edexcel

Website Exemplar

GCE D&T Graphics Product.

Unit: 6GR01

Topic: Baked Beans Packaging.

Portfolio of Creative Skills

Product Analysis- Baked Bean Packaging

Product Analysis- Baked Bean Packaging

Baked Bean Tin

Form- It must be a cylindrical shape with a flat top and bottom so that is easy to stack, store and maximise transporting potential.
-The tin must be no bigger than 100mmx150mm and hold correct weight of beans otherwise it will not fulfil its purpose
-The container must have a barcode on it so it can be used in conjunction with an EPOS system

Function- The tin must hold the contents without damaging it as otherwise the consumer will not be content with the product.
-It must use the correct colours so the customer can associate the brand with the product and attract their eye and increase the likelihood of them buying it.
-The packaging must inform the consumer of all legal requirements such as ingredients and barcode

User Requirement- The tin must have an easy to open system so the user can access the contents easily
-It must be safe to dispose the tin after use so it does not harm anyone who handles it e.g. disposal agencies.
-The tin must be a shape that is easy to stack so the maximum can be stored by wholesalers and retailers etc.

Performance Requirement-The tin must hold the contents effectively so it will not get contaminated by foreign material
-The tin must be able to be dropped 50 times without braking so it can withstand transportation.

Materials- The materials it is made out of must be recyclable because of green, environmental concerns of the company
-The container must be made out of tinplated steel so the content does not corrode the container.
-The material should be durable so it can be transported without being damaged.

Components- It must have a ring pull so the product is easily accessible and can be opened with ease.

Scale of production-The tin must be suitable for mass production as the product is of high demand.
-The tin must be a standard component as this will reduce costs.
-The paper used for the label must be able to be used in lithographic printing process so that it can be massed produced.

Costs- The tin must be made with as little waste both physical and financial so that the costs of manufacture are kept as low as possible.
-The tin must be a standard component as this means they can be bought in bulk further reducing the cost.

Baked Beans Snap Pot

Form- The shape of the pot must be suitable to stack, store and maximise transporting potential.
-Each individual pot must be able to hold 1 portion of beans and be no bigger than 100mmx100mm as this will make sure the pot is of a suitable size
-The container must have a barcode on it so it can be used in conjunction with an EPOS system

Function- It must use the correct colours so the customer can associate the brand with the product and attract their eye and increase the likelihood of them buying it.
-The packaging must inform the consumer of all legal requirements such as ingredients and barcode

User Requirement- the individual pots must be able to 'snap' away from the main body because each pot must be able to be heated on its own.
The pot must be able to open easily so the consumer can use the product with ease.
-It must be safe to dispose the tin after use so it does not harm anyone who handles it e.g. disposal agencies.
-The tin must be a shape that is easy to stack so the maximum can be stored by wholesalers and retailers etc.

Performance Requirement- each pot must be able to break along the perforated edge without damaging the rest of the pots or remaining products because if the remaining products are damaged they will not be able to be used as effectively

Materials- The materials it is made out of must be recyclable because of green, environmental concerns of the company
-The container must be made out of polypropylene so the content does not corrode the container.
-The material should be durable so it can be transported without being damaged.

Components- The pot must have a film lid that keeps the contents of the pot fresh and uncontaminated

Scale of production- The pot must be suitable for mass production as the product is of high demand.
-The pot must be a standard component as this will reduce costs.
-The card used for the label must be able to be used in lithographic printing process so that it can be massed produced.

Costs- The pot must be made with as little waste both physical and financial so that the costs of manufacture are kept as low as possible.
-The pot must be a standard size as this means they can be bought in bulk further reducing the cost.

Similarities and differences- The main differences between the two products is that the 'Snap Pots' are individual portions whereas the traditional Tin Can is an unspecified amount which can lead to waste. Another difference is the materials one is tin and the other is LDPE meaning they both have very different properties however both are recyclable. The two products also have different target markets, the 'snap pots' are great for elderly people who live on their own or university students who don't have a fridge and need their own food portions, however the tin can is better for families who will eat a whole can between them rather than individual portions.

Product Analysis- Baked Bean Packaging

Materials

Component	Material Chosen	Advantages	Disadvantages	Environmental Issues	Alternative Materials
Tin 	Tinplated Steel	- This material is recyclable making the packaging more sustainable - Tin plated steel can be painted or printed on using different type of inks and lacquers meaning there is not necessarily a need for a label. - It is corrosion resistant meaning the contents of the tin will not react with the container. - It is easy to form into shape and is strong so can be dropped and transported without being easily damaged -Cheap to produce in large quantities - Can be heat treated, suitable for sterile products, can be sealed airtight	- Hard to form meaning more energy is needed thus spending more money on production overall. - Hard to form because of the makeup of the material. - Non-renewable resource meaning it is not a sustainable material to make the product. - Steel will corrode meaning extra materials have to be added such as a lacquer or polymer lining making the overall production more costly.	The disposal of the chemicals used in the process of making the composite material will need to be disposed of in a safe way. The two materials will also needed to be transported to the same place to be combined this will have environmental concerns because of the miles covered. Also the production of the material uses a lot of energy that also contributes to the amount of pollution in the atmosphere.	Aluminium would be an alternative it is lighter and easier to form and is also recyclable. However it is more expensive than steel of the same strength and is not as strong.
Label 	Coated Paper	- This material is recyclable making the packaging more sustainable. - Lightweight material meaning the overall product does not weigh more than necessary - Can be printed on meaning it is suitable for use in offset lithography - Renewable resource making the product more sustainable - High quality finish if used with the correct inks and printing process meaning the image of the brand looks better - Relatively inexpensive meaning the unit cost of each product is lowered and as the product is an item that is commonly used this is best	- Has a low tensile strength this makes it easy to rip however with my product this should not be too much of a problem. - Paper is an additional material rather than just printing straight onto the tin however I gives the product a better quality feel - Higher set up cost because of the machines needed to produce the label and the inks needed. - Coated paper is not water proof therefore if it got wet it the label would be ruined.	If not made from a sustainable forestry source it can be bad for the environment because it is causing deforestation. Solvent inks are toxic thus making the disposal of waste disposal dangerous. High energy is needed to produce the label meaning large amounts of fuel are being used to produce them.	PET Label is an alternative to high quality coated paper; it has a higher quality finish as it is glossy. This would make the logo look better and make the brand seem more appealing.

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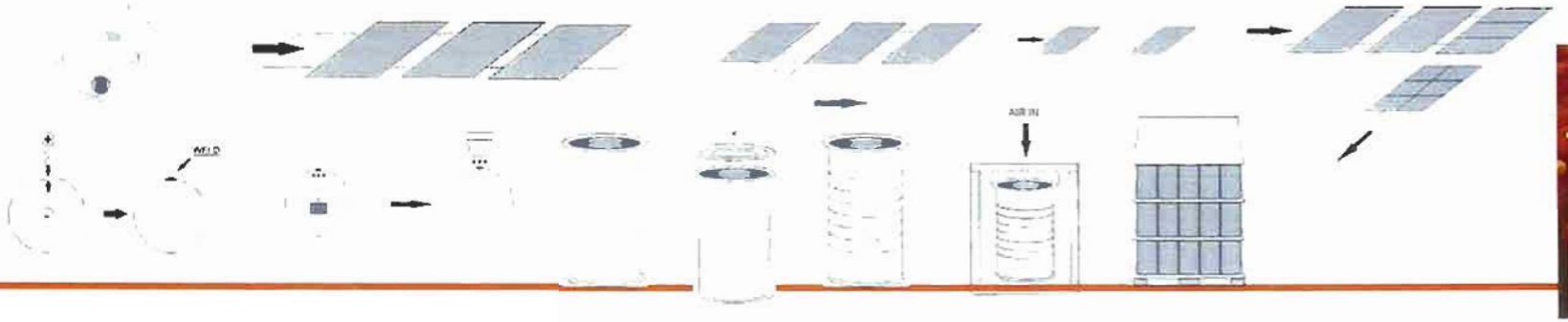
Product Analysis- Baked Bean Packaging

Manufacture

Component	Manufacturing Process	Advantages	Disadvantages	Environmental Issues	Alternative Processes
Tin- Three Part Can 	Steel strip arrives at the can manufacturing plant in large coils. Steel strip is cut into large sheets. Lacquer is applied to the side of the sheets that will become the internal surfaces of the finished cans. This special lacquer is to protect the can itself from corrosion and from any possibility of interaction between the contents and the metal. The lacquered sheets are dried in an oven. The large sheets are slit into small sheets, one for each can body. Each small sheet is rolled into a cylinder. The cylinder edges are welded by squeezing them together whilst passing an electric current through them. This heats up the metal sufficiently for a sound joint to be made. The inside surface of the weld is sprayed with lacquer and then cured by blowing heated air on to the outside of the cans. The cans are passed through a flanger where the top and bottom of the can are flanged outwards to accept the ends. Plain ends are seamed to the can bodies to close one end of every can. The cans are passed through a beader where the walls of the cans have circumferential beads formed in them to give added strength. Every can is tested at each stage of manufacture. At the final stage they pass through a pressure tester, which automatically rejects any cans with pinholes or fractures. The finished can bodies are then transferred to the warehouse to be automatically palletised before despatch to the filling plant.	• This method is repeatable so can produce many tins at the same time to the dimensions and requirements. • Standard components are produced in this method meaning the cost is lower because lots of companies can use them for whatever they want. • Waste material created in production is recycled to be reused in the next batch of tin cans. • This method has been used many times and is proven to work this reduces the risk of problems during production. • Lay-planning can be used to minimise waste and maximise production per unit.	• This method requires lots of energy and pressure for the many stages of the process this means it is costly and harmful to the environment because of the release of green house gases. • The Three Part Can process is a longer more involved process which increase the cost and time needed to produce a single unit. • To set up the machinery and equipment needed has a high set up costs and needs high capital to initially invest in.	Metal is a recyclable material that is designed to be recycled and is 100% recyclable. Tin cans are made from metal produced with more than 50% recycled material. It takes a long time to degrade so it is used to make new material rather than creating more virgin material. However if people to do recycled the tins and send them to land fill this will cause issues as they will not break down.	Two part can, this is a quicker production method that requires less energy however the set up costs for changing the process to two part can are high.
Label -Lithography 	The offset lithographic process works by first transferring an image photographically to thin metal, paper, or plastic printing plates. Unlike other forms of printing, in offset lithography the image on the printing plate is not recessed or raised. Rollers apply oil-based ink and water to the plates. Since oil and water don't mix, the oil-based ink won't adhere to the non-image areas. Only the inked image portion is then transferred to a rubber blanket (cylinder) that then transfers the image onto the paper as it passes between it and another cylinder beneath the paper.	• Good reproduction quality • Inexpensive printing process meaning the high volume of labels needing to be printed will have a low unit cost. • Able to print on a wide range of papers • High printing speeds means large quantities of labels can be produced in a smaller amount of time. • Widely available meaning it is accessible to the manufacturers.	• There can be colour variation due to water and ink mixture and this can lower the overall quality. • Paper can stretch due to dampening and this can affect the overall outcome • Set up costs make it uneconomic on short runs • Can only be used on flat materials so cannot print directly onto the cans. • Requires a good-quality surface so more expensive paper has to be used. • It has high set up costs particularly for long runs • Plate quality can degrade over time and there are expensive to replace.	Inks can be harmful to the environment because they are toxic and the chemicals used on the cylinders can also be harmful to the environment. Also the waste from the printers can be damaging to the environment if it is not dealt with properly.	Flexography is an alternative process however it is not as high quality as lithography. Flexography cannot reproduce the detail in the photography because of the limited colours therefore will reduce the overall quality of the brand



Product Analysis- Baked Bean Packaging

Quality Standards:

These are the main quality standards which would be applied to my tin can and paper label

BS EN 15136:2006
Materials and articles in contact with foodstuffs. Certain epoxy derivatives subject to limitation. Determination of BADGE, BFDGE and their hydroxy and chlorinated derivatives in food simulants

This would ensure that the materials the can is made out of do not react with or contaminated the food.

