

Claire

Table Lamp



What's the situation?

I have chosen to base my final project on Design Task 7. The task states the following:

"A major design museum wishes to expand its range of products on sale in the museum shop. It wishes to sell popular products influenced by major design eras of the last 100 years. Design and make a low-voltage light, radio, phone charging stand or ipod docking station in the style of any design era of the last 100 years. You can use bought-in, or recycled components for the electronics e.g. TEP radio kits."

The Situation:

There is a large market for table lamps as they are useful for bringing extra light to a room and most households have at least one. Table lamps can be split into two main designs, the traditional style and more unusual varieties.

The traditional style lamp is still very common. It consists some type of stand/base holding up a lampshade that covers the light bulb.



Lampshade

Stand/base

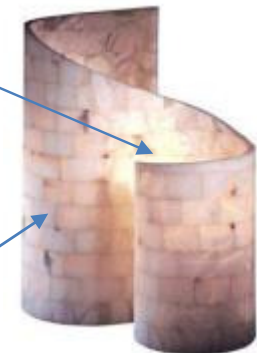
There are now many different interesting and **unusual designs** of table lamps available. These less traditional lamps are often very interesting to look at and are aesthetically pleasing.

Due to fact that less traditional lamps are designed to be unlike any other lamps on the market it is difficult to point out their main features. However, most of these lamps do involve the light bulb being surrounded in casing that has been made to look quite exciting.



Light hidden within

Casing



The Brief and Research Planning

What Questions Should I Ask?

I will need to ask the following questions:

- How much light does a table lamp have to provide and must it be focussed in a particular direction?
- Would an ideal lamp be adjustable?
- What style would be most suitable for modern homes?

How Will I Gather My Information?

I will need to gather my information in the following ways:

- Asking for opinions from friends/family
- Looking in books and on the internet
- Analysing existing products

Who Will I Be Asking For Advice?

I will need to talk to:

- Members of my target audience

Why Will I Need This Information?

I will need this information because:

- It is important to have sufficient background information on existing designs
- Asking for opinions from members of my target market will mean that my final product will appeal to them

Where Will I Incorporate This Information Into My Design?

I can use the information that I gather to:

- Create a basic specification for my product
- Design a product that would sell if placed on the market

Conclusion:

I have now decided that I would like to design a table lamp that breaks away from the traditional. I have also identified a set of research guidelines that will help me to gain the information I need to design a good product.

The Brief

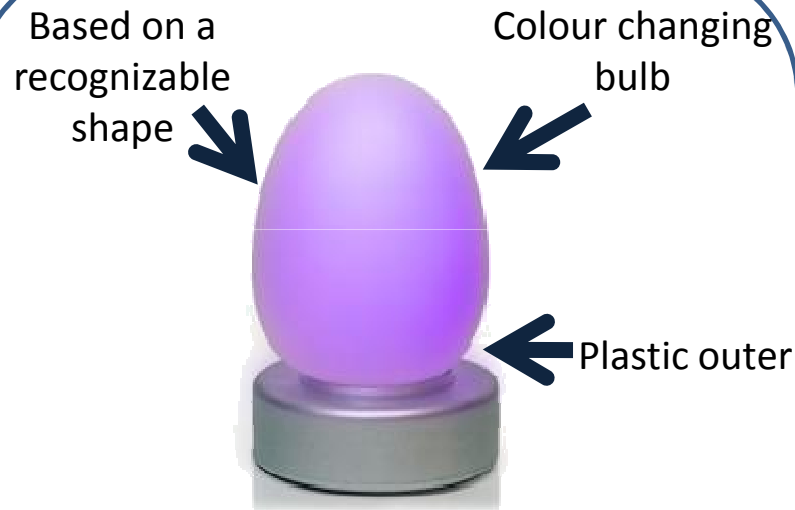
Having looked at the two main styles of table lamps, traditional and unusual, I have decided that I would like to design and produce a lamp that is quite unusual and interesting.

Design Task 7 also states that my product must be made in the style of a design era from the past 100 years. As the less traditional style lamps have no concrete design formula, I think that incorporating ideas from one of the recent design eras will be fairly simple to do.

Investigating the Design Context

Existing Table Lamps

There are many interesting table lamps on the market. I decided to look at some of these to get an idea of what my design will need to include (what works well) and what I need to avoid doing (what doesn't work well).



Here is a lamp that is in my sister's room.
It is a simple but recognizable shape, however the colour changing bulb inside adds interest to the lamp. The fact that the lamp is made primarily of plastic means that it is easy to mass produce however it would be difficult for me to produce in the workshop. The colour changing bulb does not give out as much light as a conventional bulb which is also a drawback of this type lamp.

This lamp is one that I had as a child.
This lamp is unusual as it is made of ceramics rather than the more traditional metal, plastic or wood. The way the lamp has been shaped and painted gives it a homely feel as apposed to the modern look that many modern lamps create. I like this style however it would be difficult to mass produce. The lamp gives off plenty of light so fulfils it's purpose.



Neither of these lamps are adjustable or focus light in one direction.

Existing Table Lamps

The lamps that are on this page are ones that I found on the internet after using a search engine.

This lamp is being sold by John Lewis.

[http://s7v1.scene7.com/is/image/JohnLewis/230410293?\\$product\\$](http://s7v1.scene7.com/is/image/JohnLewis/230410293?$product$)

Long and thin



Fabric Shade

Wooden Frame



The wood makes this lamp look really sophisticated. The way that the amount of light dwindles as you look further up the shade seems quite atmospheric. The way that the wood has had slats cut out of it adds interest to the lamp as it makes it more detailed.

These lights were on

http://gizmodo.com/assets/resources/2007/07/purdy_leds.jpg

LED bulbs
(available in different colours)



Stainless Steel Base

These lights are about 205mm tall. Due to the fact that they are quite small they have the novelty factor.

The LED bulbs are low-voltage, which fits the criteria of my design task, so I think that incorporating them into my design would work well.

The LED bulbs are available in different colours too, which add the novelty and interest of the product.

Conclusion: After researching products that are already available on the market I have decided to use LED lights in my design. These lights are available in many colours which I will need to consider when I design my lamp. I have realized that simple shaped lamps can still be interesting if you add occasional details and will be easier for me to produce.

