

ENTER NUMBER OF QUESTION	DO NOT WRITE IN THIS MARGIN
1.a)	Wheel easy collapsible wheelbarrow-
	The nylon wheel is suitable as nylon is self-lubricating. Therefore, the wheel will not get stiff and stop turning.
	The waterproof cloth is also suitable. Waterproof is a suitable feature because it often carries wet substances, therefore the cloth will not become damaged.
	The tubular mild steel frame is suitable because the metal can be extruded. This means that the the metal has the uniform strength due to the constant cross-sections, meaning the wheelbarrow can withstand holding a lot of dirt or other mixture.



* X 7 1 9 7 6 0 1 0 3 *

1

ENTER NUMBER OF QUESTION		DO NOT WRITE IN THIS MARGIN
	Endurance wheelbarrow -	
	The rubber tyre is suitable when taking into account the terrain it will cross. For example, if the wheelbarrow goes over stones, they will the rubber will simply move over them without any damage to the tyre, as the rubber is durable.	
	The galvanised mild steel tray and struts are suitable because of its strength. This means that a heavy amount of dirt or stones can be obtained by the wheelbarrow.	
	The tubular mild steel frame is also suitable as it can be bent easily. This means that they are easy to	



ENTER NUMBER OF QUESTION	DO NOT WRITE IN THIS MARGIN
	manufacture into the shape of the design, improving the function of the wheelbarrow.
b)	Extrusion can be used for mass production, as it can produce tubes to standard lengths, making them easy to produce.
	Injection moulding is appropriate for the polypropylene handles because this production method produces a high quality finish with intricate detail.
	Die casting could be used for the ^{galvanised} mild steel tray tray and it is successful because there is little waste.
c)	Psychology has influenced the endurance

* X 7 1 9 7 6 0 1 0 5 *
3

ENTER NUMBER OF QUESTION	DO NOT WRITE IN THIS MARGIN

wheelbarrow: The black polypropylene handles ~~signify~~ tell the consumer that this area is used to hold the wheelbarrow, as none of the other components are black, other than the wheel.

Psychology has also influenced the wheezy collapsible wheelbarrow. The brown colour tells the consumer that it should be used in the garden to lift dirt or other terrains or mixtures.

physiology has influenced the wheezy wheelbarrow. The UV-protected waterproof cloth is very tight, and therefore the consumer will not be caused any strain while lifting the barrow.



* X 7 1 9 7 6 0 1 0 6 *

4

ENTER
NUMBER
OF
QUESTIONDO NOT
WRITE IN
THIS
MARGIN

Physiology has influenced the endurance wheelbarrow too. For example, the tapered end of the wheelbarrow allows the contents to be poured out easily, rather than having to lift it out by hand, and therefore it causes less strain on the user.

d) One functional need is to be able to transport the contents, by a wheel. Therefore they both have wheels.

Another function is to be able to hold its contents easily. Therefore, they have either waterproof cloth or steel ~~frame~~ ^{tray, which is strong.}

Also, another function is to be able to be lifted up easily, in order to push it. The lightness of the cloth clarifies this function.

Another functional need is to be able to put the wheelbarrow down while holding contents. Hence the endurance barrow has tubes to sit down on.



* X 7 1 9 7 6 0 1 0 7 *

5

ENTER NUMBER OF QUESTION		DO NOT WRITE IN THIS MARGIN
	A final functional need is to be able to store the wheelbarrow easily.	
	The wheeleasy barrow is collapsible, minimising space needed to store it.	
	e) Standard components are ^{produced in} good for mass production, making them cheaper to retrieve.	
	It allows an easier construction of the the wheelbarrow than or product, because they are simple to work with.	
	They are easy to order or manufacture, and get a hold of them, due to them being common.	
	They are strong due to the uniform shape.	



* X 7 1 9 7 6 0 1 0 8 *

6

ENTER NUMBER OF QUESTION		DO NOT WRITE IN THIS MARGIN
2.a)	One benefit of laminated wood is the	
	good, smooth smooth finish it	
	provides.	
	Another benefit is that it is strong,	
	providing a firm base for the chair to	
	withstand a lot of weight.	
	Another benefit is that it is easy to	
	work with, meaning it is easy to cut	
	to size, and therefore it takes less time	
	to produce.	
b)	Die casting produces a good surface	
	finish, which enhances the aesthetics	
	of the chair.	
	Also, die casting is a mass production	
	method, making it easy to produce a	



* X 7 1 9 7 6 0 1 0 9 *

7

ENTER NUMBER OF QUESTION		DO NOT WRITE IN THIS MARGIN
	large quantity ^{of} bases.	
	c) In planning, research could be done to see how much costs certain materials cost, so that the designer could produce the best quality for the big set budget.	
	Research into their target market also ensures efficiency, so that they can understand what aesthetics are going to impress their clients, making it a more specific design.	
	The research of manufacturing processes could also be done carried out. This way, the designer can determine how cheaply they can produce their products, and how quickly.	