BS EN 10333:2005
Steel for packaging. Flat steel products intended for use in contact with foodstuffs, products or beverages for human and animal consumption. Tin coated steel (tinplate)

This would ensure that the material is suitable for use with the food contents.

BS 4277:1968
Glossary of terms used in offset lithographic printing
Copy preparation, photographic and associated operations including colour separation, plates and platemaking, printing and machines and equipment.

This would ensure that the technician or engineer would know how to use the Offset Lithography Printing machine.

BS ISO 12636:1998
Graphic technology. Blankets for offset printing Offset lithography, Printing equipment, Printing, Blankets, Dimensions, Dimensional measurement, Thickness measurement, Elongation, Tensile strength, Mechanical testing, Dimensional changes, Marking, Tensile testing, Compression testing, Test equipment, Conversion (units of measurement), Ordering, Labels

This would ensure that the blanket cylinders for offset lithography would be correctly tested to the highest standards.

Quality Control: *what, how, why?*

These are the main quality control checks and tests which would be applied during the manufacture of my tin can and paper label

Preparation	1. The machinery is inspected for faults such as scratches using a visual check performed by an expert engineer 2. The cylinders are visually checked by an expert engineer for any defaults that may affect the outcome of the print
Raw Materials	1. The sheet metal is tested by radiation to make sure it is the correct thickness to be used in machines 2. The coated paper is delivered and visually checked for any defects e.g. torn paper, damaged corners, that may jam the printer
Manufacture	1. The sheet metal is tested by radiation to make sure it is the correct thickness to be used in machines 2. The coated paper is delivered and visually checked for any defects e.g. torn paper, damaged corners, that may jam the printer
Assembly	1. The weld in the tin is checked with radiation to check it is secure and will not leak 2. The label is checked to make sure the printing is aligned.
Final product	1. Sampling is used to check the correct volumes are achieved by filling with a liquid and measuring to see if the needed quantity fits. 2. Tin cans are tested to destruction to ensure they will not break whilst in use.
After sales	1. Samples are requested from retailers and feedback is requested so the company can improve any problems they have not noticed.

Quality Assurance:

This is an overall approach adopted by a company to ensure that high quality standards are maintained throughout the organisation and suppliers. Every activity within a company; standards, procedures, documentation and communication systems are established and monitored. For example supervisors will check each process is completed correctly and the can is meeting quality control standards. This usually involves developing a Quality Manual which defines the best way of doing things and which can be followed by all staff. Total Quality Management (TQM) is an approach to management, which seeks to establish the highest possible standards of quality within every part of a company and in every stage of manufacture from designing a product to obtaining feedback from customers. It is committed to continuous improvement for the complete lifestyle of a product. This will eventually assure the tin can being the best it can possibly be every time it is produced. Quality assurance during manufacture: manufacture processes are clearly defined and controlled. All critical processes are validated to ensure consistence and compliance with specification. Manufacturing processes are controlled, and any changed to the process are evaluated. This means that the tin can will always be the highest quality it can be. Instructions and procedures are written in clear and unambiguous language. Operators are trained to carry out and document procedures. Records are made, manually or by instruments, during manufacture that demonstrate that all the steps required by the defined procedures and instructions were in fact taken and that the quantity and quality of the product was as expected. Deviations are investigated and documented. Records of manufacture and distribution that enable the complete history of a batch to be traced are retained in a comprehensible and accessible form. The distribution of the products minimizes any risk of their quality. A system is available for recalling any batch of products from sale or supply. Complaints about marketed products are examined, the causes of quality defects are investigated and appropriate measures are taken with respect to the defective products and to prevent recurrence.

Product Design- Perfume Bottle

Product Design-Perfume Bottle & Packaging
Unit 2

Product Design- Perfume Bottle

I have been asked to design a perfume bottle and it's packaging for a new cosmetics company. The perfume must be have a theme of natural forms and if possible should represent the fragrance. It must attract the female market aged 14-26 years old so must therefore be vibrant, fashionable and so it stands out against other products similar to it. The product must also be suitable for mass production as the product will distributed across the country to many different departments stores.

Perfume Bottle

Form

- The bottle must be ergonomically sound so it is easy to hold and comfortable for the user to apply
- The bottle must have an atomiser spray system so the fragrance can be released in a mess free way.
- The bottle must be no bigger than 200mm x 200mm as this will make the product too bulky for the consumer to use.

Function

- The bottle must be inspired by natural forms as this it the theme for the product.
- The bottle must have some form of identification on it e.g an embossed image on the bottle so the make and brand is recognisable.

Cost

- The bottle must not cost any more than £5 per unit to produce otherwise it will be come too expensive for the target market to purchase.

Scale of production

- The bottle must be design to be mass produced as this will reduce the cost to the consumer.

Performance Requirements

- The atomiser system must be able to last at least 1000 sprits'.
- The materials used in the bottle must be hard wearing and durable so they do not break in use.

User requirements

- The bottle must dispense the correct amount of perfume per sprits as to make the perfume last longer

Perfume Packaging

Form

- The packaging must be dynamic as to make it more interesting
- The box must be a design that is easy to store and transport as to maximise the amount of units that can be transported thus reducing costs.

Function

- The packaging must catch the consumer's eye as this will make them more likely to buy the product
- The colours of the bottle and the packaging must correspond as to make the overall image of the perfume smart and sophisticated

Cost

- The packaging must cost under £1 per unit to product otherwise it will make the product to expensive

Scale of production

- The packaging must be suitable for mass production as a high quaintly of units will need to be produced

Performance Requirements

- The box must support and protect the bottle so the product is not damaged when it reaches the user.

User requirements

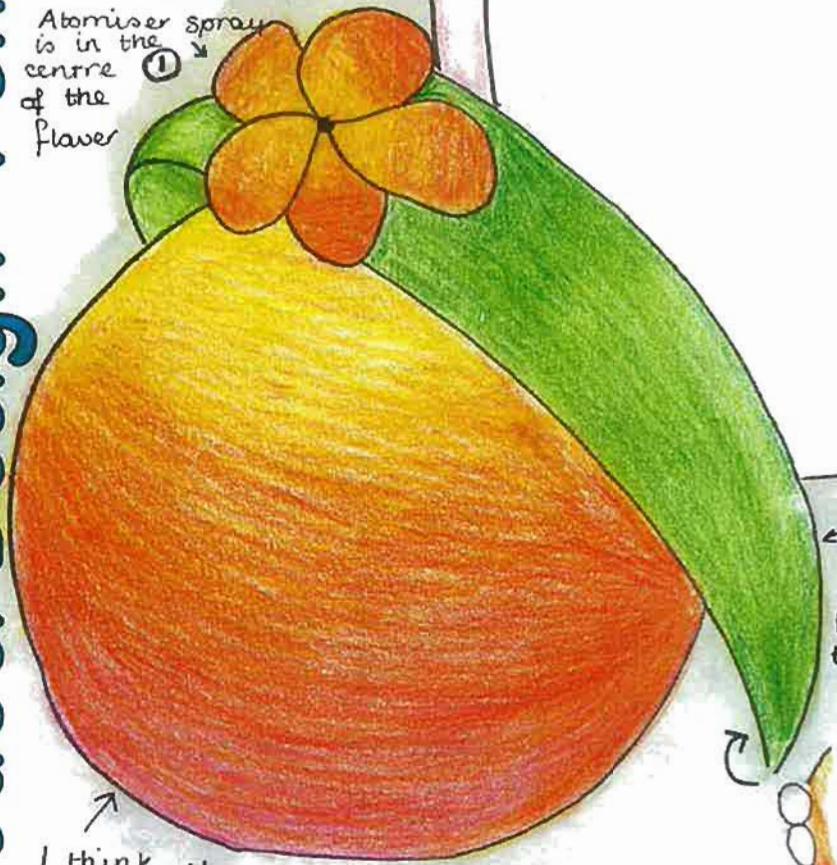
- The packaging must be easy to open as so the product can be accessed easily

Product Design- Perfume Bottle

The lid on this bottle would twist open (2) to reveal the atomiser system

I do not think the bottle would suit my target market of 16-26 however some modern graphics may improve this

Atomiser spray is in the centre (1) of the flower

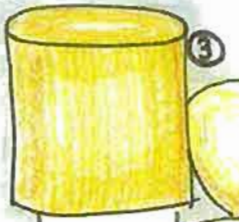


I think the colour and theme of this bottle is directly suited to my target market.

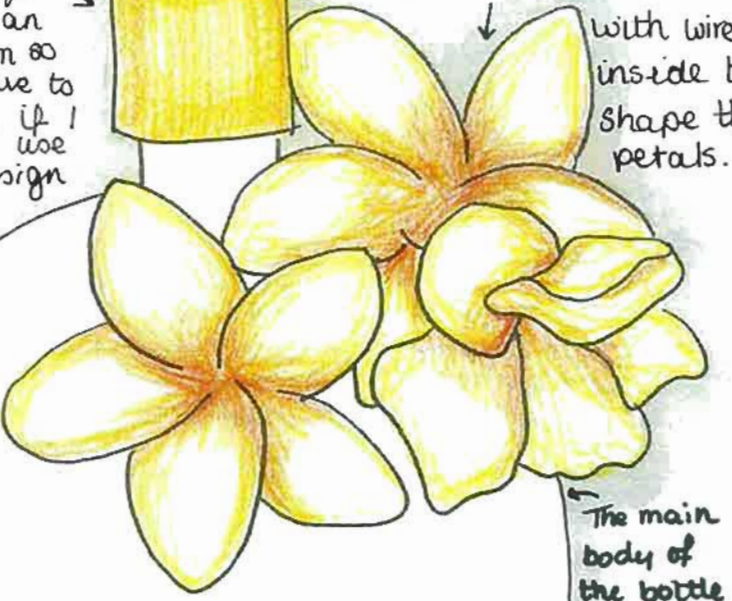
The flower and leaf could be made out of acrylic however this may make the bottle seem less sophisticated.

If the leaf is pushed towards the bottle the perfume is released out the flower centre.

The lid for this bottle screws off however my specification says there must be an atomiser system so this would have to be altered if I were to use the design



These flowers could be made of material with wire inside to shape the petals.