Design Eras from the Past 100 Years

Bauhaus:

This approach to design originated at the Staatliches Bauhaus school in Germany. The school was open between 1919 and 1933 and its style influenced all types of design areas

This is a Bauhaus style cabinet that I found on www.archiv.hofmobiliendepot.at
It is based around simple shapes and is built primarily of different blocks.

Simple:
•Varnished wood
•Built out of basic shapes



Sophisticated style

Art Deco:

The Art Deco style is based on a combination of popular 20th century design movements. It was extremely popular between 1925 and the 1940's.

This is an Art Deco style clock that I found on www.countryliving.com.
It is based around bold lines and angles. The colours are very strong and contrasting.

Bands in a strong contrasting colour set slightly beneath the main surface



Very angular

Conclusion: I prefer the simplistic characteristics of 'Bauhaus' design so will be using it as inspiration for my project and will try to create a product that is clearly influenced by the era.

Specification

Number	My table lamp must...
1	Be between 250mm and 600mm in height so that can stand comfortably on a table
2	Be unusual and break away from the traditional style so that it is aesthetically pleasing as well as being practical
3	Be made in an environmentally friendly manner
4	Increase the amount of light in a room
5	Be safe to use within the home (have no dangerous wires etc...)
6	Cost no more than £25 so that if I was to market the product it would be affordable
7	Incorporate the style of a design era from with the last 100 years

Developing of Design Proposals: Planning

Section	How will I do this?	Why?
Initial Ideas	I will draw up my initial ideas by hand and then scan them so that I have a copy of each of them on the computer.	Drawing by hand allows me to try sketching out my ideas several times and then picking the best one. It also means that I can create images of my ideas without having to spend too long drawing them using CAD.
Developing my idea	I will develop my chosen design idea using ProDesktop to create a 3D image of my lamp.	Using ProDesktop will mean that I can adapt my design easily without having to redraw it every time that I make a change.
Parts List	I will present my parts list in a table which includes the name of the part as well as it's size an any other relevant information.	Creating a table for my parts list will mean that the information is clearly presented and easily accessible as it will all be in one place.
Plan of Making	I will create a basic step-by-step guide of how I will make my lamp. This will be presented in a table.	I need to plan how to make my lamp so that I am prepared and know exactly what to do at each stage of the making process. A table will let me organize the information well.

Initial Ideas

**THIS IS THE IDEA THAT
I HAVE CHOSEN TO
DEVELOP!**

Idea 1...

Based on: Bauhaus (block shapes and simple block colours)

LED lights inside

Wooden Frame:

- Easy to work with
- Sturdy so will not topple over too easily

Fabric:

- Works as a lampshade to dim the light

Total height: 450mm
Total width: 150mm
Total length: 150mm

Conclusion: I like this idea because I think it is quite an unusual lamp.

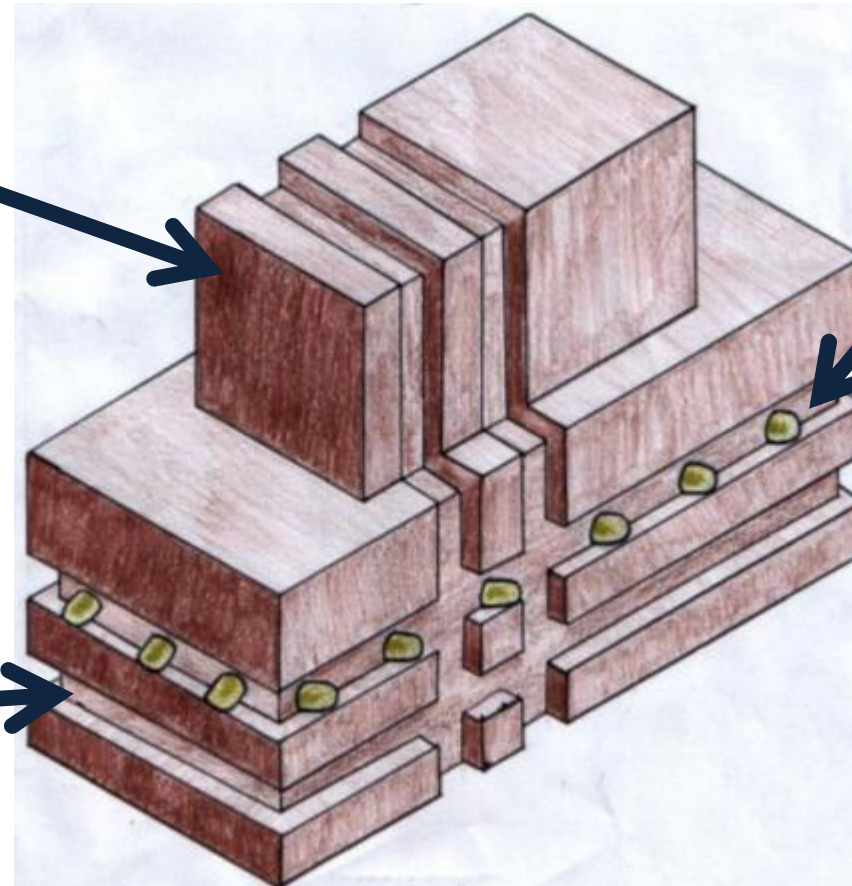
- The clusters of LED lights should provide plenty of illumination.
- The design shows the lamp to have a large base so it should not fall over easily.
- The fabric gives a chance to add contrast and interest to the product as well as stopping the light from being too bright and hurting your eyes.
- It is very simple so could be considered boring.
- The bright colours lower the sophistication of the product.

Initial Ideas

Idea 2...

Based on: Art Deco (strong lines and very angular)

Made of wood:
- Hollow inside to allow space for electrical components and reduce product weight



LED lights:
These LEDs would run all the way around the product in the routed areas

Routed areas

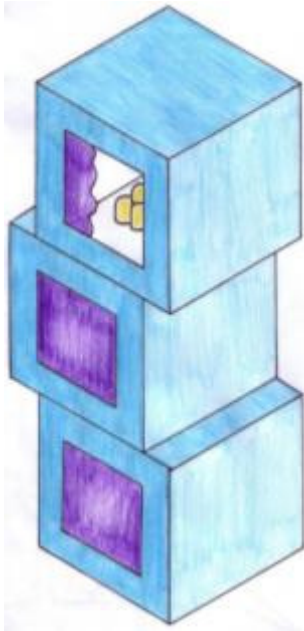
Total height: 180mm
Total width: 150mm
Total length: 300mm

Conclusion: I think that this lamp is really interesting to look at however I don't think that it would appeal to the majority of potential customers.

