Wall Plant Holder

DESIGN UNIT *OUTCOME 2*

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D2.1 2.2 2.3 2.4 2.5

MATERIALS & MANUFACTURE *OUTCOME 1-4*

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MM 3.1 3.2 3.3, 3.4, 3.5

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MM4.2

The candidate will show they have considered improvements that might support the commercial manufacture of the wall plant holder, recommending materials and processes for mass production.

MM4.3, MM4.4

Wall Plant Holder

In this assessment project you will produce ideas for a metal wall plant holder and manufacture it.

In this task you will undertake the following activities		DESIGN	MATERIALS & MANUFACTURE
Activity 1	Produce a series of initial ideas	**D 2.1 2.2 2.3 2.4**	
Activity 2	Produce drawings in detail for your final design	**D2.1**	**MM 1.1**
Activity 3	Testing the suitability of selected materials in terms of workability, practicability, function and performance		**MM1.2 1.3 1.4**
Activity 4	Make a model of your final design and write an evaluation of your model		**MM3.2, 3.3 MM 3.4,3.5**
Activity 5	Write up a final product evaluation		**MM4.2 MM4.3 MM4.4**

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Wall Plant Holder



SITUATION

The season is soon to be spring and a national outlet has asked you to help them make a wall plant holder for sale in their stores. They would like the wall plant holder to be eye catching and its design to be unique. The product must be competitively priced. It must be recyclable (at least 90%)

BRIEF

I will design and manufacture an eye catching and unique wall plant holder for a local Garden Centre. This will be used to showcase and display various flowers in a hanging basket on sale in the garden centre. The product will reflect the Spring & Summer theme and will be produced mostly of metal

Use some of the following pointers as inspiration.

Scrolls Nature Leaves Plants Flowers

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Wall Plant Holder

SPECIFICATIONS

FUNCTION It must be strong enough to hold the weight of a hanging basket.
It must be attractive and eye catching.

FINISH The metal must be finished with to protect it from the natural elements and also assist with it attractiveness.

MATERIALS Must be made mostly from metal
Must be at least two parts
Must be recyclable
Must be inexpensive

SAFETY Must be robust and not fall apart
The wall plant holder must be held securely
The wall plant holder must be able to be secured onto a wall or fence post
Must be safe for all to use

AESTHETICS Must be attractive to the consumer
Must be finished to suit the environment of the wall plant holder

PRODUCTION Must be made accurately and be well finished
Must be able to be mass produced

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Wall Plant Holder



RESEARCH

MATERIALS

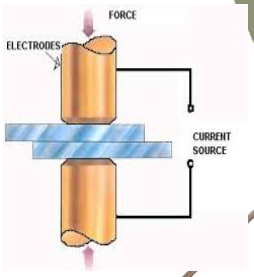
Research THREE types of metals.

Aluminium(AL)
Mild Steel (Fe)
Copper (Cu)

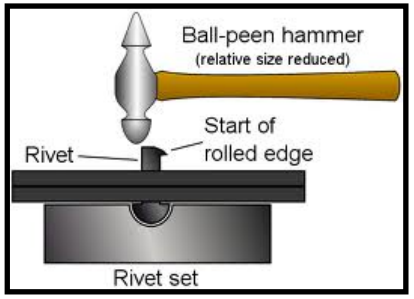
Record three properties that these three materials have and where they can be used.

PROCESSES

Research the following processes that can be used to join metal together in the manufacturing of the wall plant holder.



Riveting,
Spot Welding,
Brazing,
Gluing of metals.
Scrolling
Finishing of metals



Illustrate your Investigation using diagrams.

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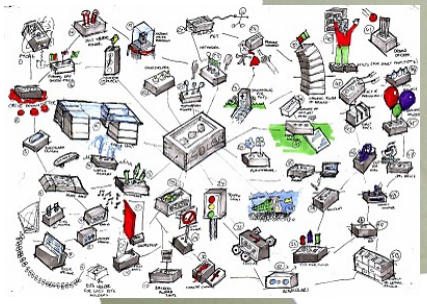
Wall Plant Holder



ACTIVITY 1 initial ideas

- **Produce a range of ideas for your wall plant holders using a variety of resources e.g market research on the Internet, photographs of wall plant holders, those being sold in garden centre.**
- **Create a inspirational mood board.**

- **Show on your last initial idea sheet your final design**



IMPORTANT

The wall plant holder must be made of no less than two parts. It must be secured to a wall or support. It must hold a hanging basket.

