

Evaluation & Testing

OCR Technology GCSE
Resistant Materials
Assessment Objective 6

Evaluation

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A manufacturer of garden accessories and tools wishes to commission a new series of products that will be aimed at the upper end of the market. The products in this new range of garden accessories are for keen, dedicated gardeners who are willing to pay a little bit extra for the highest quality products available to them. They take pride in the appearance of all aspects of their garden, and would use these products to enhance the overall effect of their "outdoor room".

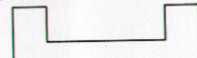
To complete the set of high quality garden accessories I propose to create a hose guide, which can be inserted into the ground and will avert damage to plants that are likely to come into accidental contact with the hose. Careful placing, for example, on corners where the hose is used to cut across flowerbeds or paths will prevent extensive damage

The solution to the garden tap problem is to make a decorative wooden insulated cover, which will allow continuous use of the tap all year round.

The size

The size of my Hose Guide product complies with the specification I had previously decided upon. After taking measurements of an outside tap I decided on the sizes of the pieces of wood, which would create my tap cover. I did however have to change the size of the base as I was making my tap cover, because I had not foreseen that routing the inside of the two sides and front would create a gap on both sides This was rectified by cutting into the base and creating a shape like:

The two pieces on the end would fill up the gaps.



The materials

In general terms the production materials used will consist of metal or plastic and semi-hard woods. My tap cover is made entirely from Oak, which has been varnished to make it more durable. The hose guide is made from an oak finial and two oak disks, which have been varnished with the same varnish as the tap cover. The metal rods are made from steel and the disks are made from acrylic.

The performance of the product

The tap cover must fit the standard outdoor tap size. It must be easy to fit to the wall. It has to be fully accessible to allow maintenance to the tap or to the cover. The lid does not have hinges and comes right off making the actual tap fully accessible.

Safety

Previously the main safety risk was from the folding lid that might catch a person's hand/fingers and cause some minor damage. This I changed in development and instead had the lid just slotting in the top, its own weight holding it in place. The hose guide is visible even in the mist of plants, and when placed in sensible locations should not be liable to cause any accidents by falling over it.

Cost

Oak- a plank of oak cost £20.00

Finishes-Decorative wood preserver costs £3.75/L., which I already have.

Hammerite Enamel paint costs £5.18 per250ml which I also already have.

A set of two brackets: £1.19, which I already had.

The acrylic and metal rods had a total cost less than £5.00

The total cost for all the materials for my products will not exceed £50 however when all the materials are bought in bulk like it would be when making a batch of 50 the cost would be considerably cheaper.

The total of the needed items that I needed to buy cost: £25.00 however if I had not had the paint and varnish and the brackets it would have cost: £35.12

Appearance

The specification of the products where that they should blend in well with their surroundings, and generally be discrete. I have produced products which I believe answers the criteria as there is one simple design on the lid of the tap cover and the wood has been left a natural colour, not drawing eyes towards the products.

By following my plan I did not encounter many difficulties. The only major one, which affected my products, was that when I was using the milling machine on the very ends of my wood to create comb joints, small chunks flew out which were not meant to come out. If the milling machine is to be used for a batch of 50 then more time would be needed to spent on this area of making the product so that perfect joints were produced, as I believe that it may have been because I did not allow enough time to make the joints which caused me to rush slightly to get them finished. However these small chunks I believe add to create a more rustic and hand crafted quality look to it.

The success of my control device, for my products gave me mixed results. For the hose guide the laser cutter cut out perfect disks, but I had to experiment with some designs that the laser cutter could engrave onto my wood. This was a slow process, as there always seemed to be someone else using the machine, after several tries I found the perfect design.