

Resistant Materials	The ability to recall, select and communicate knowledge and understanding in design and technology	Apply Knowledge, understanding and skills in a variety of contexts and in designing and making products	Analyse and evaluate products, including their design and production.	Additional indicators
% of total Grade	25%	50%	20%	5%
A*(8)	<p><b>Can independently</b> Generate a clear and thorough understanding of all aspects of the design problem. Thoroughly analyse several products of systems. Research a wide range of different aspects of the chosen design and thoroughly evaluate them all. Generate a Design specification which is detailed, thorough and reflects the research in every detail. Profile an intended customer and thoroughly explain and analyse any relevant findings.</p>	<p><b>Can independently</b> Generate design ideas which show flair, originality and creativity. Draw up detailed plans for manufacture, suitable for 3<sup>rd</sup> part interpretation. Show a thorough understanding of social, moral, environmental and sustainability issues, and explain how they have thoroughly informed the design. Develop designs in increasing sophistication through a wide range of techniques, including modelling, drawing and CAD. Thoroughly explain choice of materials/components re properties/functions. Produce a complete artefact, which has a flawless finish, is completely accurately made and is suitable for commercial production. Use materials and equipment correctly, safely, skilfully and independently. Made a product which shows a very high level of skill and which is completely suitable for the intended market. Systematically/thoroughly check all aspects of work, making appropriate modifications.</p>	<p><b>Can independently</b> Identify, explain and evaluate the thorough on going tests made on the product. Thoroughly test the product against design intentions and explain and evaluate the differences in terms of user appeal, function and commercial production. Identify and justify all improvements to the product in terms of user appeal, function and commercial production.</p>	<p><b>Can independently</b> Communicate decisions clearly and skilfully using appropriate technical language. Faultlessly use grammar, punctuation and spelling. Present work in an outstanding way in terms of neatness, layout and use of space.</p>
A (7)	<p><b>Can independently</b> Generate a clear and thorough understanding of the design</p>	<p><b>Can independently</b> Generate design ideas which show a high degree of flair and creativity.</p>	<p><b>Can independently</b> Identify, explain and evaluate the on-going</p>	<p><b>Can independently</b> Communicate decisions clearly</p>

	<p>problem. Thoroughly analyse several products or systems. Research a broad range of different aspects of the chosen design and thoroughly evaluate them all. Generate a Design Specification which is detailed, thorough and reflects the research in detail. Profile an intended customer and explain and analyse relevant findings.</p>	<p>Draw up detailed plans for manufacture, suitable for third party interpretation. Show an understanding of social, moral, environmental and sustainability issues, and explain how they have thoroughly informed design proposals. Develop designs in increasing sophistication through modelling, drawing/CAD. Explain choice of materials/components in terms of properties and functions. Produce a complete artefact, which has a good finish, is accurately made and is suitable for commercial production. Use materials and equipment correctly, safely and independently. Made a product which shows a high skill level and is suitable for intended market. Systematically check the quality of work, and make appropriate modifications.</p>	<p>tests made on the product. Test the product against design intentions and explain and evaluate the differences in terms of user appeal, function and commercial production. Identify and justify several improvements to the product in terms of user appeal, function and commercial production.</p>	<p>using appropriate technical language. Faultlessly use grammar, punctuation and spelling. Present work in an outstanding way in terms of neatness, layout and use of space.</p>
B (6)	<p><b>Can independently</b> Generate a clear understanding of the design problem. Thoroughly analyse a range of products or systems. Research several different aspects of the chosen design and thoroughly evaluate them. Generate a Design Specification which is detailed, thorough and reflects research. Profile an intended customer and explain and analyse any relevant findings.</p>	<p><b>Can independently</b> Generate design ideas which show flair and creativity. Draw up plans for manufacture, suitable for third party interpretation. Show an understanding of social, moral, environmental and sustainability issues, and explain how they have informed design proposals. Develop designs in sophistication through modelling, drawing and CAD. Explain choice of materials/components in terms of properties and functions. Produce a complete artefact, which has a good finish, is accurately made and is suitable for commercial production. Use materials and equipment correctly, safely and</p>	<p><b>Can independently</b> Identify, explain and evaluate the tests made on the product. Test the product against design intentions and explain the differences in user appeal, function and commercial production. Identify and justify any improvements to the product in terms of user appeal, function</p>	<p><b>Can independently</b> Communicate decisions clearly using appropriate technical language. Use grammar, punctuation and spelling in a skilful way. Present work in a clear way re neatness, layout and use of space.</p>

