GCSE Resistant Materials

Below is a PLC for your GCSE Subject. Each topic appears in the specification and you must revise its contents. Use the RAG system to highlight your areas of strength and development and make a note of where you can get information from to support you with your revision preparation. Please note that the work you have done for your coursework covers several topics relating to your exam.

Area	R	A	G	Resources
Materials; Metals, timber, plastics , composites, smart and nanomaterials				Kerboodle digital book section 1 pages 8-27 Theory lesson PowerPoints Coursework folder
Materials: sources of different materials				
Materials: recycling, reusing ,disposal				
Materials: metals working characteristics, properties, ferrous and non-ferrous, heat treatments and alloys				
Materials: plastics working characteristics, properties, thermo and thermosetting				
Materials: wood working characteristics, properties, hardwoods and softwoods and manufactured boards				
Materials: how materials can be combined				
Materials: smart materials have a reactive capacity				
Materials: nanomaterials can change characteristics of a material				
Components: pre-manufactured components				Kerboodle digital book section 2 pages 28-45
Components: different fixings				
Finishes: different finishes for a range of materials				
Adhesives: different adhesives for a range of materials				
Design and market influences: product analysis				Kerboodle digital book section 7 pages 78-84 Coursework folder
Design and market influences: affect on manufacturer				
Design and market influences: affect on user				
Design and market influences: affect on environment				
Design and market influences: health and safety issues				
Task analysis: identify factors that will influence the design				
Task analysis: consider needs of client and user				
Task analysis: market pull, technology push				Kerboodle digital book section 3 pages 54-55
Research and analysis: use relevant sources of information				Kerboodle digital book section 13 pages 142-145 Coursework folder
Research and analysis: ergonomics and anthropometrics				
Research and analysis: aesthetic and functional requirements				
Research and analysis: influence of successful designers				Kerboodle digital book section 3 pages 56-59

Product specification: generate a specification				Coursework folder

Area	R	A	G	Comment
Product specification: use specification to influence design				Coursework folder
Designing: Use range of 2D/3D techniques				
Creativity: generate wide range of ideas				
Creativity: consider the use of different materials				
Creativity: consider the use of different processes				
Evaluation: check design proposals against specification				Kerboodle digital book section 16 pages 164-167 Coursework folder
Evaluation: modify specification in light of ideas				
Evaluation: review design to simplify it				
Development of ideas: modelling techniques				Coursework folder
Development of ideas: client testing				Kerboodle digital book section 14 pages 146-155 Coursework folder
Development of ideas: consideration of materials				
Development of ideas: consideration of construction				
Development of ideas: formal drawings, CAD				
Development of ideas: testing against specification				Coursework folder
Planning for manufacture: selecting appropriate materials				Kerboodle digital book section 8 pages 98-99 Coursework folder
Planning for manufacture: specify quantities, sizes and tolerances				
Planning for manufacture: producing a sequence of instructions for a third party				
Planning for manufacture: quality control				
Planning for manufacture: time scales				
Planning for manufacture: methods to aid accuracy and repetition				Kerboodle digital book section 1 pages 130-131
Social and cultural: influence of different cultures and societies				Kerboodle digital book section 5 pages 66-67 Coursework folder
Social and cultural: impact of products on lifestyle				
Consumer rights: legal requirements and safety				Kerboodle digital book section 7 pages 84-85
Sustainability and environmental issues: concerns with designing and making				Kerboodle digital book section 6 pages 72-74

Area	R	A	G	Comment
Sustainability and environmental issues: 6Rs				Kerboodle digital book section 6 pages 77-76 Coursework folder
Moral, ethical and economic issues: financial and human costs in designing and making				Kerboodle digital book section 5 pages 68-69 Coursework folder
Health and safety: risks and hazards in workshop				Kerboodle digital book section 6 pages 104-105 Coursework making
Health and safety: product safety for consumer				Kerboodle digital book section 7 pages 84-85
Processes and manufacture: appropriate manufacturing processes for materials and products				Kerboodle digital book section 11 pages 113 -131 Coursework making
Processes and manufacture: CAD/CAM				
Processes and manufacture: tools and equipment for different materials				
Processes and manufacture: preparation of different materials				
Processes and manufacture: marking out different materials				
Processes and manufacture: cutting different materials				
Processes and manufacture: shaping different materials				
Processes and manufacture: forming and bending different materials				
Processes and manufacture: casting metals				
Processes and manufacture: permanent and non-permanent joining methods				
Processes and manufacture: marking out different materials				
Processes and manufacture: cleaning materials				
Processes and manufacture: different finishes for different materials				
Processes and manufacture: different methods of applying finishes				
Processes and manufacture: CAM systems				
Systems and control: basic mechanisms				Kerboodle digital book section 12 pages 132-137
Systems and control: basic electrical systems				
Systems and control: quality control checks during making				Kerboodle digital book section 7 pages 84-85 Coursework folder
Systems and control: quality control procedures				
Computer technology and communication: Using ICT to research, record, gather and present ideas				Coursework folder

Computer technology and communication: Using CAD to develop ideas				Kerboodle digital book section 8 pages 94-95 Coursework folder
Computer technology and communication: Using CAD to present accurate drawings				
Computer technology and communication: CAD/CAM awareness of latest technologies				Kerboodle digital book section 7 pages 128-129
Industrial practices: one-off, batch and continuous production				Kerboodle digital book section 11 page 130
Industrial practices: roles of client, designer, manufacturer and user in development				Kerboodle digital book section 7 pages 78-79
Industrial practices: effects of manufacturing in quantity and introduction of new technologies				Kerboodle digital book section 11 pages 128-129