The main body of the bottle could be injection moulded thus being suitable for mass production

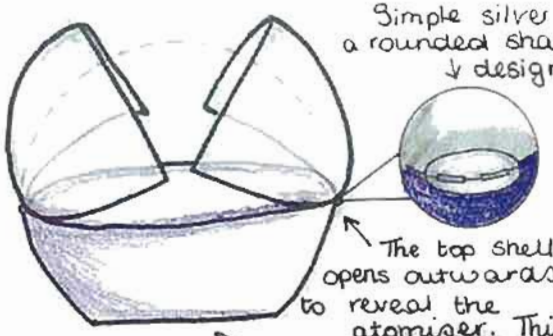
I think this bottle looks quite old fashion because of the gold and pastel yellow

Product Design- Perfume Bottle

Design	The bottle must be ergonomic sound	The bottle must have an atomiser system	The bottle must be inspired by natural form	The bottle must have some form of identification with the brand on it	The bottle must be suitable for mass production	Total	Justification & Explanation
1	9/10	8/10	8/10	7/10	8/10	40 /50	The spherical shape of the bottle makes it easier for the user to hold also the way the atomiser is shaped it makes it easier to spray. The bottle is very much inspired by natural forms as the colour is used to represent a tropical sunset and the flower finishes off the design. The colour and design makes the bottle identifiable with the possible brand and leaves space for a logo and graphics.
2	4/10	7/10	6/10	5/10	8/10	30/50	This bottle is quite plain and old fashioned hence the low score. The square shape means it is difficult to hold and would need to be remodelled into a more curved shape to make it more ergonomic. The design would need some interesting graphics to make it a more viable design. The bottle could be mass produced however the rose component would need more components to create.
3	6/10	0/10	8/10	7/10	8/10	29/50	I really like this design concept however it does now have an atomiser spray which immediately lets it down. The pastel yellow shade of the bottle makes it seem as though aimed towards an older market, if I were to adjust to my target market I would use more vibrant tones.

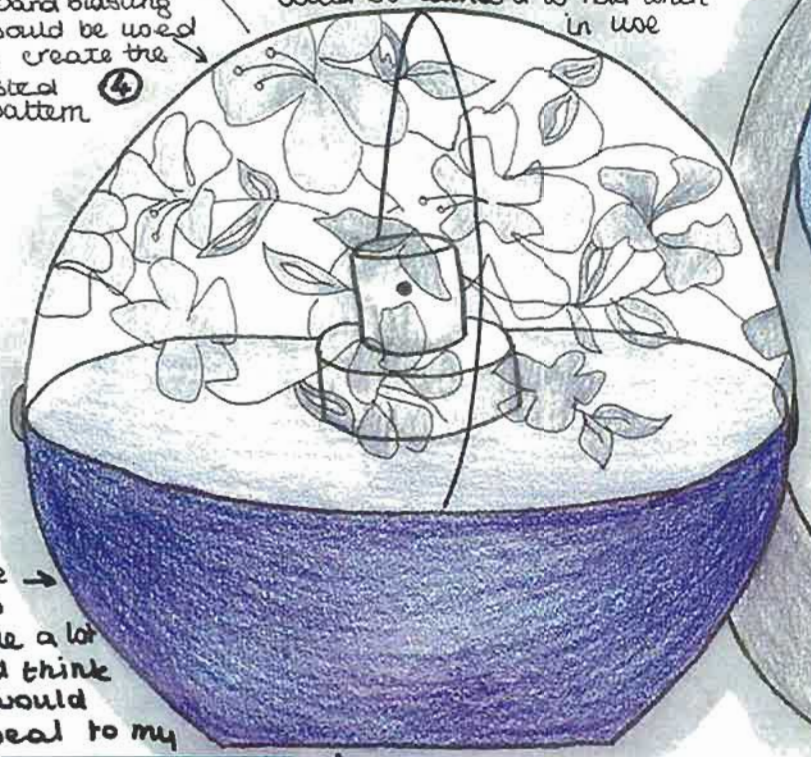
Product Design- Perfume Bottle

Simple silver glass in a rounded shape to continue design form.



The top shell opens outwards to reveal the atomiser. This could be awkard to hold when in use

Sand blasting would be used to create the frosted pattern ④



This base could be made of anodised alluminium however if this was made by the process of spinning it may not have such a good finish so would have to be blow moulded instead.

I like this bottle a lot and think it would appeal to my target market.

⑤ I think this bottle has quite a masculine feel however these could be developed into more feminine features.

Perfume would be held in this glass sphere.

The lid for this bottle would screw off to reveal the atomiser

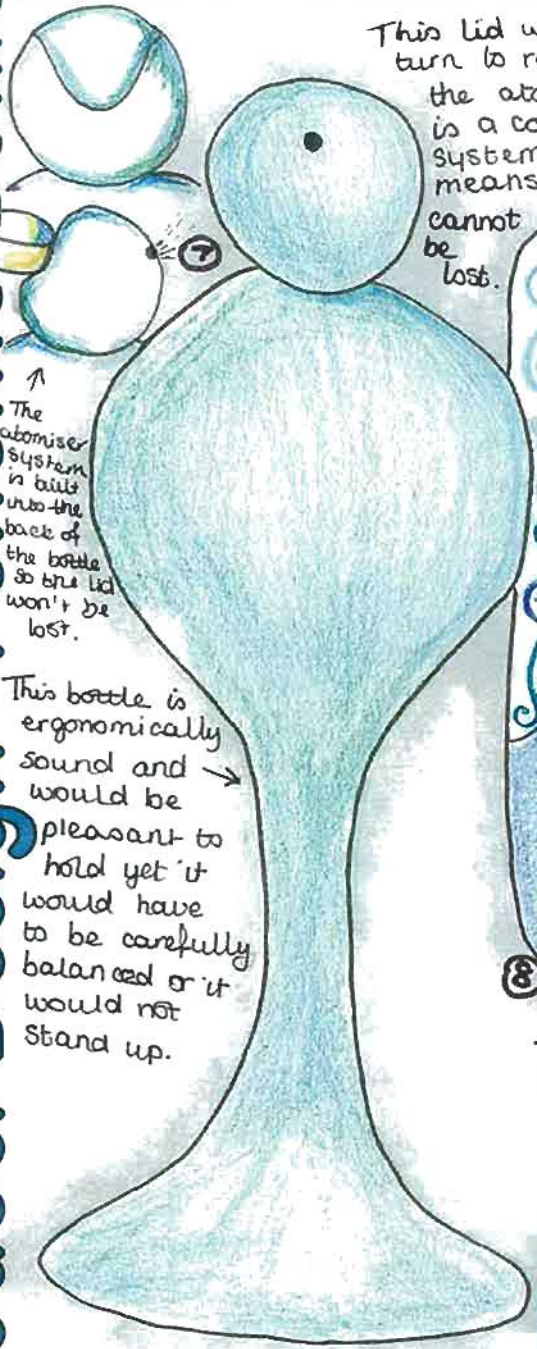
I like this bottle as it has a good ergonomic shape and looks quite young

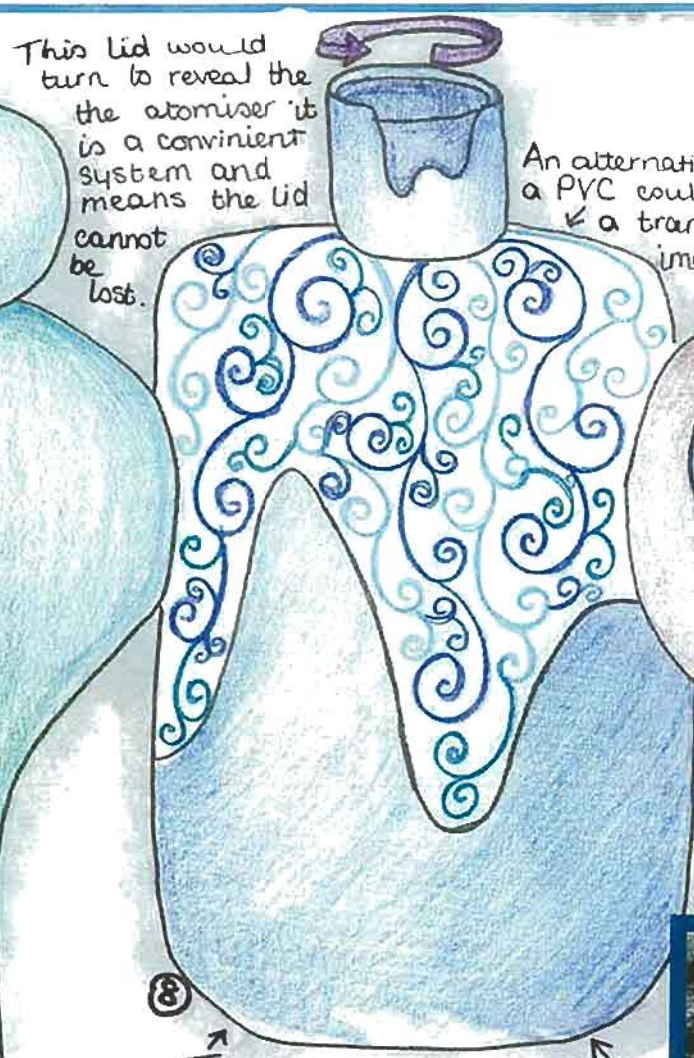
⑥ The swirl detail would be embossed onto the bottle giving extra texture and detail.

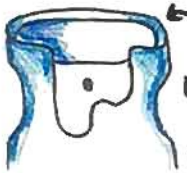
Product Design- Perfume Bottle

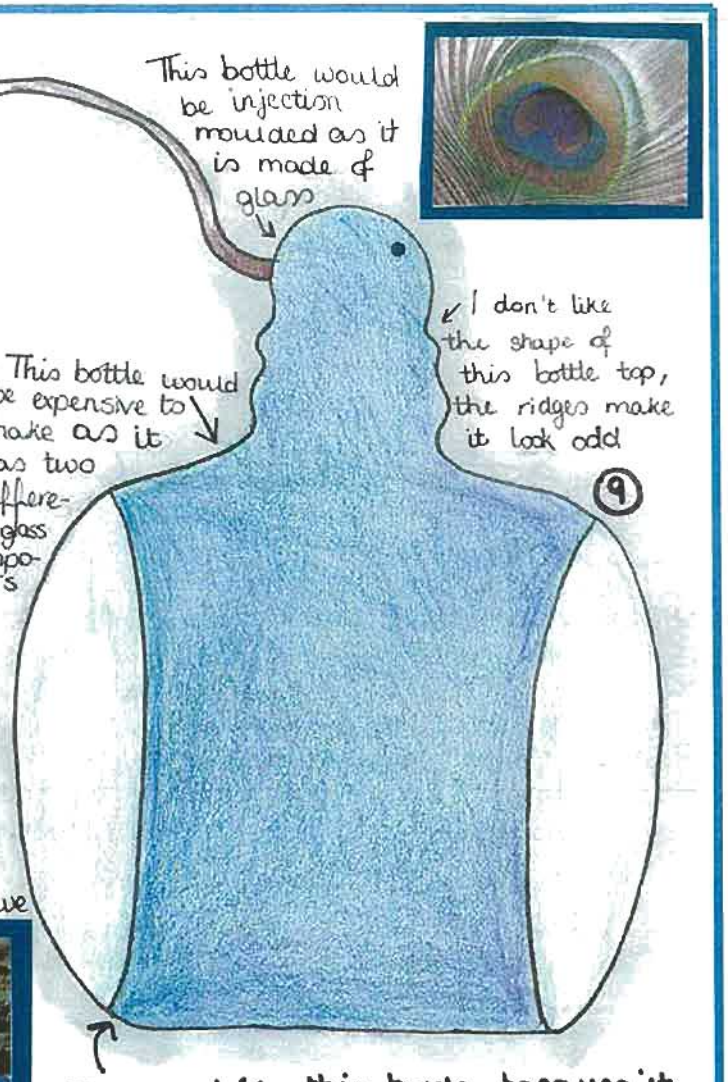
Design	The bottle must be ergonomic sound	The bottle must have an atomiser system	The bottle must be inspired by natural form	The bottle must have some form of identification with the brand on it	The bottle must be suitable for mass production	Total	Justification & Explanation
4	6/10	8/10	9/10	8/10	7/10	38/50	I really like this bottle as it is very sophisticated however the ergonomics of the design let it down. The bottle lid opens into two halves and this makes it awkward to hold this would have to be changed if I were to chose this design to take further. The bottle has an atomiser spray however it is very basic this could be changed to something more interesting. The link with natural forms is created by the floral pattern engraved on the lid.
5	5/10	7/10	5/10	5/10	6/10	28/50	This bottle is probably the most masculine design as it is very grey making it look very industrial. If I were going to carry this design through I would have to find a way to make it more feminine. Overall I don't like this design.
6	9/10	8/10	8/10	7/10	9/10	41/50	This is one of my favourite bottles I love the shape as it would fit nicely into someone's hand. It is also easy to adapt to the brand of my perfume as it has space for graphics or a different embossed image. The bottle is suitable for mass production as it would be injection moulded or blow moulded..

