

Candidate 6

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| 1a) | |
| Carbon fibre wheels are Durable | |
| and Lightweight So it can be easily | |
| carried | |
| Aluminium front wheels are Lightweight | |
| and easy to produce, allowing easy | |
| mass production | |
| Mild Steel frame is very durable | |
| meaning it isn't likely to break with | |
| use | |
| The use of Standard components | |
| allows it to be more easily produced | |
| for retail | |
| Stainless Steel bumper is Tough | |
| and durable so it won't break easily | |
| and will continue to look good | |
| after some use | |
| Aluminium frame makes the chair more | |
| lightweight and easier to carry/transport | |

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| b) | Nylon wheels are injected moulded, making the manufacture quicker and easier |
| | Die Casted Aluminium front wheels is quicker and cheaper than manually making them, allowing for easier mass production. |
| | The Steel frame would also be Die casted in separate parts and put together with standard components, which would be easier than trying to Die Cast the whole thing. |
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| c) | <p>A collapsible seat allows the wheel chair to be easily transported in a compact space such as in a car</p> <ul style="list-style-type: none">• The mild steel frame makes sure that the wheel chair isn't likely to come in under the users own weight.• The handles on the back of the collapsible wheel chair allow it to be pushed along by somebody else, which is good if the person on the wheelchair isn't capable to push themselves• The footrests on both wheelchairs ensure the users feet don't drag along the ground• The bumpers on the sports wheelchair provide protection to the possibly fragile feet feet of the user |

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| 2a) | It's alot easier and quicker than by hand allowing easier mass production |
| b) | PVC is suitable as it's relatively durable and comes in a range of colours to make the packaging more appealing |
| c) | Workability of the materials and cost. |
| 3a) | It allows you to make a more detailed prototype model of the headphones, more easily go back and change decisions made earlier and take apart the model to look at individual parts of the model Headphones |

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| b) | <p>A good brand would help to sell the product to fans of the brand who trust it and add artificial price making the cost more the product cost more.</p> |
| c) | <p>Copyright would be used to protect legally protect the design or name of a product.</p> |
| d) | <ul style="list-style-type: none">The product is sold to the consumerThe product is used by the consumer for some amount of timeThe product grows obsolete and is replaced by a newer version. |

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| 4a) | The colour of the Blue Razor |
| | would make it more appealing to |
| | younger men. |
| | • The Blue Razor has a more |
| | angular design with more edges |
| | where as the other Razor is more |
| | Smooth |
| | • The Blue Razor has a much |
| | simpler design compared to the other |
| | more complex Razors |
| | • The Metal Razor has contrasting |
| | colours to make it stand out. |
| b) | A Scale Model can be used to |
| | discover issues with the ergonomics or |
| | anthropometrics of a product either from |
| | a model person or actual person |
| | if the model is large enough. |

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A CAD model can be alot more detailed allowing you to get a good idea on how the final model will look like ~~not can be easily fixed~~. This can help discover issues with the aesthetics of the product and can be easily changed.

5a) i/. To give the designer an idea of what the client wants the product to look

- Colours, shape etc would be found in one

ii/. To give technical requirements of the product

- Sizes or \varnothing Dimensions would be found in one.

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| b) | • Questionnaires or Surveys. |
| | • Desk research - i.e. google |
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| c) | • They could use re-usable materials |
| | in their products. |
| | • They could use less hardwoods as |
| | they take far longer to grow. |
| | • They could use any left over materials |
| | from the manufacturing process in future |
| | products |
| | • They could design the product to |
| | last longer so overall less people will |
| | throw them out. |
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| 6a) | • Looking at the physical properties |
| | (i.e. colour) |
| | • Testing the durability of the material |
| | • Test the chemical resistance of it |

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• Test of it can be remoulded via heat.

b) Bosses, ribs and webs add structural strength to the product so it won't break as easily. Location pins are used to connect to another pin on the product to put a screw (or something similar) into to hold the product together.

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| c) | They tell the consumer what the product is made from and if the product has been properly tested. |
| 7) | ° Sketches can be used early in the design process to come up with ideas. |
| | ° Sketches can also be used to help and develop or refine a design fairly easily. |
| | ° CAD can be used later on in the design process to test the aesthetics of the design and if it looks suitable. |
| | ° CAD can also be used more easily go back and change earlier elements of the design if need be. |
| | ° You would use CAD to get a good idea of what the finished product would |

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