- The lamp has a large base so would be extremely sturdy.
- The distribution of the lights mean that light can be given off in all directions.
- It's quite brick like which may be unpopular with potential customers.
- The angular design doesn't fit in with the sleek, smooth styles found within modern homes.

Developing My Idea

I have decided to develop **Idea 1**



There are several points from this design that I can see need adapting:

- 1) It is quite simple
- 2) It's not very sophisticated
- 3) It looks very box-like
- 4) The light is not being distributed evenly throughout the room

I will solve these problems by:

- 1) Adding in more details
- 2) Changing the colours so that it's not as bright
- 3) Chamfering/rounding the edges to make them less sharp and abrupt
- 4) Creating window style openings in each side of the lamp

How will I develop my idea?

I will produce a 3D image of my product using CAD. This will allow me to see how my lamp will look from all angles and will also let me adapt my design and test out different possible changes that I could make.

Development Continued...

This is the original image that I created using CAD:



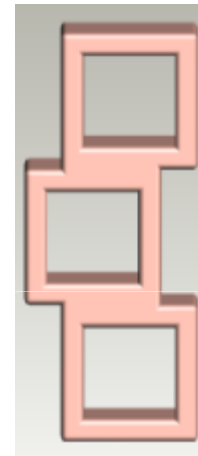
It is very box-like

There is no indication as to where the LEDs will be

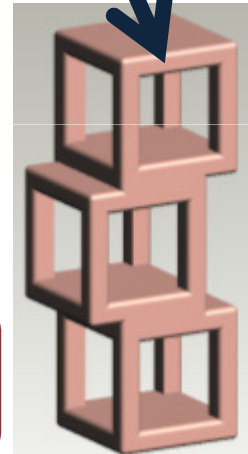
Openings allow light to be distributed evenly

It lacks interesting details

I then adapted my design. The following images show my second version:



The rounded edges create a smooth feel



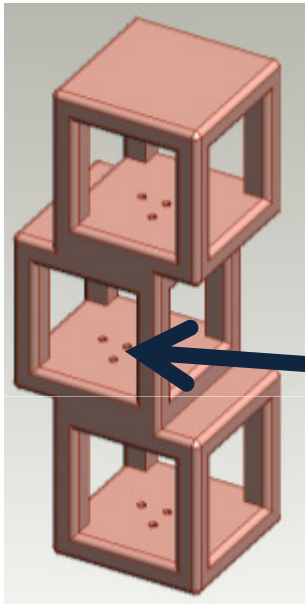
There is no indication as to where the LEDs will be

It lacks interesting details

Conclusion: I have addressed some of the issues that I saw in my original design however I need to continue to make changes so that my idea develops.

The green boxes indicate positive changes I have made to my CAD model whereas the red boxes indicate areas that I still need to address. There are a number of red boxes remaining; this means I need to keep adapting my plans.

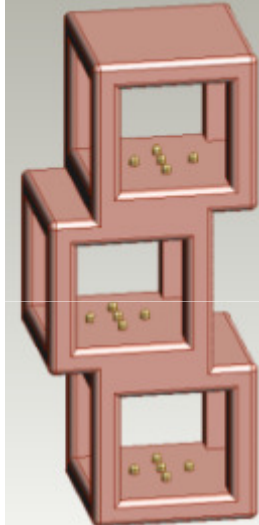
Development Continued...



I continued to make changes to my design. Here is the third version that I have come up with:

There are holes for the LED lights to fit into

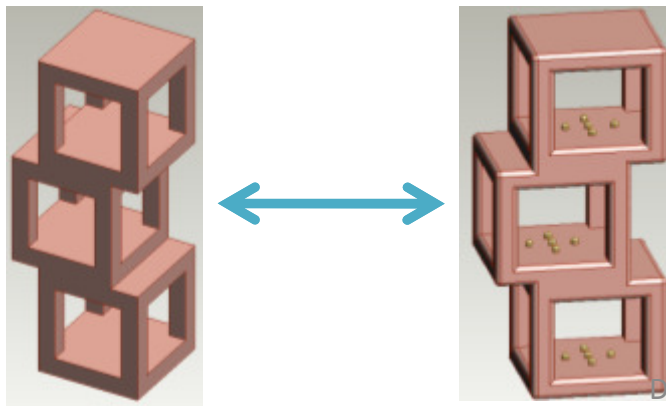
It lacks interesting details



Here is the final development plan that I have produced:

You can now see what the LEDs will look like in the lamp

It lacks interesting details



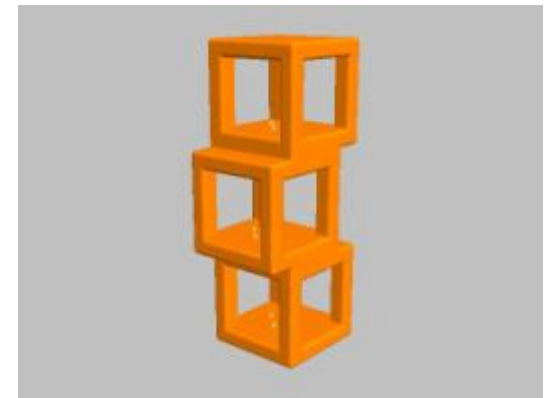
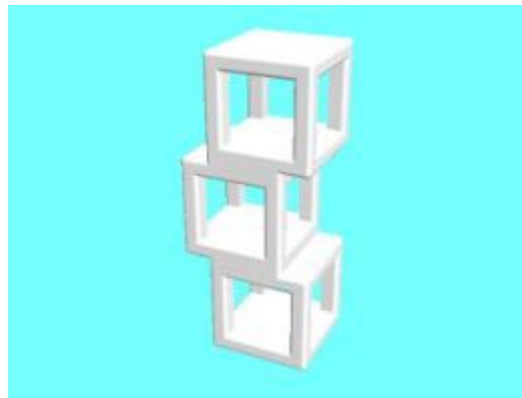
Conclusion: After developing my idea I have managed to fix most of the problems I originally identified as needing adapting. The only remaining issue is the lack of interesting details on my lamp however I have decided not to change my design any further at the moment. I think that routing a pattern into the lamp could solve the problem of details but I believe that it may then lose the simple elegance that it has.