Product Design- Perfume Bottle





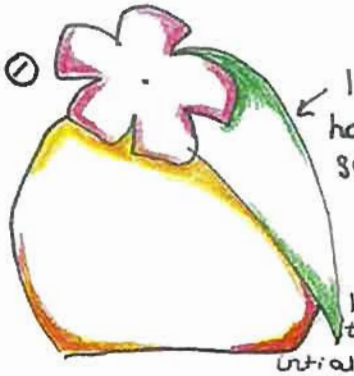




Product Design- Perfume Bottle

Design	The bottle must be ergonomic sound	The bottle must have an atomiser system	The bottle must be inspired by natural form	The bottle must have some form of identification with the brand on it	The bottle must be suitable for mass production	Total	Justification & Explanation
7	8/10	8/10	6/10	5/10	7/10	34/50	This bottle only got 34 points because of the small area for a logo or graphics. It is a very ergonomic shape however it would need to be balanced or else it would fall over. The bottle has an atomiser spray however it may need to have a lock on it because it does not have a lid and the spray may accidentally go off.
8	7/10	9/10	5/10	5/10	7/10	33/50	The bottle has got a lid similar to that of a body spray which does not make it as sophisticated as it could be. The bottle has the swirls on the bottle give identification with the brand however there will need to be some different graphics and a logo to make it have a higher visual impact.
9	8/10	7/10	6/10	7/10	8/10	36/50	I like the atomised spray on this bottle because it is innovative and sophisticated. The bottle may be difficult to mass produce due to the design of the bottle. The ergonomics of the bottle would also need to be improved because at the current design it would not fit comfortably into somebody's hand, it would needed to more rounded or have a nicer neck shape.

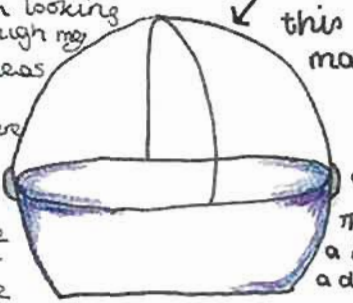
Product Design- Perfume Bottle



① I like this bottle overall however I think some elements such as the shape could be improved ④

When looking through my initial ideas the main themes were floral and water however I think the theme for my bottle will be birds, as birds are highly fashionable and have a greater feeling of the edgy style I am aiming for.

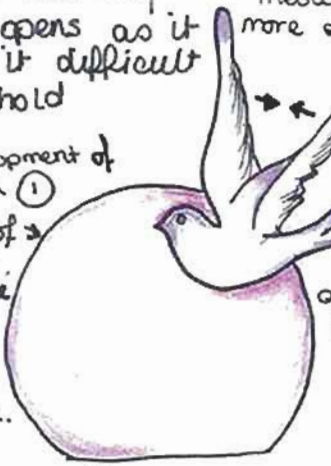
I don't like the lid of this bottle I think it is too plain and simple ⑥



I don't like the way this lid opens as it makes it difficult to hold

Development of design ①

The eye of a bird is a diamante used to add some glitz.



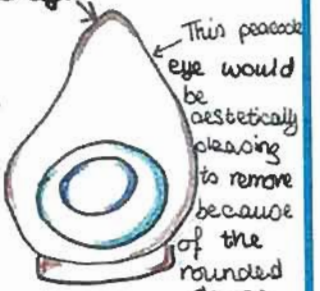
By squeezing the wings together the atomiser is activated and releases the scent.

I think the colours need to be adapted to make this more modern and highly appealing

Twisted feather

The feather would twist around the atomiser to provide and elegant fitting

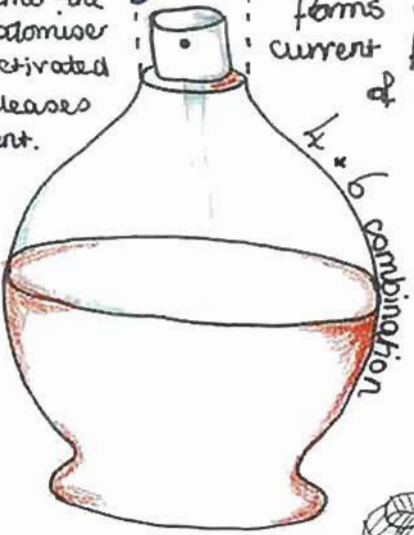
This would be made of attqued metal to give it a more edgy feel



Peacock eye

This peacock eye would be aesthetically pleasing to remove because of the rounded shape

The swallow on the lid fits with the theme of natural forms and follows current fashion trends of birds



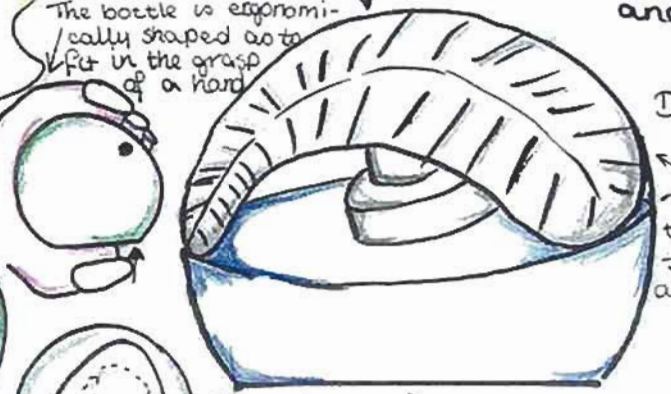
4 × 6 combination

Trying to work out how to draw a twisted feather

I have taken the shape of design ⑥ and the clear lid of ④ to create this hybrid design.

The feather could be distressed to give it an edge feel

The bottle is ergonomically shaped as to fit in the grasp of a hand



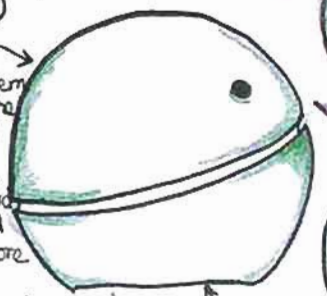
Development of ④

The lid rotates back over the perfume bottle to reveal the atomiser

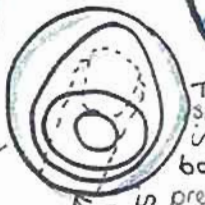
The colour scheme needs to change to make it more feminine.

Development of ④

One problem with the initial idea is it is awkward to hold therefore this design helps by using the curve of the hand to shape it

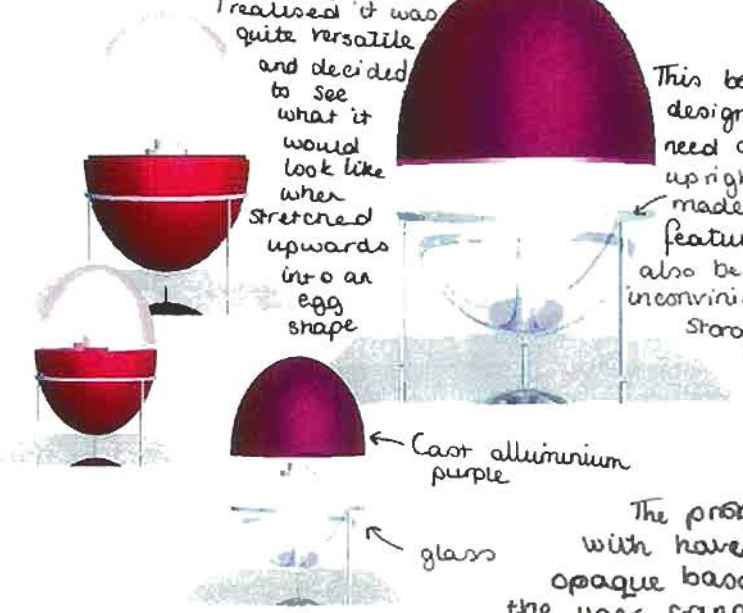


The atomiser spray release is at the base and is pressed by the thumb.



Product Design- Perfume Bottle

When looking at the shape of the bottle I realised it was quite versatile and decided to see what it would look like when stretched upwards into an egg shape

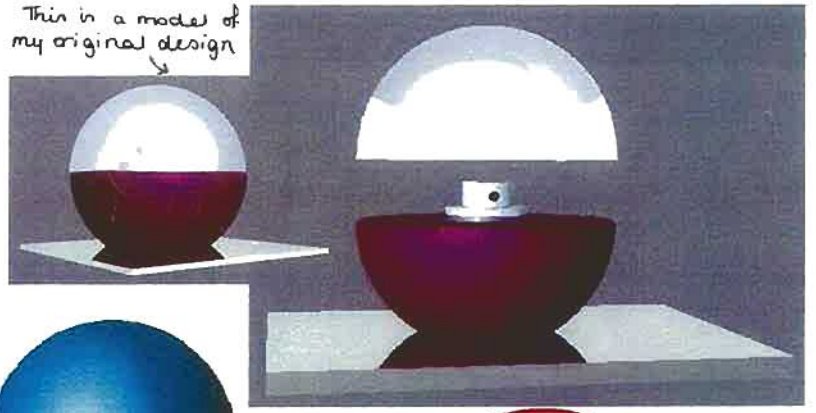


This bottle as it is designed now would need a stand to stay upright this could be made into a design feature but could also be highly inconvinient for storage.

← Cast alluminium purple

← glass

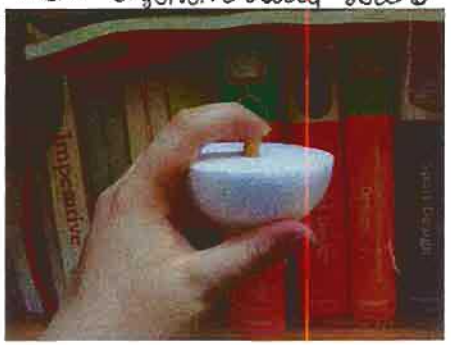
This is a model of my original design



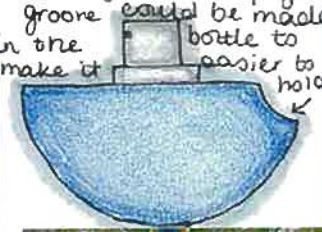
The problem with having an opaque base is the user cannot see how much perfume is remaining.

