

# Research (Analysis of Brief, Research & Analysis, Product Analysis, Specification)

Have you ...	Level
... said something about what <u>a</u> product does?	1
... said something about what <u>the</u> product does / who uses it?	2
... identified the user and give four features / things the product needs to do? In addition, identified four different features of an existing product.	3
... identified the important features that will be needed in your design and stated at least 6 in your specification. In addition, considered the constraints that will limit what can be made? ... when analysing products, have you identified 5 different features of the same product including some that allow it to do what is needed?	4
... carried out research into a few features needed by the design and explained why some of the identified features are important with at least 8 needs in the specification. ... when analysing products, have you described the features of at least two related products?	5
... carried out and commented on research into some features and explained why these are needed in the design; with at least 10 points on a specification, including measurable criteria. ... when analysing products, have you explained the reasons for some identified features of at least two related products?	6
...carried out research into more than half the features needed? ... investigate most of the relevant features of at least two related products, including how they were made and what they are made from? ... shown how the results of your research and analysis influenced all of your design criteria ?	7
... identified the target market for the product and carried out research into most of the features needed by the design and explain why they are important? ... carried out detailed product analysis of at least two related products, explaining the reasons for their design features? ... explained how the results of your research and analysis influenced the development of your design criteria and product specification?	8
... identified the target market for the product and carried out research into all of the features needed by the design and explain why all are important? ... carried out detailed product analysis of several related products, explaining the reasons for all their design features? ... Explained thoroughly how the results of your research and analysis will influence your all your design criteria?	9
...demonstrated whilst researching and analysing all of the above and to an exceptional standard.	10

# Design (Ideas Generation, Development of Ideas, Design Proposal)

Have you ...	Level
... generated one stereotypical idea?	1
... generated two similar stereotypical ideas?	2
... generated at least three different ideas and labelled the important features to suggest the materials and components to be used? ... developed your initial design ideas to create your final design?	3
... generated ideas that show some creativity and consider environmental or sustainability factors. In addition, consider how ideas will meet the needs of the users and satisfy a few of the design criteria? ... chosen at least one of the materials or components that you plan to use based on some of its properties? ...use modelling to test at least one feature of the proposed design	4
... generated creative ideas influenced by either a social, moral, environmental or sustainability issue. Do your ideas satisfy most of the design criteria? ... used knowledge of their working properties to choose a few of the materials or components? ...developed your work through modelling and other techniques. ...used modelling to test a few features of the design against the design criteria	5
... generated highly creative ideas and explained how they address at least 5 different types of need. In addition, given reasons for the main features and described how these have been influenced by either a social, moral, environmental or sustainability consideration; and show that some satisfy aspects of your design criteria ... used knowledge of their working properties to choose some of the materials or components? ...developed (and evaluated) ideas using more than one type of modelling (could include CAD) ...described how your design ideas have changed during the development of your design criteria.	6
... shown how your ideas have been influenced by more than one social, moral, environmental or sustainability considerations/ objectively evaluated your design ideas against some of the design criteria/considered the needs of the user/satisfied many of your design criteria? ... used knowledge of their working properties to choose most of the materials or components? ...used modelling or computer simulation to test several features of the design against the criteria? ...explained how your design ideas have been developed and improved to create the final design proposal?	7
... explained in detail the main features of your ideas, showing where your research has influenced your designs and explained how these have been influenced by a range of social, moral, environmental and sustainability issues. In addition, objectively evaluated your designs against most of the design criteria and generated a design proposal that satisfies most of your design criteria? ... used knowledge of their working properties to choose all of the materials or components that you plan to use? ... made useful and effective changes to your design due to your development work? ... made a scale model or a computer simulation to test most features of the design proposal against the design criteria?	8
... explained in detail all features of your ideas, showing where your research has influenced your designs and objectively evaluated these against all of the criteria? ... made a scale model or a computer simulation to test all features of the design proposal against the design criteria?	9
...demonstrated whilst designing all of the above and to an exceptional standard.	10