Development Continued...

I continued to use CAD to see what my design would look like if I made it in different materials. The two main avenues I followed were leaving the wood as it was (with the possibility of varnishing it) or painting the wood.



These 3 views show what the structure of my lamp would look like if I did not paint it.



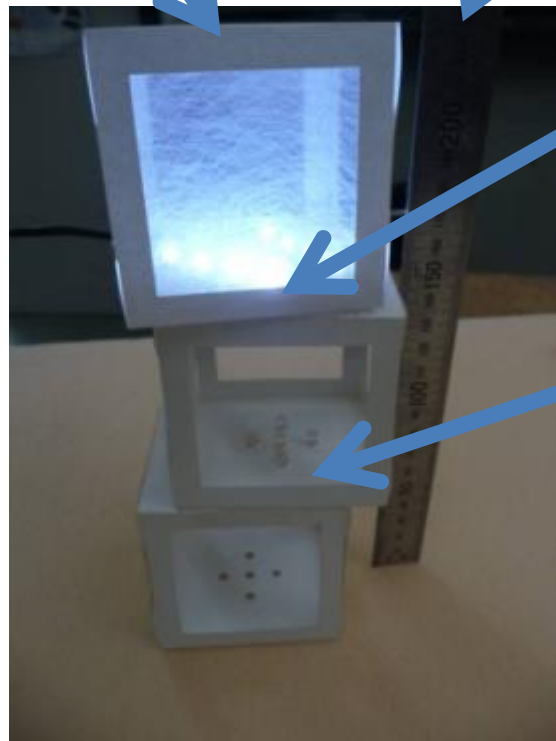
The three images above show what the lamp would look like if I was to paint it. The colours I tried out were white and orange because I thought that I was most likely to use white paint but also wanted to get an idea of how the lamp would look if it was a bright colour.

My Model

I created a model in order to see a physical version of the product I plan to make. I also used this opportunity to test out different lighting options.

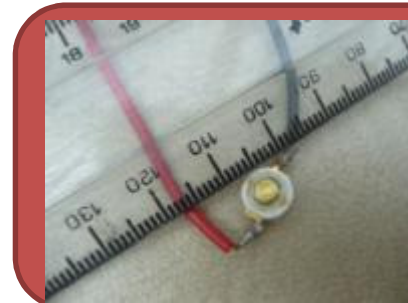
I used card to create the basic shape of the lamp

I made the model to a scale of 1:2 so that it was half the size I had planned for the real thing



Large window to let light out

Single LED lights



Like the single LEDs, these little lights are very bright but would require need to be added in to the circuit one at a time – which could be difficult to do.







This block of LEDs would be convenient to wire into my lamp as there is only one thing to connect into the circuit and it would also provide lots of light too. Unfortunately group of LEDs is very bulky so would be difficult to fit into a lamp.



These strips of LEDs give out plenty of light and are easy to connect into a circuit as they are all linked. They can be cut into sets of four lights and are only small so should be very discreet when placed in a lamp. I will use these lights in my lamp.

Choosing Materials

Before I could begin making my lamp I had to decide which wood I wanted to use. I wanted to use a medium/dark hardwood so that my lamp would have a nice appearance and be durable, so I had 5 main options:

	Name	Description	Advantages	Disadvantages
	Elm	This wood is 'warm brown' in colour and has a good grain.	<ul style="list-style-type: none"> •The grain adds interest to the design . 	<ul style="list-style-type: none"> •The grain may distract from the simplicity of the lamp's design.
	Oak	Oak has attractive grain markings and is an attractive colour – slightly darker than most of my other options.	<ul style="list-style-type: none"> •It has a sophisticated colour. 	<ul style="list-style-type: none"> •The grain of the wood may detract from the lamp as a whole - people's attention will be attracted to the wood in particular.
	Cherry	Cherry is red-brown in colour and has a subtle grain.	<ul style="list-style-type: none"> •It has a rich colour. •The grain looks good but doesn't take away from the lamp as whole. 	<ul style="list-style-type: none"> •It is quite brittle to work with.
	Iroko	Iroko is a deep brown colour with a very stripy looking grain.	<ul style="list-style-type: none"> •The grain creates a strong contrast of colours in the wood. 	<ul style="list-style-type: none"> •The stripes make the wood seem quite tacky.
	Ash	The wood is quite pale and has an obvious grain.	<ul style="list-style-type: none"> •The wood looks smart as it doesn't have many knots. 	<ul style="list-style-type: none"> •The colour of the wood would not provide enough contrast with the colour of the material

**THIS IS THE
WOOD I HAVE
CHOSEN**

Parts List

I have created a parts list that details the main components needed to produce my lamp:

PART NUMBER	PART NAME	NUMBER OF	CROSS SECTION	LENGTH IN METRES	MATERIAL	TOTAL COST
1	Side	12	150 x 150	0.15	Iroko	£11.00
2	Top/Bottom	6	150 x 150	0.2	Iroko	£5.50
3	Fabric	1	100 x 50	N/A	Fabric Lining	£1.70
4	Mirror	6	70 x 70	N/A	Acrylic	£3.00
5	Bolts/Screws/Washers	6	N/A	N/A	Metal	£0.30
6	Base for Mirror	4	5 x 20	0.3	Mahogany	£1.50
7	Electrical Wire	1	N/A	1.0	Wire	£0.10
8	LED Light Strip	2	N/A	0.3	LED	£20.00
9	Power Supply	1	N/A	N/A	-	£6.95
Total						£31.85

- To find the information on wood prices I visited the 'Fitchett and Woollacott' website (www.fitchetts.co.uk) as this is the supplier that my school uses when ordering materials for Design and Technology projects.
- The price of the electrical components is taken from a catalogue of product prices
- The price listed for part number 5 are taken from the prices listed at a local hardware store.

Conclusion: If I was to buy in all of the parts for my project it would come to a cost of about £31.85, however as I am recycling wood that the school already owns the cost will be much lower.

