

Yr 11 GCSE Design and Technology (AQA): PPE2

If you didn't complete any revision for the last PPE we are hoping that you have learnt a valuable lesson! You also need to make sure that you do not answer questions on topics where your knowledge might be limited (eg I wouldn't answer a question on a cotton skirt if I could answer a question on a plywood chair)

Drawing techniques were also highlighted as an area for development – Isometric drawing, third angle and perspective drawing needs to be secure knowledge

Core Technical Principles (all page references refer to your CGP blue revision guide)

Topic	R	A	G	To further your understanding try answering these questions:	Page ref.
Powering systems				<ul style="list-style-type: none"> Identify the difference between a Finite and Non-finite fuel. Be able to name examples of fossil fuels List an advantage and disadvantage of nuclear power 	p.12- p.13
Sustainability				<ul style="list-style-type: none"> Explain the meaning of the six Rs – Reduce, Reuse, Refuse, Repair, Recycle, Rethink 	p. 6-9
Designing and Making Principles				<ul style="list-style-type: none"> Be able to explain the Iterative Design process. Explain why designers conduct research and product analysis before designing. 	p.104- p 108
Specialist terminology				<ul style="list-style-type: none"> Be able to define specific technical language: Ergonomics Anthropometrics Aesthetics CNC CAD/CAM 	p 102 p 96 p 4-5
Work of others				<ul style="list-style-type: none"> Be able to list a designer and design era and comment on their impact on design and society 	P 94- 95
Mechanical Systems				<ul style="list-style-type: none"> Be able to describe different types of motion Explain the difference between a first, second, and third order lever Name and explain different types of linkages Understand how gearing can affect output – be able to use gear ratio equation. Describe the use of a variety of Cams and followers Be able to explain how a pulley can provide a mechanical advantage 	p.28 - 31
Materials - Timbers				<ul style="list-style-type: none"> Define the difference between a natural and a man-made board Explain the difference between a hardwood and a softwood. Be able to name three hard and softwoods stating their appearance, properties and what they could be used for 	p.17
Materials - Metals				<ul style="list-style-type: none"> Explain where metal is sourced. Be able to define a ferrous metal Be able to define a non-ferrous metal Be able to define the term - alloy Name three non-ferrous metals, detailing their properties and uses 	p.14 p. 18

				<ul style="list-style-type: none"> ○ Name three ferrous metals, detailing their properties and their uses. ○ Define toughness, hardness, ductile, malleability, tensile strength – relating to properties of metals 	
Materials - Polymers				<ul style="list-style-type: none"> ○ Understand the difference between a thermosetting and a thermoplastic ○ Be able to name two thermoplastic and two thermosetting plastics explaining their properties and possible uses ○ Explain how the vacuum forming process works ○ Explain how the injection moulding process works (lego) ○ Explain how the blow moulding process works 	p.123
Technical materials				<ul style="list-style-type: none"> ○ Understand what is meant by a Smart Material ○ Be able to name three examples of a Smart material and their uses ○ Understand what is meant by a Modern Material ○ Be able to name three examples of a Modern material and their uses ○ Understand what is meant by a composite material ○ Know a little about technical textiles!! 	p.32-35
Business Initiatives and models				<ul style="list-style-type: none"> ○ Understand how a business can be developed under a co-operative model ○ Understand how businesses can be started up by crowd funding 	p.10
Renewable energy				<ul style="list-style-type: none"> ○ How is power generated from: ○ Wind? ○ Solar? ○ Tidal? ○ Hydro-electrical? ○ Biomass? ○ What are the pros and cons of using each renewable energy type? 	P12
Treatments and finishes				<ul style="list-style-type: none"> ○ How can metal be protected from the elements ○ How can you stop wood from decaying and rotting 	p.73 p72