After researching anodised metals I have decided alluminuim would be the best choice for my bottle

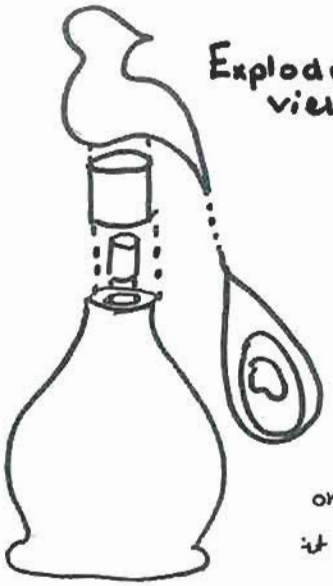
After modelling my perfume design I realised it is very awkward to hold so for my final design I would make it more ergonomically sound



To make the shape more ergonomic a finger groove could be made in the bottle to make it easier to hold



Product Design- Perfume Bottle



Exploded view.

I chose the peacock because Birds are very fashionable and would appeal to my target market

The lid will also be made of Jellutong

The peacock will be made of air-dry clay as the shape is difficult to make unless moulded by hand

Jellutong also takes a finish well. Therefore once it is sprayed it will look good

The real peacock feather will add another dimension to the bottle to make it stand out.

I wanted to use a real peacock feather because it would look better than one that was hand made.

This will be a real feather pushed into the clay body of the peacock.

The main body of the bottle will be made of Jellutong

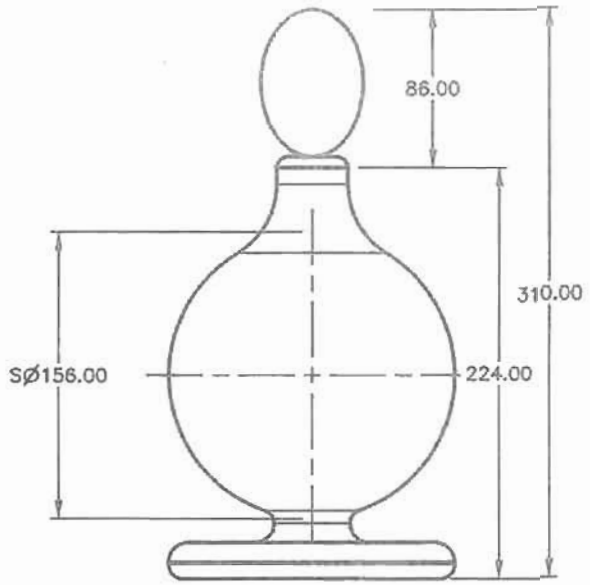
I chose this design for the bottle because of the ergonomic shape.

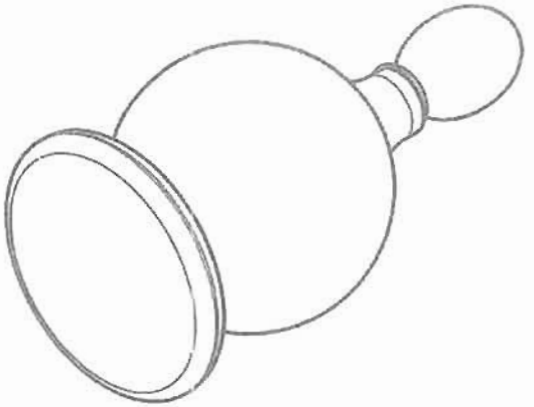
I chose this design for the logo because I like the elegant curves and think they are sophisticated.

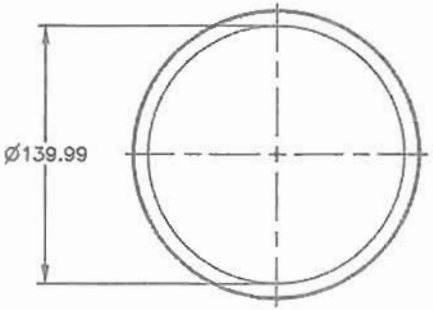
The logo will be made of paper stuck onto the bottle as this is the best way to get the logo to stick onto the curved surface

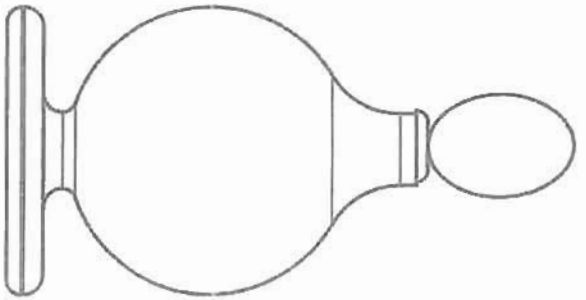
Jellutong has a fine grain therefore cuts and shapes well making it easy to mould

The jellutong is a sustainable material therefore is better for the environment







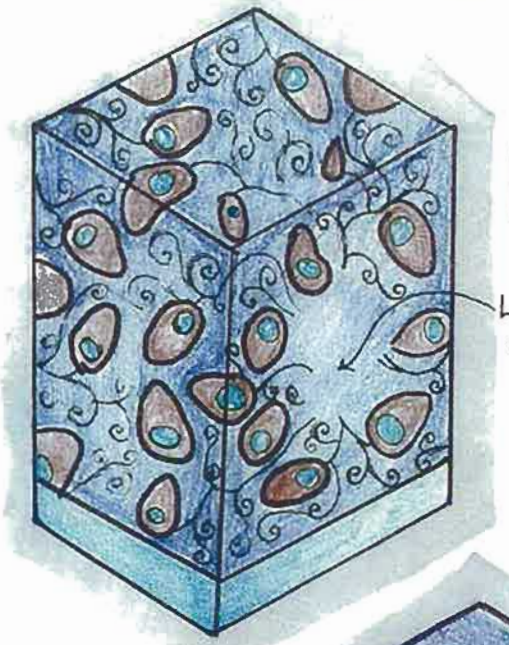


REV	DESCRIPTION	BY	DATE

TITLE

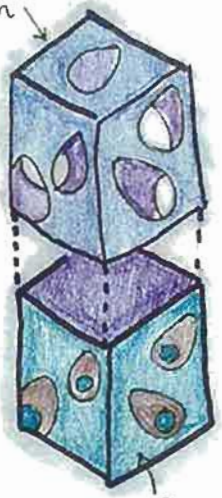
	SCALE	DATE
	DRAWN BY	
	CHECKED BY	
	APPROVED BY	
PROJECT NUMBER	DRAWING NUMBER	

Product Design- Perfume Bottle



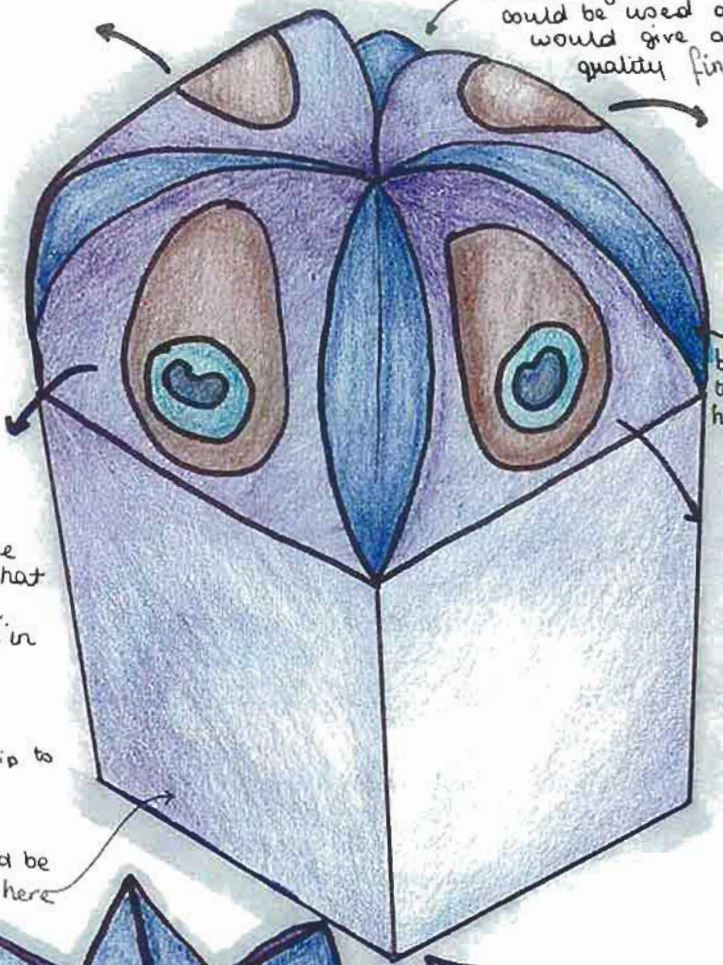
Logo would go here

Laser cut holes so image can be seen.



Printed base with images that correspond with laser cut holes in the lid

To hold together ribbon could be used as this would give a high quality finish

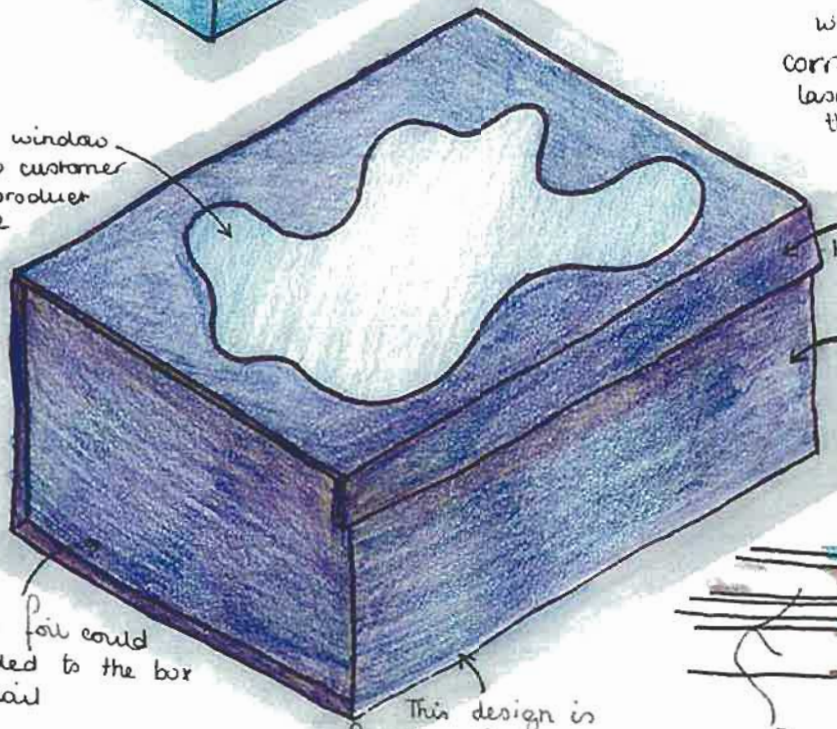


Metallic blue card to give a high quality finish

Here are some ribbon samples that could possibly be used with my box design.