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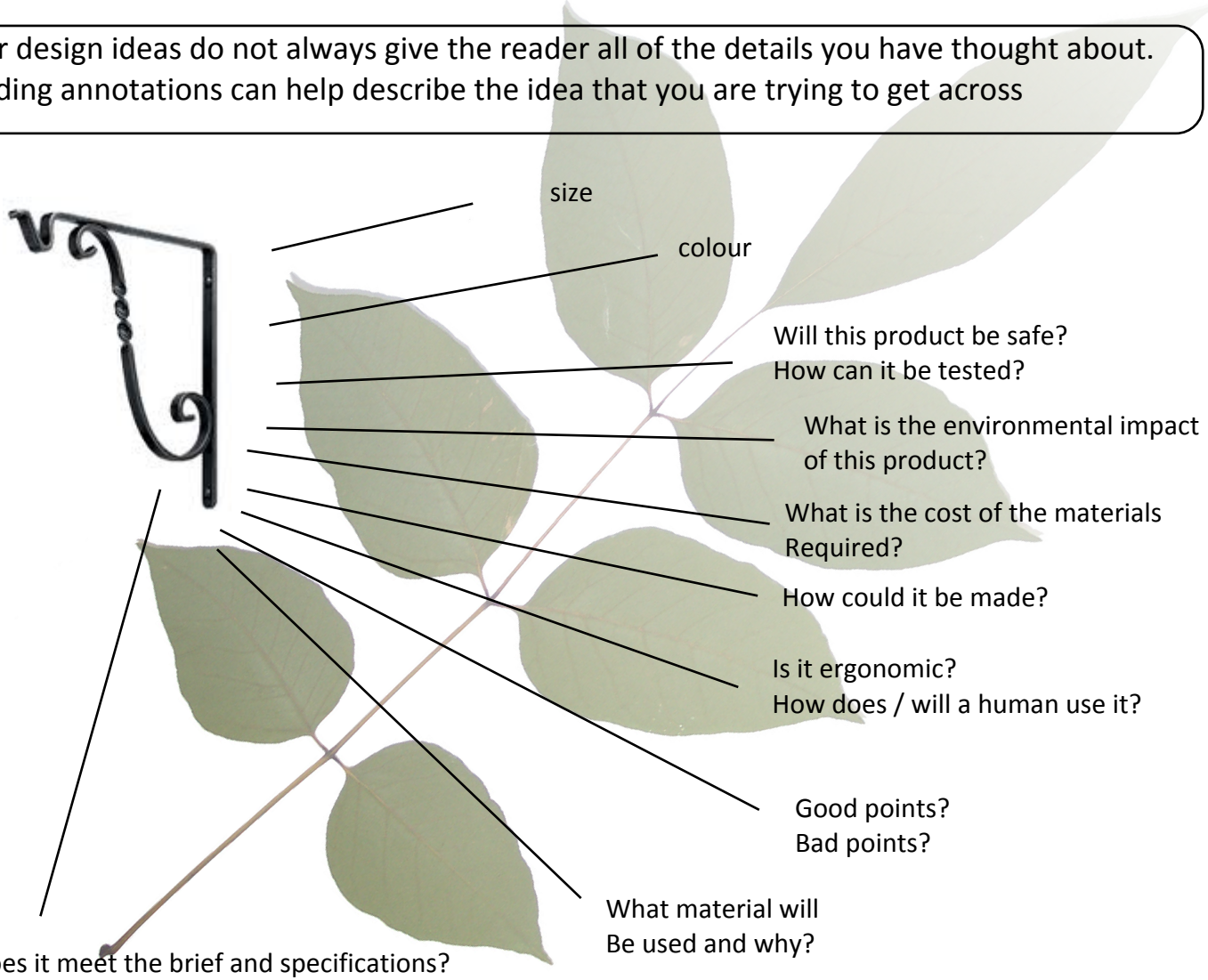
Wall Plant Holder



ACTIVITY 2 ideas & annotations

Your design ideas do not always give the reader all of the details you have thought about.
Adding annotations can help describe the idea that you are trying to get across



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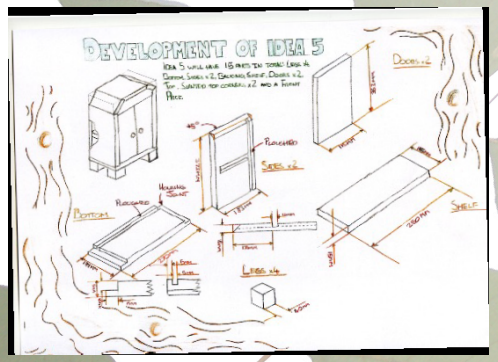
Wall Plant Holder