Plan of Making

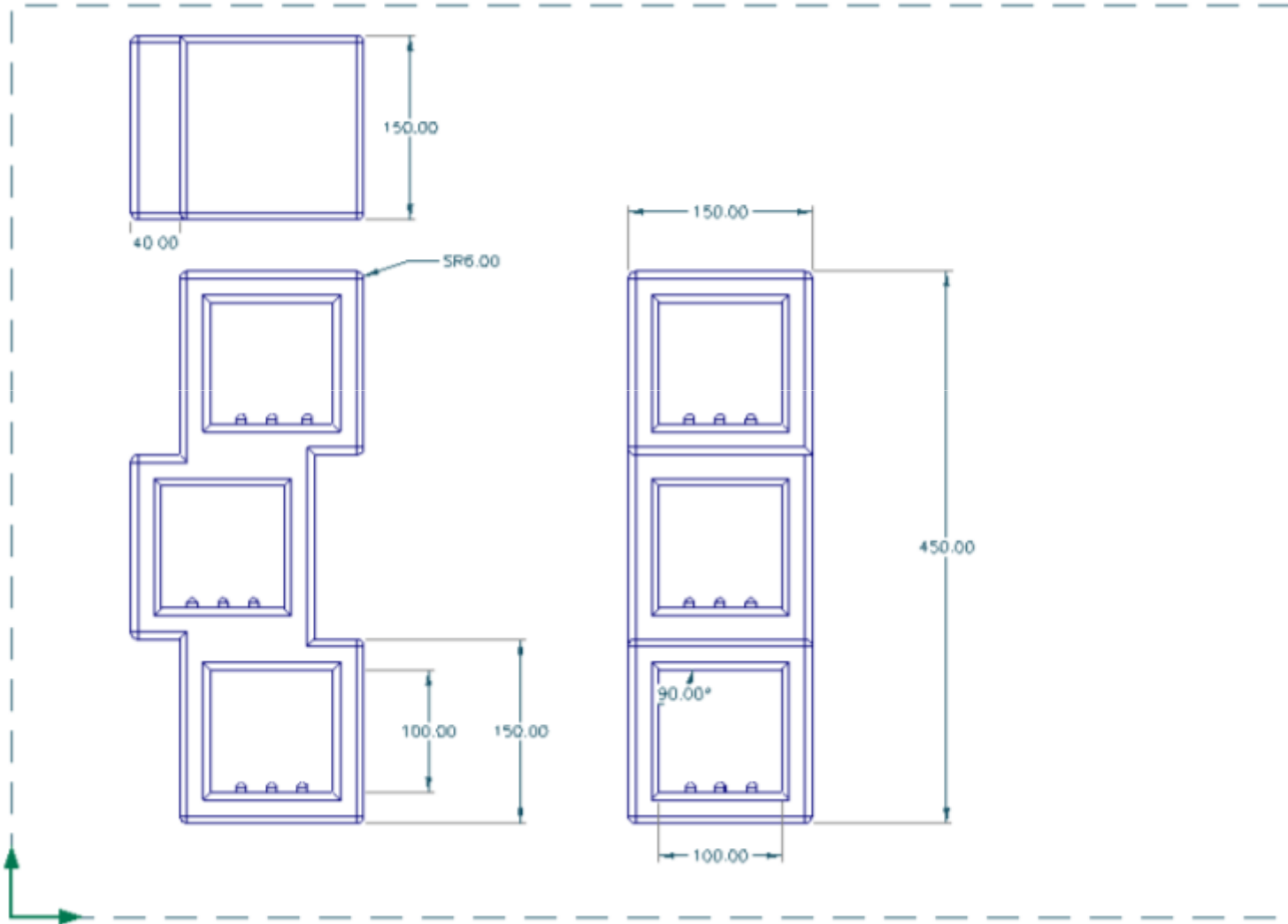
Step	Process	Description
1	Materials	I will need to ensure that I have all of the wood I will need prepared.
2	CNC – Computer Set Up	I must transfer my design to the computer attached to the Denford Micro Router. I will then need to change the file from the “2D design” format to a format the micro router will be able to understand (a FANUC file). I will then use “VR milling 5” to send G codes to the micro router.
3	CNC – Materials Set Up	I will need to nail the wood that I am using to a scrap piece of MDF, ensuring that the wood is cut to a size that will fit inside the Denford Micro Router. Once everything is set up correctly I can set the machine to cut out my parts.
4	Gluing the boxes together	I will need to ensure that the pieces of wood fit together correctly. I will dry clamp the parts together and try to eliminate any possible gaps. I will use PVA glue to join the pieces.
(5) ?	Finishing the boxes	I will need to sand the boxes down and use the router to round the edges off. I will then cover the boxes in a finish.

Plan of Making

Step	Process	Description
6	Connecting the boxes	I will need to drill two holes in the base of the top two boxes and the lids that they will sit on. I will then bolt the boxes together through these holes so that the lamp is secure.
7	Creating the circuit	I will create the circuit for my lamp by connecting each set of lights with a small piece of wire that will run around the edge of the boxes. I will need to use a soldering iron in order to connect the wires are the lights.
8	Inserting the mirrors	I plan on gluing the mirrors to the insides of each box (one on the top and one on the bottom). This will reflect the light that the LEDs are shining and will increase the amount of light the lamp is giving out.
9	Attaching the fabric	To insert the fabric to the windows of the lamp I will cut out pieces of fabric just larger than the hole itself and staple them in place.

Plan of Making

I used Pro Desktop to create an engineering drawing that I could work from when making my lamp:



Development of Design Proposals

Making my Project

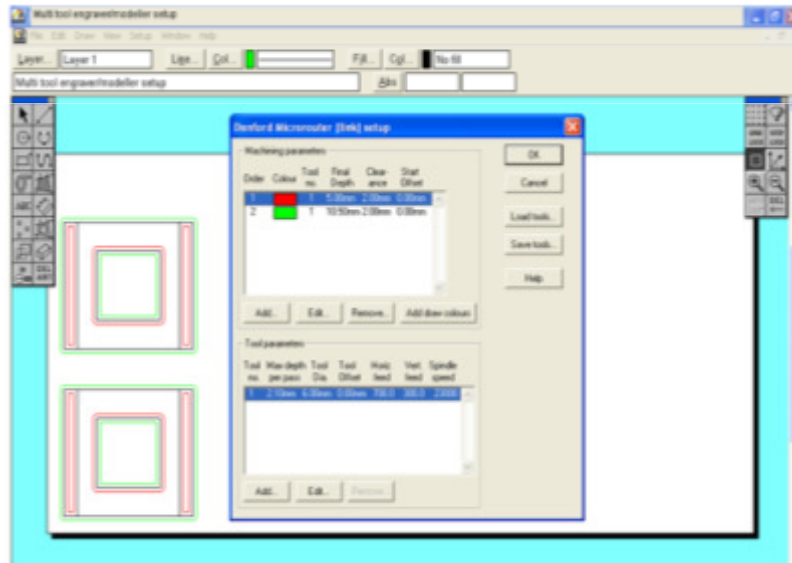


Step 1:

First I had to use the CNC Milling Machine to cut out the parts for my lamp.