# Plan and Make

Have you ...	Level
...identified how you could make your product? ...used tools and materials to make a product?	<b>1</b>
...identified some materials and tools for making your product, and considered the stages involved in completing the task? ...used tools and materials to make a product that is identifiable from your design?	<b>2</b>
... chosen the materials and components needed to make your product and listed some tools and equipment needed? ... prepared some instructions for making your product with tasks in the correct order? ... made a finished product safely whilst demonstrating some basic skills, using a few tools or processes correctly?	<b>3</b>
... described some of the correctly sequenced stages needed to make your product whilst identifying tools and equipment needed? ... whilst demonstrating an understanding of safe working practice made a product with some parts at a medium level of challenge, that is assembled to a satisfactory standard and correctly used a variety of tools or processes.	<b>4</b>
... generated a step-by-step list of the stages needed to make the product including details of processes and techniques with notes on health and safety where needed? In addition, identified which activities during making could affect how well your product will meet the general requirements of the design? ... made a product that had a medium level of challenge using a wide variety of different tools or processes correctly whilst demonstrating fair skills to achieve a generally well assembled outcome with a good finish?	<b>5</b>
...in the instructions for making included alternative tools and processes, and quality control checks that could be used? <i>(E.g. if tools are not available, or to make in large quantities)</i> ... made a product in which some parts have a high level of challenge, selecting and using a wide variety of different tools or processes correctly to achieve a well assembled product with a good overall standard? In addition, have carried out quality control checks for some features during the making?	<b>6</b>
... identified most of the individual activities that could affect how well your product will meet each of the design criteria? In addition, included process times, operating parameters and some quality control checks. ... made a product that had a medium to high level of challenge, whilst selecting and using a wide variety of different tools or processes correctly and demonstrating good or very good skills to achieve a well assembled and finished outcome? In addition, carried out quality control checks for most of the main features during making?	<b>7</b>
... prepared detailed instructions that could be used by someone else (without technical expertise) to successfully make the product, and included some appropriate forms of quality control? In addition, identified all of the individual activities during making that could affect how well your final product will meet each of the design criteria. ... made a product that had a high level of challenge, selected and used a wide variety of different tools or processes correctly, whilst demonstrating very good skills to achieve a well assembled outcome with a good finish? In addition, demonstrated how quality control checks were applied during the making of the product.	<b>8</b>
...in addition to level 8, identified and describe in detail all of the individual activities during making that could affect how well your final product will meet each of the design criteria? ... made a product that had a very high level of challenge, selecting and using the most appropriate tools or processes correctly, demonstrating very good skills to achieve a well assembled outcome with a flawless finish?	<b>9</b>
...demonstrated whilst planning and making all of the above and to an exceptional standard.	<b>10</b>

# Evaluation of the Final Product

Have you ...	Level
... made a brief comment on whether you think the product is successful or not.	<b>1</b>
... stated a difference between the design you were making and your final product?	<b>2</b>
... tested that your product does what it needed to and explained any differences between the design you were making and your final product?	<b>3</b>
... identified the good and bad features of the outcome and suggested at least two improvements that could be made to the product?	<b>4</b>
... tested at least one feature of the product against the design criteria and explained how and why you tested the product this way. In addition, have you commented about how suitable the product is for the target user?	<b>5</b>
... tested a few features of the final product against the design criteria and suggested at least three improvements with an explanation of why these are needed?	<b>6</b>
... tested some features against the design criteria and modified your product to improve how it works or functions. In addition, selected and justified a suitable method to evaluate if the outcome would be suitable for the target user?	<b>7</b>
... tested most features of the final product against the design criteria and demonstrated that the outcome would be suitable for the target market. In addition evaluated the commercial viability of the final product?	<b>8</b>
... tested all features of the final product against the design criteria and detailed how the outcome would be suitable for the target market. In addition, evaluated in detail the commercial viability of the final product?	<b>9</b>
...demonstrated whilst evaluating all of the above and to an exceptional standard.	<b>10</b>