Acetate window to allow customer to see product inside

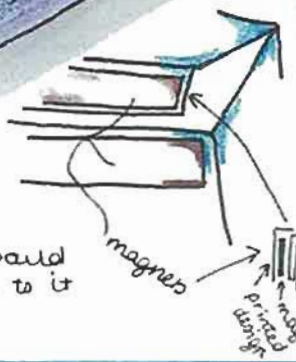
Magnetic strip to hold box shut

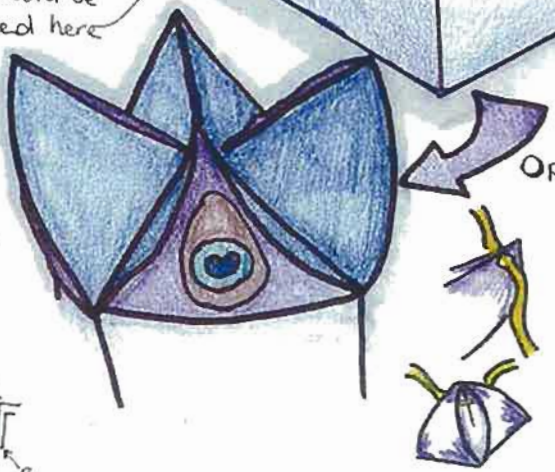


Logo could be placed here

Silver foil could be added to the box detail

This design is far too simple and would need something added to it to make it work





Open box

Product Design- Perfume Bottle

Design	The packaging must catch the consumer's eye as this will make them more likely to buy the product	The colours of the packaging must correspond as to make the overall image of the perfume smart and sophisticated	The packaging must be suitable for mass production as a high quaintly of units will need to be produced	The box must support and protect the bottle so the product is not damaged when it reaches the user.	The packaging must be easy to open as so the product can be accessed easily	Total	Justification & Explanation
1	9/10	8/10	8/10	7/10	8/10	40 /50	The packaging design is unique as it has two layers rather than a traditional square box. The design is interesting because the swirls and peacock feathers fit in with the theme. The box is also easy to open however if held wrong the bottom would slide out therefore this may need to be addressed.
2	7/10	7/10	8/10	5/10	8/10	35/50	I like the shape of this box as it is different to most boxes you find in the shop. It's an interesting opening as well rather than the traditional opening therefore may attract people more. I think the graphics on the bottle would need to be altered as they do not compliment the design of the box. The box net would be complicated and may not tessellate for lay planning.
3	3/10	8/10	8/10	7/10	8/10	34/50	This design is plain and simple but has potential. The acetate window is a good idea as it allows the customer to see the product they are buying which may also encourage people to buy it. The closing mechanism adds sophistication to the box because it is not just a tab close.

Product Design- Perfume Bottle

This box isn't the most easy to open and the design could be simplified

This box would hold the bottle well however it would be difficult to store and transport.

This box has lots of potential space for graphics.

This would not tesellate creating a lot of waste when being produced.

This box is an interesting shape however it would be difficult

I like the carry case design of this box as it makes it feel more than just packaging.

This box is dyramic and far more interesting than other designs

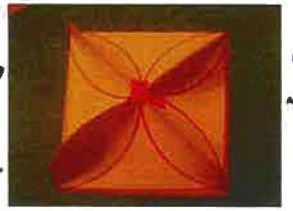
To make the box coordinate with my theme I would add windows in the shape of a peacock eye and focus the design through to top closing and make the peacock feathers

This design could be developed to reflect the theme of peacocks in my perfume bottle

The base of this box would have to be reinforced to make sure it could hold the weight of the bottle

I would hold the top closed with ribbon.

This box is easy to open and with the ribbon it would look attractive



I really like this box because the "stilts" make it look like its on a display stand.

This carrier works well with the spherical shape of my bottle

This design isn't very attractive therefore would have to be altered

I decided my bottle needs a product holder to protect the bottle whilst in transport and to also make it attractive and presentable when the customer opens it.

This box is easy to open yet sometimes accidentalies pings open

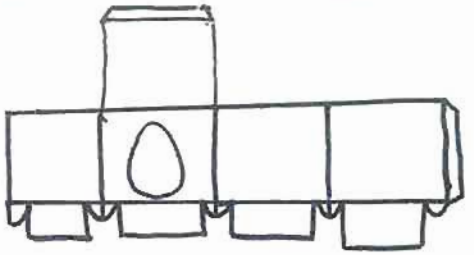
This bottle continues the fluid curved shape of my bottle however it is not very stable.

This shape is interesting yet will not transport easily.

There may also be issues with designing graphics that are effective on the shape

Product Design- Perfume Bottle

• - specification point



This lip would have a transfered message on it to add extra detail

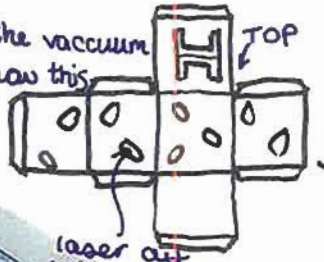
The second internal layer would also help protect the bottle

The colours of the bottle & box reflect the colours of a peacock as the theme of the perfume is peacocks.

The egg shaped window would be vacuum formed

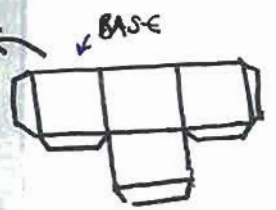
The colour of the box matches the bottle

Due to the vacuum form window this may not be easy to transport

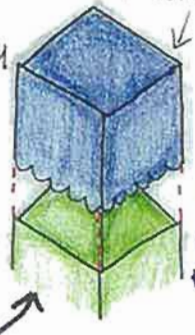


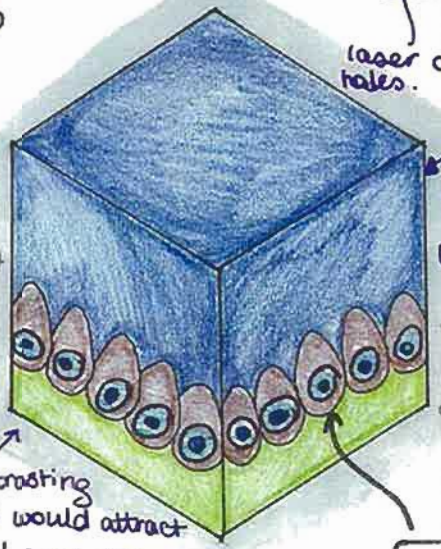
This design would store and transport easily

I like this box because it is a carry case making it feel a bit more sophisticated



This box is very basic however this may compliment the complexity of the graphics





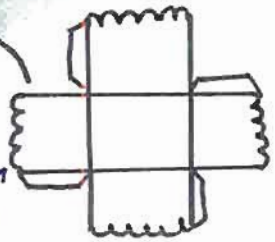
This packaging is quite simple and may need something to enhance it.

I like the scalloped base of this box

The contrasting colours would attract the customers eye.

The holes in this net would be lacer cut for precision.

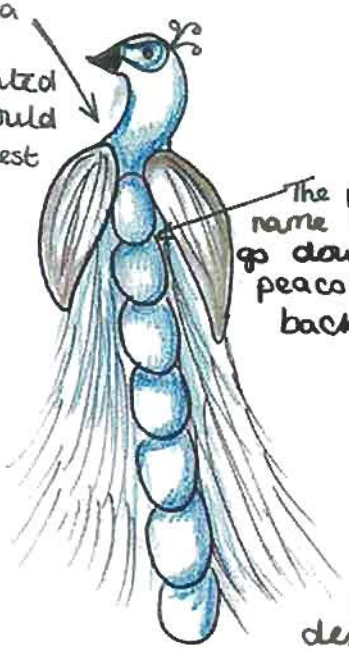
The two layers of this box make it more dynamic and interesting



Product Design- Perfume Bottle

Here I have looked at logos fonts for my design.

I think a less complicated font would work best on this logo.



The perfume name would go down the peacocks back

Freedom

Freedom

I could take the image of the bottle down an urban decay style look.

Freedom

This image is quite chunky however a version that isn't so bold may work better

I really like this font the swirls make it seem almost 'fairy tale' like

FREEDOM

Freedom

FREEDOM

FREEDOM

I do not think this font fits the image of my purfum

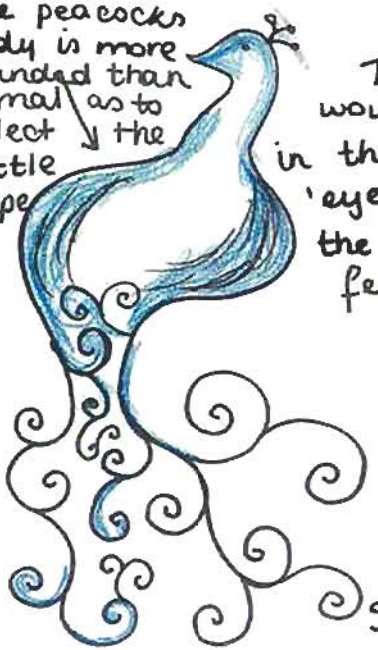
I like this but the flowers make it seem a bit young

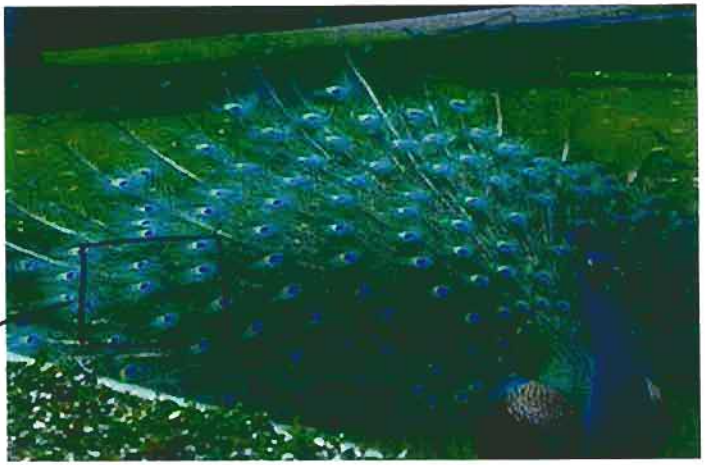
← I like the feathered design on here it makes it seem more feminine.

The peacocks body is more rounded than normal as to reflect the bottle shape

The fragrance name would fit in the 'eye' of the feather

Feather fan





The fan design is sophisticated

Stylised peacock

Product Design- Perfume Bottle

I drew a peacock design by hand and scanned it into Photoshop. I edited this so that it looked neater and more sophisticated. After this I put it onto 2D design and vectorised the image so I could cut it out on the laser cutter. I then edited it to put onto my net so I could cut the intricate images out.

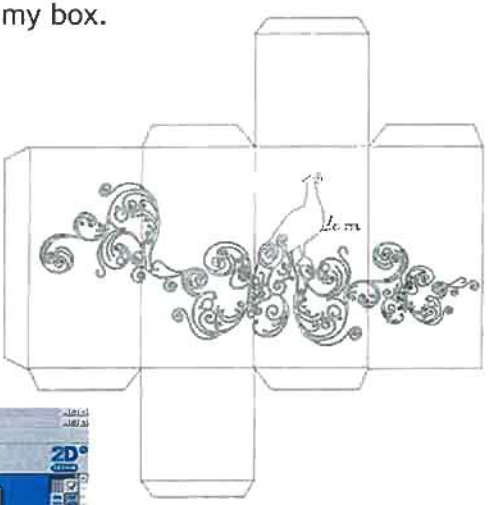
Shown below is the process I went through on 2D Design.