		<p>independently. Systematically check the quality of work, and make modifications. Make a product which shows a high skill level and is suitable for intended market.</p>	<p>and commercial production.</p>	
C (5)	<p><b>Can independently</b> Display a good understanding of the design problem. Analyse other products or systems. Research and explain a few areas concerning production. Generate a Design Specification reflecting the research. Stated who the likely customer is and explained why.</p>	<p><b>Can independently</b> Generate design ideas which are creative to some degree. Plan how to make the product. Show knowledge of social, moral, environmental and sustainability issues. Develop work through modelling and drawing and CAD. Explain the choice of materials and components used. Make a product which his finished and shows accuracy. Use materials and equipment correctly and safely. Make some parts of the product skilfully. Check the quality of work. Make a product which, with one or two minor changes, is suitable for the customer.</p>	<p><b>Can independently</b> Explain why the final product is how it is. Test the product against the design idea and explained any differences. Suggest a few improvements or modifications to the product.</p>	<p><b>Can independently</b> Choose carefully what to put into the design folder. Draw and explain decisions clearly using proper technical language. Use grammar, punctuation and spelling in a largely accurate way.</p>
D (4)	<p><b>Can independently</b> Display an understanding of the design problem. Analyse a limited range of other products or systems. Research a few areas concerning production. Generate a Design Specification reflecting some of the research. State who the likely customer is.</p>	<p><b>Can independently</b> Generate design ideas which are creative to some small degree but are somewhat derivative. Plan how to make some parts of the product. Show a rudimentary knowledge of social, moral, environmental and sustainability issues. Develop work in a limited way through modelling and drawing and CAD. Little explanation of the choice of materials and components used. Make a product which is mostly finished and shows some accuracy. Use materials and equipment safely. some parts of the product show some skill.</p>	<p><b>Can independently</b> Explain why some of the final product is how it is. Test some of the product against the design idea and explained some of the differences. Suggest an improvement or modification to the product.</p>	<p><b>Can independently</b> Choose what to put into the design folder, but it contains irrelevant content. Draw and explain decisions using technical language in a limited way. Use grammar, punctuation and spelling in a way that contains many</p>

		<p>Check the quality of some of the work.</p> <p>Make a product which, with a few changes, is suitable for the customer.</p>		errors.
E (3)	<p><b>Can independently</b></p> <p>Understand the basic design problem.</p> <p>Analyse another product.</p> <p>Do limited research and explain some of it.</p> <p>Generate a Design Specification which is very general and lacks detail.</p> <p>State who the likely customer is.</p>	<p><b>Can independently</b></p> <p>Generate ideas which are derivative.</p> <p>Plan some stages of manufacture.</p> <p>Say something about social, moral, environmental and sustainability issues.</p> <p>Generate drawings and models which are not detailed and have little explanation as to how they have contributed to the design process.</p> <p>Explain in a simple way some of the choices of materials used for the product.</p> <p>Generate a product which is not finished and/or is not accurate.</p> <p>Use materials and equipment safely with assistance.</p> <p>Make a product, one of two parts of which are accurate.</p> <p>Only check the quality of the product occasionally.</p> <p>Make a product which is not really suitable for the customer.</p>	<p><b>Can independently</b></p> <p>Explain why some of the product is how it is.</p> <p>Test some parts of the product and explain some differences.</p> <p>Suggest some improvements or modifications to the product.</p>	<p><b>Can independently</b></p> <p>Generate a design folder which contains much irrelevant content.</p> <p>Draw and explain decisions using some technical language in a limited way.</p> <p>Use grammar, punctuation and spelling in a limited way. It contains many errors.</p>
F (2)	<p><b>Can independently</b></p> <p>Understand some aspects of the basic design problem.</p> <p>Analyse another product in a limited way.</p> <p>Do limited research and explain one of two aspects of it.</p> <p>Generate a Design Specification which is limited, very general and lacks any real detail.</p> <p>State a likely customer.</p>	<p><b>Can independently</b></p> <p>Generate a very limited range of ideas, which are derivative.</p> <p>Plan some stages of manufacture in a generalised way.</p> <p>Have an awareness of social, moral, environmental and sustainability issues.</p> <p>Generate drawings and models which are not detailed and have no explanation as to how they have contributed to the design process.</p> <p>Explain in a poor way some of the choices of materials used for the product.</p> <p>Generate a product which is not finished and is not</p>	<p><b>Can independently</b></p> <p>..Explain why a part of the product is how it is.</p> <p>Test a part of the product and explain a difference.</p> <p>Suggest an improvement or modification to the product.</p>	<p><b>Can independently</b></p> <p>Generate design folder which contains much irrelevant content.</p> <p>Draw and explain decisions using some technical language in a limited way.</p> <p>Use grammar, punctuation and</p>