* X 7 1 9 7 6 0 1 1 0 *

ENTER NUMBER OF QUESTION	DO NOT WRITE IN THIS MARGIN
3.a)	A benefit of using rotational moulding is that it produces the perfect shape, due to the mould.
	Another benefit is that it produces a hollow seat, making it tighter less heavy for the child to move themselves.
	Also, a final benefit is that this this process produces a smooth finish, suitable for the child.
b)	ABS could be used for the play seat. This is because it is strong, meaning it won't snap when sat on. Another reason is because it can be produced in any colour, which is suitable for children who like a variety.



* X 7 1 9 7 6 0 1 1 *

ENTER NUMBER OF QUESTION		DO NOT WRITE IN THIS MARGIN
	of colours.	
	c) One safety issue is designing a product that has no sharp edges, so that the child cannot get hurt.	
	Another issue is making sure that the product is designed to a low height, involving anthropometrics. This is so that the child can fall off without getting hurt.	
	d) The use of only one material is effective in minimising their impact on the environment because there there is less less waste.	
	Also, manufacturers could use materials that are produced locally, as this	



ENTER NUMBER OF QUESTION	DO NOT WRITE IN THIS MARGIN
	would reduce transportation which
	is good for the environment.
	Manufacturers could also use "Just
	in Time" Production as this process
	allows the the ^{design} manufacture to produce
	the amount of products they need, only
	when they need them so that, again,
	there is no waste in product.
	Another method to minimise the impact
	on the environment is to design a
	product that is can can be built as
	one piece. This product reduces the
	manufacture costs and time, as it
	needs less time in manufacturing. Therefore
	it is better for the environment



ENTER NUMBER OF QUESTION		DO NOT WRITE IN THIS MARGIN
4.		
a)	<p>The needs of the target market have influenced the design of the site radio charger. One example is that it needs to be strong and durable, in case it gets damaged at a building site. Therefore it is a strong looking design, with special bumper sides.</p> <p>Also, in a building site the charger must stand out to make the builders see it easily, therefore the charger is yellow.</p> <p>Large speakers have also been included on the design, to overcome^{over play} the noise made by the builders on site. For example, to cancel out the noise of drills.</p>	



ENTER NUMBER OF QUESTION	DO NOT WRITE IN THIS MARGIN
b)	<p>The width of the palm has been considered while designing the top handle for the site radio charger. For example, the 95th percentile has been used to determine determine the length of the handle.</p>
	<p>The gripping size of a hand has also been considered, to design the girth of the handle. The 50th percentile has been used.</p>
c)	<p>An on-site user trial could have been used to evaluate the fitness for purpose. For example, a builder could have played the radio while drilling to see if he could hear the radio sound clearly.</p>



* X 7 1 9 7 6 0 1 1 3 5 *

ENTER NUMBER OF QUESTION		DO NOT WRITE IN THIS MARGIN
d)	<p>It encourages the consumer to buy their product as they know they can rely on it, with faith that it will work well.</p> <p>Also, people recognise their products more often than other brands, making DeWalt a likely choice to buy buy from. This is due to the stand-out yellow and black colours.</p>	
5.d)	<p>A meeting with clients could be organised to gather information for the game. This would give the designer an idea on price and target market.</p> <p>Researching competition products on the internet would help to see what is needed</p>	

to be done in order for their product to succeed.



* X 7 1 9 7 6 0 1 1 6 *

ENTER NUMBER OF QUESTION		DO NOT WRITE IN THIS MARGIN
b)	<p>An advantage of using an external designer is that the the company doesn't have to pay for producing the designs. A disadvantage is that if the designer left the company then they or would be able to take their designs with them because they own the them.</p>	
c)	<p>An idea generation technique that could be used is researching architecture. For example, the Eiffel Tower has a unique shape and it could inspire inspire the shape of a design.</p>	
	<p>Reading books that are full of unique shapes could be carried out, to create a really obscure design.</p>	
	<p>Also, using current events to inspire a design could also be used.</p>	



* X 7 1 9 7 6 0 1 4 5 7 *

ENTER NUMBER OF QUESTION		DO NOT WRITE IN THIS MARGIN
6.	<p>Aesthetics has influenced the design of iPhones in relation to colour. For example, Apple released the "iPhone 5c" which came in a variety of colours, so that at least one colour would appeal to the consumers.</p>	
	<p>Aesthetics has also influenced the shape of iPhones. For example, the recent "iPhone 6 plus" is a sleek shape with smooth edges edges, which appeals to many people.</p>	
	<p>Another way in which aesthetics have influenced the Apple iPhone 6 plus is the size. Apple released two iPhone 6's, both a different size. The bigger size appeals to people who like to read bigger fonts and play games more clearly.</p>	



* X 7 1 9 7 6 0 1 1 8 *