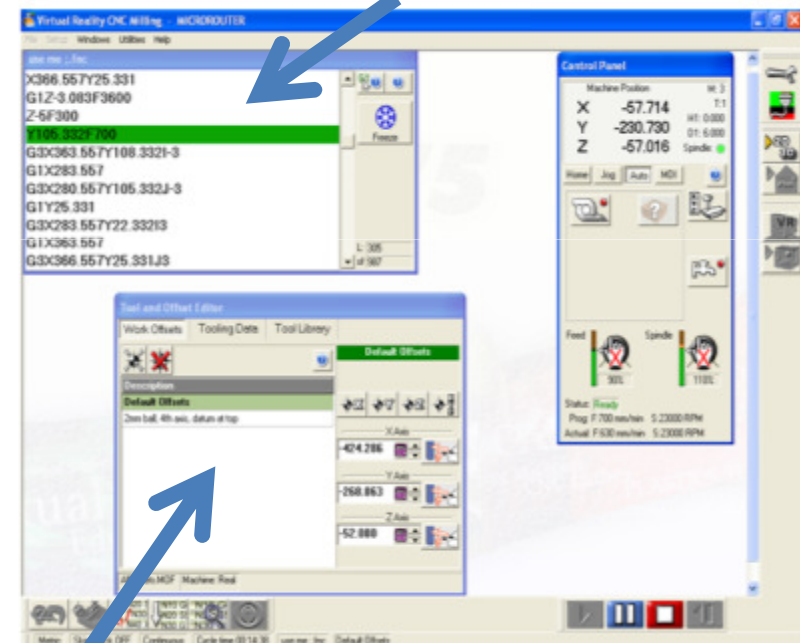
I drew my design for the parts to be cut out using the CAD programme '2D Design V2'.

I set contours around the edges of each of the parts and set the machine to cut fully through the wood wherever the lines were coloured green.



I drew red contours on the inside of the parts and set the machine to cut halfway through the wood where these contours were.

This box shows the G-codes (the coordinates) that the Microrouter uses to cut the correct shape out.



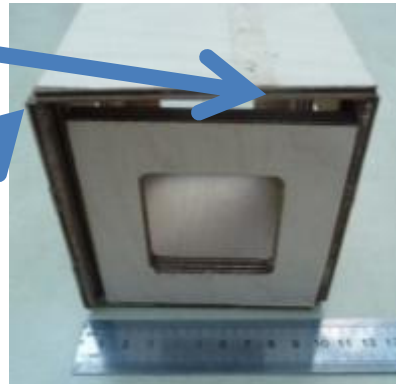
Once I had changed the file to a 'FANUC' format I exported the file to the programme that runs the Microrouter. I had to zero the machine and this box shows the coordinates of the point at which it was zeroed.

Making my Project

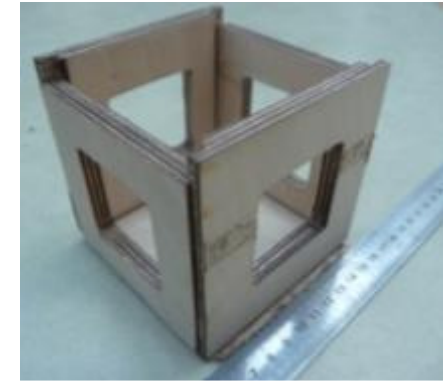
First I cut out the parts for one box using the design I had drawn up on 2D Design, however when I tried to assemble it I realised there was a problem.:

Two of the sides were too small to fit in the gap available

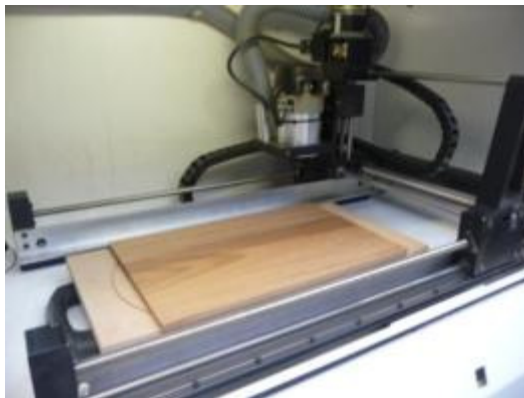
The thickness of the hardwood I was using was larger than the width of the indent I had allocated to fit it in.



By placing the pieces together in their positions I was able to work out which measurements needed to be changed. I redrew the design for the CNC Milling Machine with the adaptations (which meant the sides were all the same height and there were no areas overhanging).



I had also made the original box out of a plywood made of Cherry, however the material was brittle and hard to work with so I decided to use African Iroko instead. I chose Iroko because my research had highlighted the advantages of using it and it was readily available.



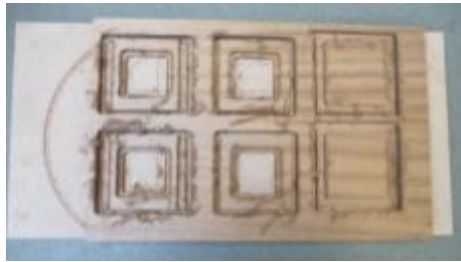
To cut each of my boxes I first used double sided tape to stick the planed piece of Iroko onto a section of sacrificial board just larger than itself. I also nailed the wood to the sacrificial board in each corner in order to stop the wood flying around the machine.

The board was held in place by the vacuum pump and after the machine had been zeroed it cut out the different parts of my boxes for me.



Making my Project

Step 2:



I removed the parts from the sacrificial board and was left with a set of wooden pieces to make each box.