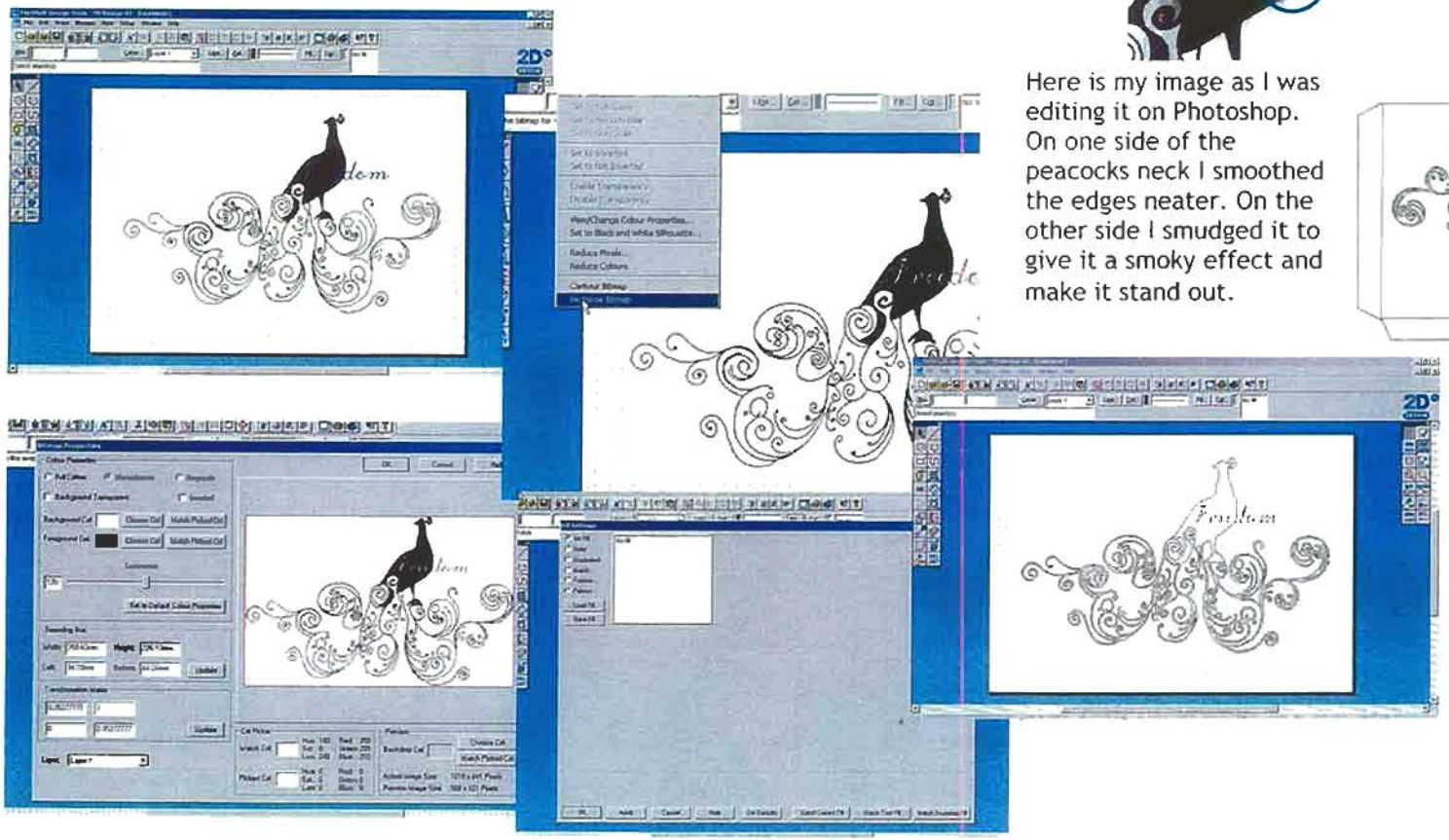
This is a photo of my final design for my logo, hand drawn.

This is my final logo design for my perfume.

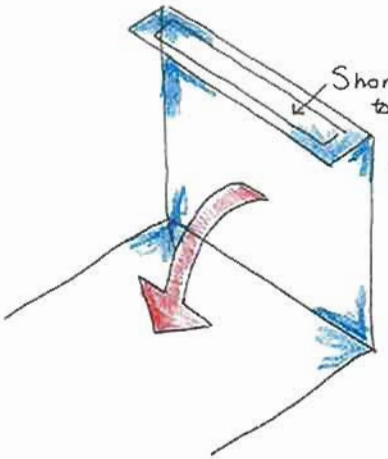
Here is my image as I was editing it on Photoshop. On one side of the peacocks neck I smoothed the edges neater. On the other side I smudged it to give it a smoky effect and make it stand out.

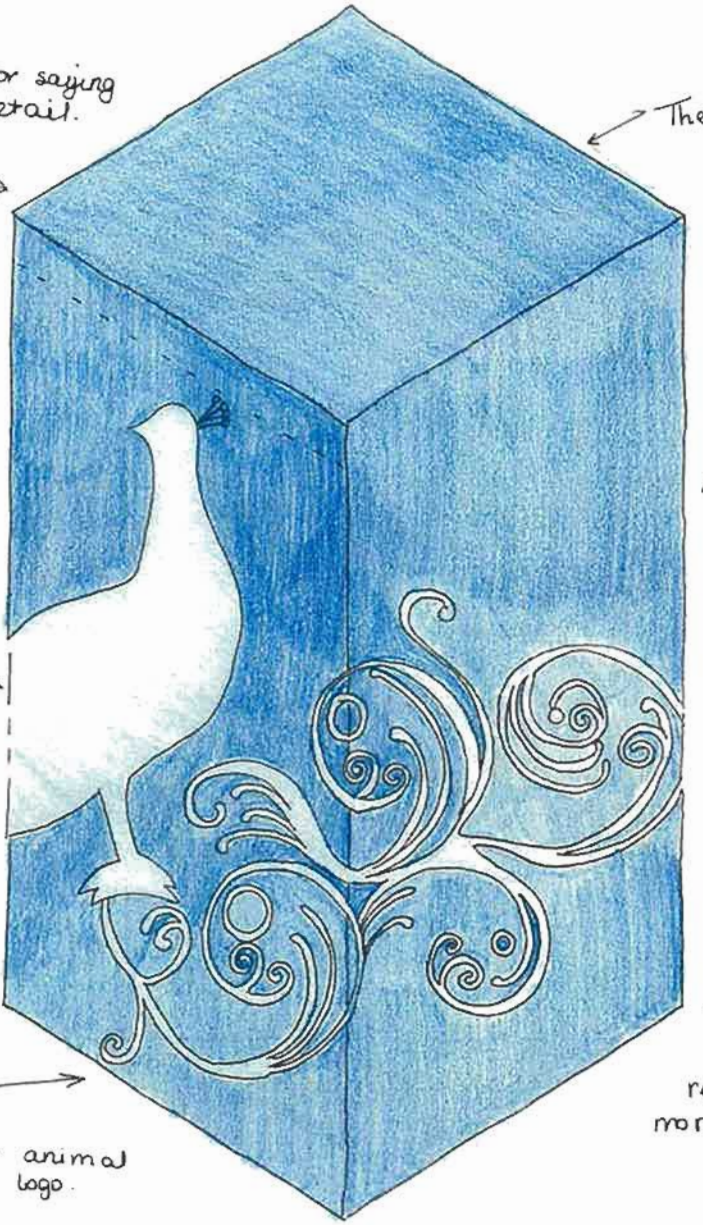
This is my final design for my box.





Product Design- Perfume Bottle



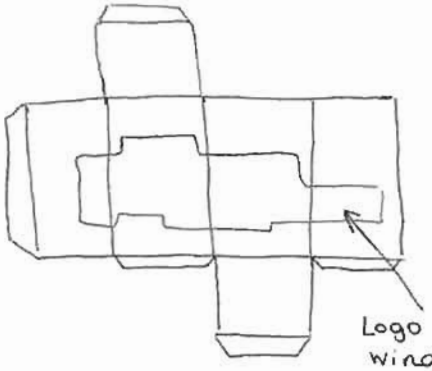


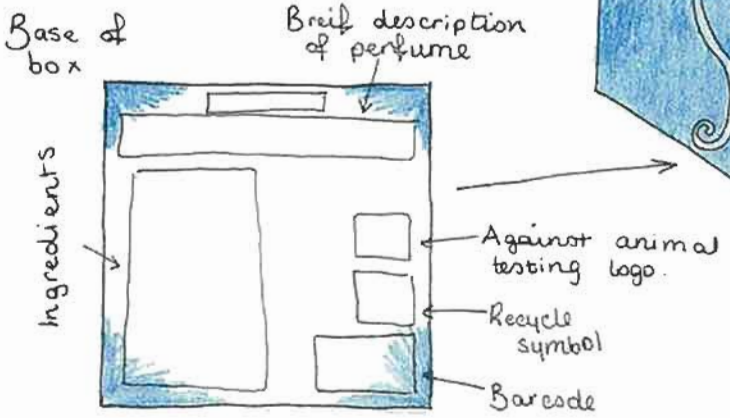
The card would be sustainable as long as it is from a sustainable forest

The box is made of card because this material makes a stable base.

Acetate window
I put this in because it will show the bottle off. It will allow the customer to see their product