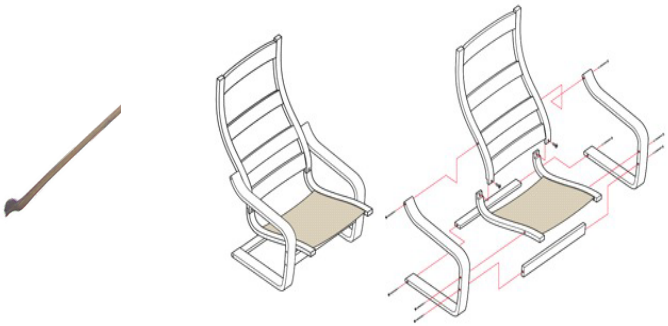
ACTIVITY 2 detailed drawings

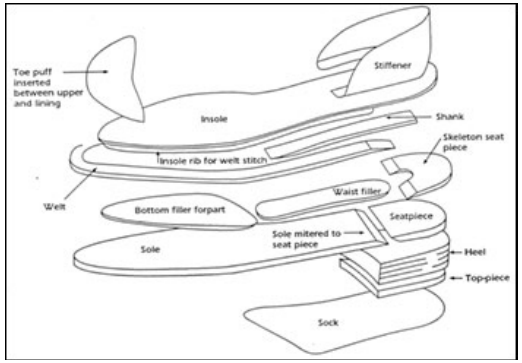
- **Illustrate your sketches to show details, including how the wall plant holder will be assembled.**
- **Think about the information that has to be communicated and the best way to show it.**



IMPORTANT

The task will require you to communicate information on the materials that you are using, such as sizes properties, costs, how it will be constructed and anything else you think is important.





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Wall Plant Holder



ACTIVITY 3 Testing

Copper Cu

Aluminium Al

Mild Steel Fe

From the selection of materials complete the table and tests for the following materials. Record all relevant information and conclusions about the materials on the sheet provided by the class teacher.

Tool steel Fe

Acrylic plastic

SHAPE
FORM
MELTING POINTS
CORROSION
BENDING
AESTHETICS
IMPACT

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Wall Plant Holder



ACTIVITY 4 model & evaluation

- **Create a model to support your design ideas and thinking**
- **Think about what materials are best suited to manufacture the model and will closely represent your design.**
- **Write up an evaluation of the model to say how ell the model works.**

IMPORTANT !

In this activity, make your model full size, mark how it could be joined together. Remember you are trying to evaluate your design by modelling it full size.

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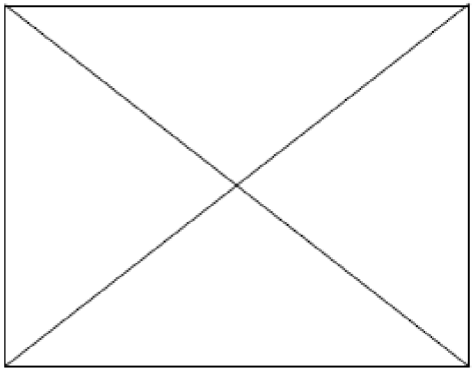
Wall Plant Holder



ACTIVITY 4 model & evaluation

EVALUATION



Photograph of model

Changes to the overall shape and size:

Other changes? (Eg ergonomics, colour scheme, texture, finish, appearance, function, cost etc.

After making and testing the model, I have decided that there may be a need for alterations . Changes to the original design.

Changes to the materials to be used:

What I consider to be the good points:

Views of other people regarding my design

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MM4.3, MM4.4

Wall Plant Holder

ACTIVITY 5 final product evaluation

It is now time to evaluate your wall plant holder.

- What parts of the manufacture were successful and what could be improved?
- How could the prototype be commercially manufactures? Consider economy, efficiency and sustainability.
- You must also show that you have thought of the environmental issues in the production of your product and how that is considered in a commercial setting.

Points to be considered when evaluating.

- What are your thoughts on the final design? What changes would you make next time?
- Are you happy with the materials you chose/ Would you use different materials?
- Is the colour scheme exactly what you expected? What alterations would you make?
- Did the project take too long to make/ Would this alter the cost of manufacture?
- Is your final solution safe? Could it be made safer/
- Are the building processes you used to make your solution okay or would you make it differently next time?
- Is the solution the right size / shape?
- What are the views of your peers regarding your design?
- Does it work? What changes are required?

IMPORTANT

Draw out any changes to your design in your evaluation.

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