The pieces had rough edges where the milling machine had not made clean cuts. I used a chisel to remove the excess wood and smoothed any necessary areas using sand paper.

Health and Safety: To avoid injury I made sure that I never placed my hand in front of the chisel.



I dry clamped each box together to make sure there were no large gaps where the pieces were not fitting correctly.

I used PVA glue to join the pieces together – working quickly so that the glue did not dry before everything was in place.

Once the parts were glued up I put clamps on the box so that it dried into position in the right way.



Making

Making my Project

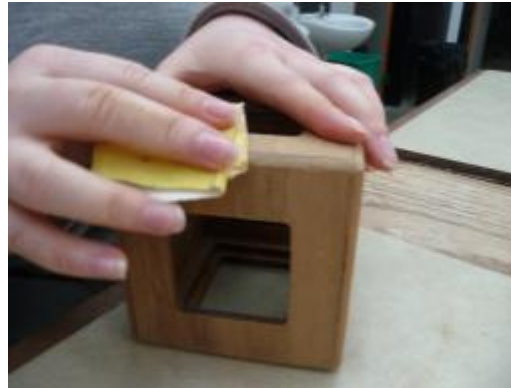
Step 3:

After the glue had been left to dry I used an orbital sander to ensure that each of the sides was flush. My teacher then used the router table to round of the edges of each box as the machine was fairly dangerous.

Health and Safety: While sanding I wore a dust mask and asked a friend to hold a vacuum next to my work so that limited sawdust could be inhaled. I held the vacuum in place while my teacher used the router and wore safety goggles so that no excess wood could hit me in the eye.



Step 4:



Before I could apply a finish to my boxes I used sandpaper in order to make sure the edges were smooth. I also had to remove any dust and dirt from the wood.

When applying the first coat of finish I mixed 1 part white spirit to 9 parts varnish so that it would soak into the grain of the wood properly. Any extra coats of finish did not need to be diluted with white spirit however it was important to sand the wood in between coats and remove any bits of dust once again.

I wore an apron to protect my clothing from the white spirit and varnish



Making

Making my Project

Step 5:



After the varnish had dried I marked out the points where I needed to drill holes. I marked on the positions of the holes for the wires to run through and also for the screws to fit through.

I used a ruler and a try square to ensure that I was marking the holes in the correct place.



I used a radial arm drill press with a 4mm bit to drill the holes in the bases of the boxes. Using a drill that was in a fixed position meant I could guarantee that the holes I was making were running through the wood at a 90° angle.

Health and Safety: I wore safety goggles and tucked my shirt in while using the drill press so that no excess material would fly into my eye and that I couldn't get pulled in by the rotating drill bit.

Next I had to transfer the holes that I had made in the base of each box onto the lids they would be sat on top of. I used a clamp to keep the two boxes in the right position on top of one another and drilled through the hole I had already made, continuing down through the lid below too. For this I used a power hand drill with a 4mm drill bit. I used this transferring technique as it was vital that the holes lined up perfectly.



Health and Safety: I secured my work in a vice before drilling so as to avoid the drill/my project slipping and causing an injury .

Making my Project

Step 6:



I separated the LEDs into strips of four lights and connected 12 sets of the lights together in the circuit. I soldered the electrical components together so that the circuit was in position, running through the correct areas of the lamp. At this point I also bolted the boxes together.



Step 7:

I cut four pieces out of a strip of hardwood using a hacksaw.



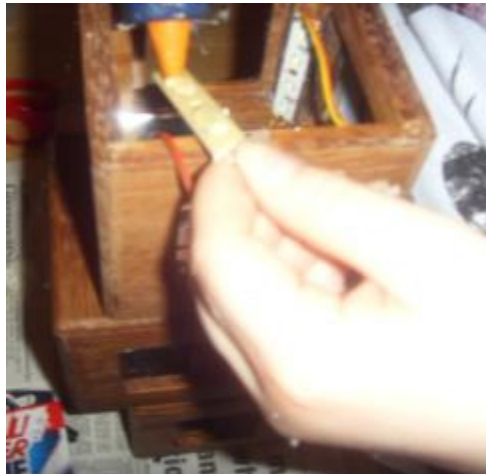
Next I used superglue to attach each piece of wood to the back of a small mirror. I then glued the mirrors to the inside of the boxes, one to the top and one to the base of each. The strips of wood meant that the mirrors sat proud of the bolts between the boxes and allowed the wire to run underneath. The mirrors on the base of the bottom box and the lid of the top box were not attached to a strip of wood as they could be placed straight onto the boxes.

Making my Project

Step 8:

I used a glue gun to attach the lights to the corners of each box, arranging it so that the wires ran along the top and bottom of the boxes alternately so that they would not be visible from outside the box.

Health and Safety: I was careful when using the glue gun to avoid touching the glue as it can cause sever burns.



Step 9:



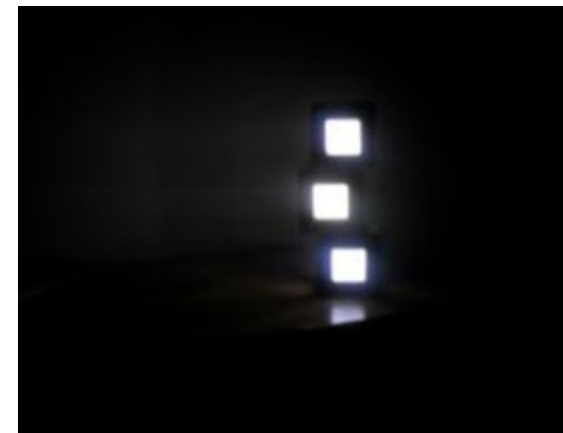
I marked out 12 squares on my fabric, measuring each square to the correct size using a ruler, then cut them out.



Finally I used a clear piece of acrylic, cut to the correct size on the CNC laser cutter, to sandwich my fabric into each of the cut-out windows of the lamp.



The Finished Product



Testing and Evaluation

Evaluating My Product

Is my final product environmentally friendly?

The iroko timber that I used to make my lamp was recycled as it was previously part of the science desks at my school. Every time a tree is cut down to make new products and is not replaced by a new tree the amount of greenhouse gases in the atmosphere increases. Reusing the wood means that I have not contributed to deforestation, so my project is very environmentally friendly. I have also used a power supply that has been taken from another product that is no longer in use, recycling plastic items like this is positive as it is saving the use of fossil fuels.