		<p>accurate.  Use materials and equipment with assistance.  Make a product which is largely inaccurate.  Check one aspect of the quality of the product.  Make a product which is not suitable for the customer.</p>		<p>spelling in a way that contains many errors and is inarticulate.</p>
G (1)	<p><b>Can independently</b>  Understand an aspect of the basic design problem.  Analyse another product in a superficial way.  Do very limited research.  Generate a very limited Design Specification which is lacking in any detail.  State a target market which has no relation to the product.</p>	<p><b>Can independently</b>  Generate an idea, which is derivative.  Plan a state of manufacture in a generalised way.  Have a limited understanding of social, moral, environmental and sustainability issues.  Generate a limited selection of drawings and models which show little detail and have no explanation as to how they have contributed to the product.  Explain in a poor and limited way one or two of the choices of materials used for the product.  Generate a product which is not finished, not accurate and poorly executed.  Use materials and equipment with a very significant amount of assistance.  Make a product which is largely inaccurate.  Check one aspect of the quality of the product.  Make a product which is not suitable for the customer.</p>	<p><b>Can independently</b>  Explain in a limited way why a part of the product is how it is.  Test a part of the product and explain, in a limited way, a difference.  Suggest an improvement to the product.</p>	<p><b>Can independently</b>  Generate a design folder which contains much irrelevant content.  Draw and explain decisions using no technical language or conventions.  Use grammar, punctuation and spelling in a way that contains a large amount of errors and is inarticulate.</p>
H	<p>Can Independently-  Understand the task at hand.  Recognise similar products.  Get pictures of a variety of similar product.  Generate a specification that cover the obvious features.  The target market is themselves.</p>	<p>Can Independently  Generate one Idea  Plan some obvious stages on a plan sheet.  Make a statement that implies some understanding of social, moral, environmental and sustainability issues.  Produce some sketches of several differing proposed product.  Chose the obvious material with some explanation why  Produce some part of a product with some accuracy  Was able to check for accuracy.</p>	<p>Can Independently  Explain how the product works and the function it performs.  Suggest an improvement.</p>	<p>Can Independently  Draw with some explanation but no use of technical language.  Explanation of one or two keywords.  Many spelling and grammar errors.</p>

		Product is incomplete.		
I	<p>Can Independently- Understand short tasks. Recognise a similar product. Get pictures of a similar product. Generate a specification that cover the obvious features. The target market is themselves.</p>	<p>Can with assistance... Generate one Idea Plan some obvious stages on a plan sheet. Make a statement that implies some understanding of social, moral, environmental and sustainability issues. Produce some sketches of several differing proposed product. Chose the obvious material with some explanation why Produce some part of a product with some accuracy Was able to check for accuracy. Product is incomplete.</p>	<p>Can with assistance... Explain how the product works and the function it performs. Suggest an improvement.</p>	<p>Can with assistance Draw with some explanation but no use of technical language. Explanation of one or two keywords. Many spelling and grammar errors.</p>
J	<p>Can with assistance- Understand short tasks. Recognise a similar product. Get pictures of a similar product. Generate a specification that cover the some features. The target market is themselves.</p>	<p>Can with assistance... Generate part of one Idea Know some obvious stages of a plan. Have no understanding of social, moral, environmental and sustainability issues. Produce a sketches of a proposed product. Chose the obvious material without explanation why Produce some part of a product with no accuracy Was not able to check for accuracy. Product is incomplete.</p>	<p>Can Independently... Verbally explain how the product works and the function it performs. Verbally suggest an improvement.</p>	<p>Can with assistance Draw with no explanation Many spelling and grammar errors.</p>
K	<p>Can with assistance- Understand short tasks. Recognise a similar product. Get pictures of a similar product. The target market is themselves.</p>	<p>Can with assistance... Recognise a design and follow step by step instructions to make a simple product</p>	<p>Can with assistance... Verbally explain how the product works and the function it performs. Verbally suggest an improvement.</p>	<p>Can with assistance Draw with no explanation Many spelling and grammar errors.</p>
L	<p>Can with assistance- Understand short tasks. Recognise a similar product. Get a picture of a similar product.</p>	<p>Can with assistance... Recognise a design and follow step by step instructions to make part of a simple product</p>	<p>Can show others how a product functions</p>	<p>Can with assistance Draw with no explanation Many spelling and</p>

	Making for themselves.			grammar errors.
M	Recognise a product and how it is used.	With assistance and help make the same product	Can show others how a product functions	Can with assistance Draw with no explanation Many spelling and grammar errors.