youtube.com/watch?v=3cp1ITBqhx8>
<http://www.youtube.com/watch?v=LbRiA3svFjc&feature=fvwrel>
<http://www.youtube.com/watch?v=awA9vayvxA>

Landfill

<http://www.youtube.com/watch?v=uP9Tcf0CaV0&feature=related>
<http://www.youtube.com/watch?v=pC1u6rJkyzA&feature=related>

Quality Control and Assurance

<https://www.youtube.com/watch?v=XRnt33txsl8> health org
<https://www.youtube.com/watch?v=CgEeuZGmUvw> lifestyle
<https://www.youtube.com/watch?v=qitenYvpSx4> –MDF and CAD/CAM
https://www.youtube.com/watch?v=1UO_A5a25U4&index=3&list=PL5363C9618C1990D2 –nor board
<https://www.youtube.com/watch?v=-DJypFyptRY> –half way through environmental issues