If I was to mass produce my product could I make it environmentally friendly?

If I was mass producing my product in order to sell it to the public I would have difficulty making it as environmentally friendly as I have done making a one-off; this is because I would not have the same access to wood that is of a very high quality but is no longer needed. Batch producing my product without contributing to deforestation may be possible as I could get in touch with schools and businesses around the country who may be getting rid of desks, however mass producing hundreds of thousands of lamps without cutting down a tree would be impractical. Even if I could locate enough timber that can be reused to make my product then I would need to work out how to transport it from A to B in the most eco-friendly way.

In order to mass produce my product in the most environmentally friendly way it would be necessary to use the technique of 'carbon offsetting' and /or 'reforestation'. For every tree cut down in the production of the lamps, two more would be planted, thus preventing the forest from being damaged beyond repair while also allowing more carbon dioxide to be removed from the atmosphere.

As hardwoods take an extremely long time to grow it would also be beneficial for the mahogany wood that I used in my project to be replaced with a softwood such as pine. This would mean that the wood that was used to produce the lamps would be replaced more quickly, causing less damage to the environment.

How could my product be put into mass production?

As I have used CAD and CAM for a significant section of my project (cutting out all of the wooden parts) the process of mass producing my product would not be much different to the way that I made my single lamp.

Evaluating the Product

Does my product meet the design specification?

Number	My table lamp must...	Does the finished product meet this requirement?	Reason:
1	Be between 250mm and 600mm in height so that can stand comfortably on a table	Yes	My lamp is 300mm tall so is within the limits set in the specification.
2	Be unusual and break away from the traditional style so that it is aesthetically pleasing as well as being practical	Yes	The lamp that I have produced does not have to traditional design of a bulb, lampshade and base. Instead it looks unusual but is still smart, sleek and interesting to look at.
3	Be made in an environmentally friendly manner	Yes	The wood that I have used for my lamp was previously a school science desk that was about to be thrown away. This is environmentally friendly as it means that no extra trees have been used in the production of my product, so I have not contributed to deforestation.
4	Increase the amount of light in a room	Yes	My lamp uses 48 LED lights that are arranged in order to provide the maximum amount of light possible. I have incorporated mirrors into the top and base of each cube so that this light is reflected. The lights I have used and the mirrors that compliment them allow the lamp to increase the amount of light in the room dramatically.

Evaluating My Product

Number	My table lamp must...	Does the finished product meet this requirement?	Reason:
5	Be safe to use within the home (have no dangerous wires etc...)	Yes	My final product is safe for use within the home as all of the wires are covered in a plastic coating which does not conduct electricity. This means that you are unable to receive an electric shock if you accidentally touch any of the wires or if water drips onto the cable.
6	Cost no more than £25 so that if I was to market the product it would be affordable	No	The parts list that I created documenting the cost to make my project estimates a total cost of £31.85. While the amount I spent on my project is lower than this price as I did not have to buy in all of the components, if I was creating the lamp to sell it would cost more than £25 specified.
7	Incorporate the style of a design era from with the last 100 years	Yes	When designing my lamp I made sure that I considered the characteristics of products from the 'Bauhaus' design era. My lamp is built of three cubes that I have varnished rather than painted in bright colours. These features, that are simple yet elegant, are inspired by 'Bauhaus' as that era was based around the use of simplicity within design.

Evaluating My Product

What do other people think of my product?

What other people think of my lamp is an important consideration as it will provide feedback that I could use if I was to develop my idea further in order to mass produce the product for the public.

"I like the design of the lamp however I would prefer it if the lights were different colours or could change colour. I think that this would make the lamp more appealing to the younger generation as it would add interest and make it funkier."
- Leanne Turner, Children's' Worker

"I think that the stacking boxes idea is good because it is unusual but if I was going to buy the lamp I would need to be a bit bigger. As it is I think that the lamp is too petite and would get lost amongst the piles of schoolwork on my desk."
- Jodie Taylor, Student

"I think that the window sections of the lamp should be bigger so that more light can be given out."
- Stella Tostevin, Nurse

"The product looks very professional and attractive and well as being functional. The lamp is very stylish and I would definitely purchase one if it was available on the market!"
- Dr Rankilor, IT Professional

"The lamp is not very traditional so would appeal to an audience who are looking for interesting products to furnish their homes. If there were a few more layers of varnish then the product would look a lot more polished and sleek, which would mean the product would sell a lot better."
- Malcolm Le Cocq, Shop Owner

Conclusion: The people that I have spoken to have provided lots of useful feedback that I would need to consider if producing my lamp for the mass market. I would need to do further market research and focus on reconsidering the size and colour of the lamp, depending on who my target market was.

Evaluating the Product

What do I like and why?

- I like the curved corners because they make the lamp aesthetically pleasing. I think that having angular edges would make the product seem too simple and boring whereas the curves mean that the simplicity of the design makes it seem quite sleek.
- I like the contrast between the plain white fabric and the rich colour and grain of the wood. The lack of bright colours mean that the lamp looks sophisticated table lamp rather than being a children's nightlight.
- I think that three is the perfect number of boxes to have stacked because it means that the lamp doesn't tower too high. If there was an even number of boxes then the lamp would be unstable and could easily topple over.



Conclusion: I am happy with the outcome of my project as the product is off a high standard. The lamp breaks away from traditional designs as I had designed it to and still looks smart and stylish. The simple block design mirrors the key features of Bauhaus design. If I was to repeat the project then I would make some changes, specifically increasing the size slightly.

What would I change and why?

- I don't like the bulkiness of the lamp's power supply. If I was to make another lamp like this then I would try to find a plug that was a lot smaller and more ergonomic as the one that I have used in this project weighs more than the lamp itself. The large power supply would be a problem if I was trying to market my product.
- I would prefer to make the lamp a little larger if I was to repeat the project. The product is very compact so does not have much presence in a big room. Increasing its size would mean that the lamp would be more of a feature within a room and would also increase the amount of light that it could give out (as more LEDs would fit inside).
- When the edges were being rounded by the router some of the wood split slightly on the corners. If I was going to repeat the project then I would research woods and use a hardwood that was less brittle.