

# ANALYSIS OF BRIEF

## Design Brief

Design and make a free standing artefact to hold a small number of your favourite books. The artefact should be designed to display personal items that reflect your interest in music and also to allow the titles of the books to be easily visible. The design should be elegant in proportion and be attractive to behold.

## Analysis Of Brief

Above I have underlined some key points and words and this is what they mean.

Free standing: may have leg and cannot be hanging from a wall.

Small number of your favourite books: what this means is that it would only have to hold from 5-10 books.

Personal items that reflect your interest in music: these may be CD's, ipods, mp3 players, tape recorders etc.

Titles of books to be easily visible: what this means is that a viewer should be easily able to see the titles of the books when looking at this artefact.

Elegant in proportion: this means that it should be not very big and sections of timber needs to be relatively small. It has to be easy on the eye.

Attractive to behold: easy and pleasing to look at. A good finish is vital!. It must be graceful in design.

## These are some key points I should consider when manufacturing This artefact.

1. It should be able to hold book and musical items.
2. It should be strong.
3. It should be stable.
4. It should not be too long or too wide.
5. It should be attractive in appearance.
6. I should consider different materials and finishes.
7. I should consider cost and any fittings required.
8. I should consider jointing methods and manufacture of the artefact.
9. I should also and most importantly consider the amount of time i have to complete my project.

# Investigation and Research

First I looked at a number of catalogues and visited a number of different stores. I then researched the internet to see what was appropriate to make my book shelf while also looking at other similar items to get more ideas for my project.

Catalogues:

Stores Visited:

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## Internet Websites:



Designsdelight.com



Homeholic.com



Woodenfurniture.net



Lyonfurniture.com



**Having researched the brief I now had to examine the size of various items such as books, and other musical items.**

# Possible Materials

## *Softwood*

### Advantages

- 1 Cheaper than hardwood.
- 2 Easier to work with than Hardwood.

### Disadvantages

- 1 Less attractive than Hardwood.
- 2 Some softwoods can Bend and warp.

## *Hardwood*

### Advantages

- 1 More attractive in appearance than Softwood.
- 2 Strong/hardwearing
- 3 Stable-resistant to Wearing.

### Disadvantages

- 1 More expensive than Softwood.
- 2 Harder to work with Than softwood.

## **Chosen Material** = Hardwood – Oak

I have chosen this material because it is hardwearing, naturally resistant to decay and cuts very cleanly. It also has good finishing properties with nice colour and attractive grain.

I decided that a finish would be needed.

## **Possible Finishes**

### *Requirements for the applied finish :*

- Attractive in appearance
- Gives the wood added strength/more hardwearing
- Shows off the beauty of the wood
- Resistant to water and heat
- Won't spoil the colour of the wood

## **Chosen Finish: Golden Oak Stain + Varnish**

I chose this finish because it meets all the above requirements.

# **DESIGN IDEAS/ SOLUTION**

## **Solution 1:**

# **Solution 2:**

# **Solution 3:**

# **SKETCHES/WORKING DRAWINGS**

## Cutting List:

<b>Item</b>	<b>No. Of</b>	<b>Length</b>	<b>Width</b>	<b>Thickness</b>	<b>Material</b>
Back leg	2	450	40	30	Oak
Front leg	2	350	40	30	Oak
Top curve	2	210	120	30	Oak
Rails	4	220	30	30	Oak
Back Rail (curve)	1	480	100	20	Oak
Back Rail (straight)	1	480	40	20	Oak
Shelf	1	470	280	20	Oak
Drawer	1	440	280	20	Oak
Drawer upstands	2	250	140	20	Oak
Back of Shelf	1	480	140	20	Oak

# Manufacture

## Project Planner:

1. Mark out the two sides.
2. Carefully cut out the curve on each side and cut out the leg designs.
3. Glue the two sides together.
4. Mark out and cut the back rails.
5. Mark out and cut the rails for the shelves.
6. Glue all the rails to the two sides.
7. Mark out and cut the shelf and drawer into size.
8. Glue the top shelf onto the rails.
9. Attach the drawer sections onto the drawer.
10. Cut out and attach the back of the shelf.
11. Attach the runners of the rails at either side of the piece.
12. Attach the drawer onto the runners.
13. Clean out and sand the piece.
14. Apply the finish.

# Manufacture of Bookshelf

1. Firstly in the manufacture of my bookshelf, I made the two sides. I used Mortise and Tenon joints to join the sides and used the Band saw to cut the curve on top. For this I used these tools: mortise gauge, ruler, tri-square, mallet, chisel and pencil.



Here we can see the mortise and tenon joints for the sides.



Here we can see the top curve cut out for one of the sides.

2. The second step I took was making the back rails. For this I also used Mortise and Tenon joints and dovetails to join these back rails to the two sides and used the Band saw to cut the curve. I used all the same tools as I used in stage 1 and a sliding bevel.



Here we can see the mortise and tenon and dovetail joints at the ends of the back rails.



Here we can see the curve cut out on the top back rail.

3. Thirdly, I made the rails for the shelves. For this I used mortise and tenon joints to join these rails to the sides.



Here we can see the mortise and tenon joints for the (shelf) rails being made in one of the sides.



Here we can see the (shelf) rails joined onto the sides.

4. The fourth step I took was manufacturing the top and bottom shelves. This also included upstands. I used the router to cut out the grooves for the upstands and the Band saw for the curve at the end.



Here we can see the upstands and one router channel.



Here we can see the top and bottom shelves with upstands. We can also see the curves at the end of the shelves.

5. The fifth step was gluing the sides, rails and shelves together. I used P.V.A. glue to glue this.



Here we see the sides being glued to the rails.



Here we see the top shelf being glued to the (shelf) rails.

6. Lastly, I sanded down my artefact and applied my finish.  
I used Golden Oak Stain and after applied three coats of varnish.



Here we can see me applying a coat of varnish.

# Evaluation of Brief

I believe my design meets the purpose it was made for. I think my bookshelf is sturdy and elegant for use in the home. My artefact expresses my interest in music as it is manufactured to hold CD's in its bottom shelf and the side is in the shape of a musical note.

I used the materials very effectively because I created a very elegant and beautiful appearance to my bookshelf.

I do not think there should be modifications or alterations made to the final presented bookshelf because it might ruin the elegance and beauty of the stool.

I think that I executed the project quite well because the appearance looked well and it was appropriate to the purpose it was made for. Also, the joints were fitting very well and the bookshelf was very sturdy. As you can see, I was very happy with the overall result.

If I was to start again, I might have made the bookshelf a bit bigger but it still is a good size for appearance and can hold a sufficient amount of books.

The realisation is safe and stable because I manufactured it so that there are no sharp edges to

lessen the chance of someone hurting themselves if they bump into the bookshelf. The Bookshelf is stable because all the legs are of equal length so it doesn't rock.

The part I taught stood out for me was the sides as the joints worked out very well and they looked very well.