Net

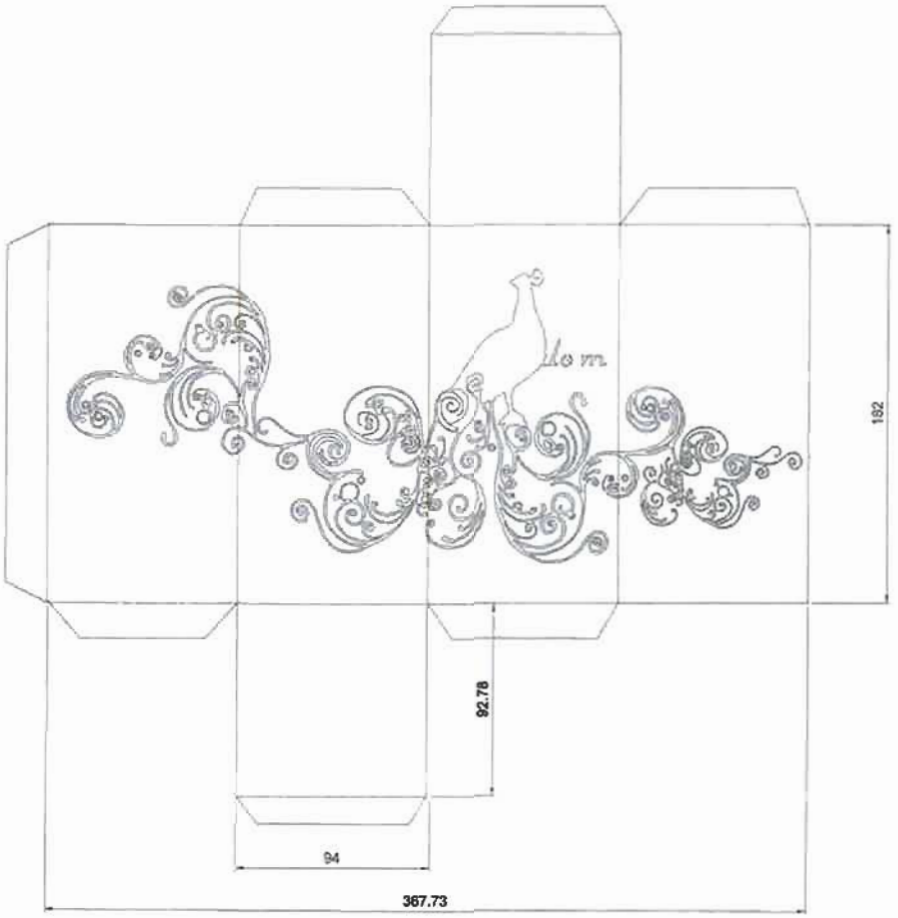


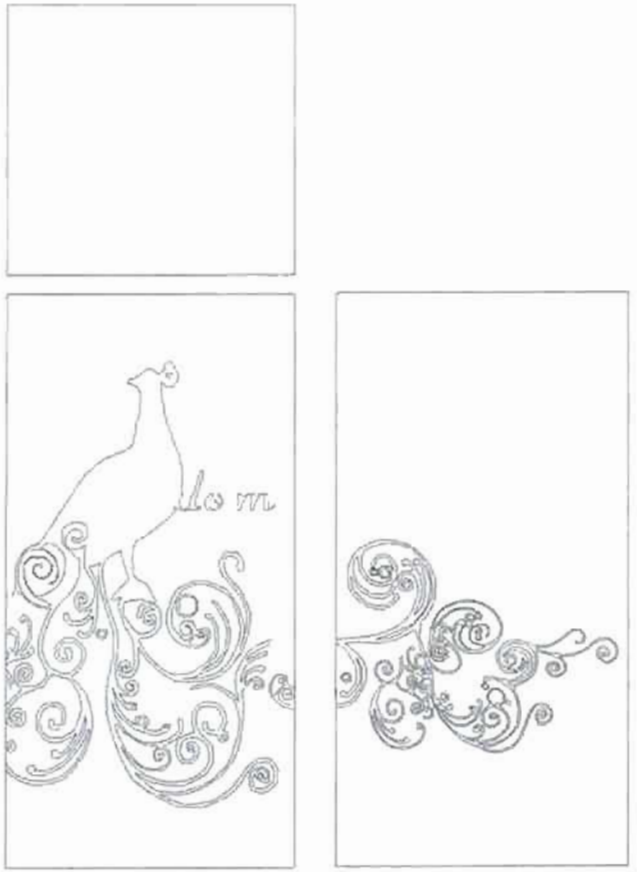


The card can be recycled therefore its more environmentally

Product Design- Perfume Bottle

This is the net for my box, the main body of the box would be made of folding box board as this is sturdy enough to take the design. Behind the window would be acetate to create a glossy effect and make the box structurally sound.





This is a working drawing for my box.

Product Manufacture- Perfume Bottle and Packaging

Product Manufacture- Perfume Bottle

My proposal is to make a perfume bottle based on the theme of birds with my main focus being peacocks. This is because at the moment birds are in fashion and are very popular therefore this shall give my product a unique selling point. I will make the main body out of Jellotong because it is a sustainable wood and forms easily. Also Jellutong takes a good finish when it spray painted. I will turn the bottle on the lathe to get the symmetrical shape that is needed. The lid will be made out of air dry clay as this will be the easiest way to mould the complex lid shape. I will make the lid by hand and then glass paper to get a good finish before finally painting the lid with acrylics.

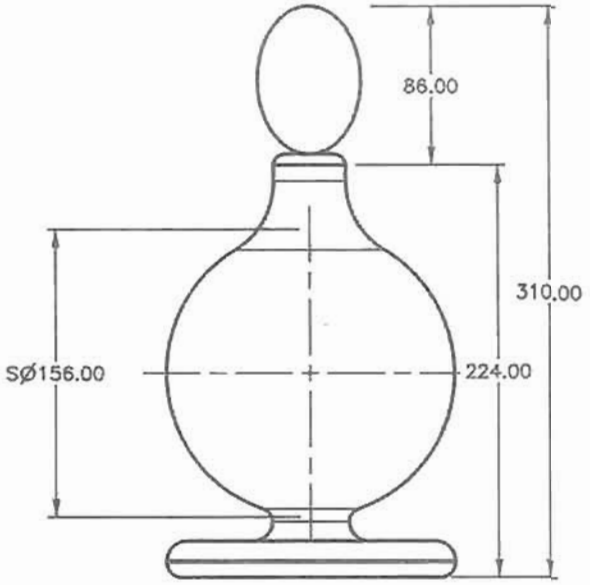
Manufacturing Specification

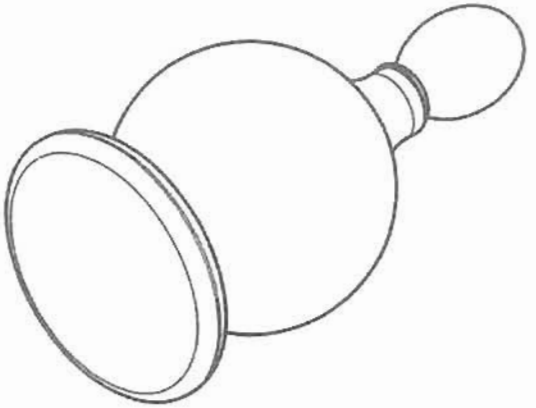
Bottle

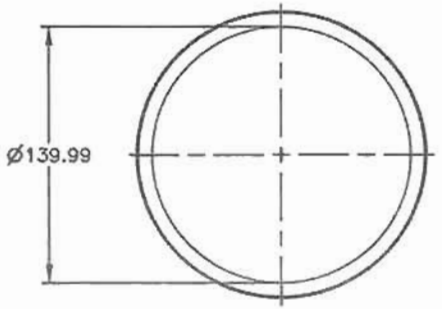
- The bottle must be ergonomically sound so it is easy to hold and comfortable for the user to apply
- The bottle must have an atomiser spray system so the fragrance can be released in a mess free way.
- The bottle must be no bigger than 200mm x 200mm as this will make the product too bulky for the consumer to use.
- The bottle must be design to be mass produced as this will reduce the cost to the consumer.
- The atomiser system must be able to last at least 1000 sprits'.
- The materials used in the bottle must be hard wearing and durable so they do not break in use.
- The bottle must dispense the correct amount of perfume per sprits as to make the perfume last longer

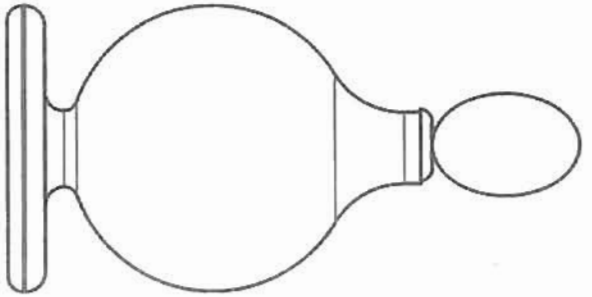
Packaging

- The box must be a design that is easy to store and transport as to maximise the amount of units that can be transported thus reducing costs.
- The packaging must be suitable for mass production as a high quaintly of units will need to be produced
- The box must support and protect the bottle so the product is not damaged when it reaches the user.
- The packaging must be easy to open as so the product can be accessed easily









REV	DESCRIPTION	BY	DATE

TITLE

	SCALE	DATE
	DRAWN BY	
	CHECKED BY	
	APPROVED BY	
PROJECT NUMBER	DRAWING NUMBER	

Product Manufacture- Perfume Bottle

Time	5 minutes	Prep time 10 mins Drying time 12 hours	45 minutes	10 mins per spray 3 hour drying time	30 mins	1 hour	30 minutes
Activity	Order wood to make my model	Glue wood together and clamp so it is secure	Attach wood block to lathe and turn bottle	Spray bottle in white base coat, dark blue body coat and gold top coat	Turn perfume bottle lid on lathe	Mould the peacock for the lid of perfume bottle	Drill a small hole in the middle of the bottle to align pieces of atomiser spray on a dowel peg
Tools	Pencil, Cutting list	PVA glue, clamps, vice	Lathe, Faceplate, Chisels of different sizes	Spray paint, spray booth, turn table,	Lathe, Chisels of different sizes	Air Dry Clay, Newspaper	Drill, Drill Bit, Bandsaw, Vice
Health and Safety	n/a	Avoid trapping fingers in the clamp	Wear safety goggles and apron, safety brief from teacher about using the lathe and associated tools.	Make sure the extractor fan is on in the spray booth. Keep fingers away from spray nozzle to avoid paint getting onto skin	Wear safety goggles and apron, safety brief from teacher about using the lathe and associated tools.	Do not breathe in dust from air dry clay.	Wear safety goggles, make sure the bottle is securely in a vice to stop it moving
Quality Control	n/a	Make sure any excess clue is wiped away	Use a template of bottle outline to assure it is the right shape and size	Constantly visually check the bottle for drips	Use a template of lid outline to assure it is the right shape and size	Visual check to make sure the peacock is the correct size and shape.	Visually check the drilled hole and peg to make sure they align straight.

Time	20 minutes	15 minutes	45 minutes	15 minutes	30 minutes	20 minutes	2 hours	30 minutes
Activity	Laser cut pieces of atomiser	Align pieces on peg and glue	Paint perfume bottle lid	Laser cut bottle tray	Place plastic and mould in Vacuum former. Vacuum form mould	Cut excess plastic off to leave the shape needed	Draw logo and net on 2D design so it can be laser cut	Laser cut box net out of thick card.
Tools	MDF, Laser cutter	PVA Glue	Paint, brushes, pallet	MDF, Laser Cutter	Vacuum former,	Band saw,	Techsoft 2D Design, Laptop	Card, MDF base board, Laser Cutter
Health and Safety	Make sure the extraction fan is on to stop toxic gases getting into the atmosphere	n/a	n/a	Make sure the extraction fan is on to stop toxic gases getting into the atmosphere	Be careful not to burn self on the heated elements	Wear safety goggles. Sand edges to get rid of sharp bits	Make sure correct posture is used to avoid RSI and damage to the eyes.	Make sure the extraction fan is on to stop toxic goses getting into the atmosphere
Quality Control	Visually check all areas are cut through and edges are smooth	Visually check pieces to assure the are aligned correctly	Visually check to make sure the painting is precise and neat	Visually check all areas are cut through and edges are smooth	Visually check for webbing of HIPS	Check all edges to make sure they are smooth.		Visually check all areas are cut through and edges are smooth

Time	20 minutes
Activity	Form the net of the box and add acetate window.
Tools	Spray mount, double sided sticky.
Health and Safety	Make sure the spray mount is used in a ventilated area.
Quality Control	Visually check all areas are joined together

Key	
Bottle	
Lid	
Packaging	
Graphic Design	

Product Manufacture- Perfume Bottle

	03/01/2011	10/01/2011	17/01/2011	24/01/2011	31/01/2011	07/02/2011	14/02/2011	21/02/2011	07/03/2011	14/03/2011	21/03/2011	28/03/2011	04/04/2011
Perfume Bottle													
Perfume Lid													
Packaging Graphics													
Packaging Box													
Vacuum Form Inner													

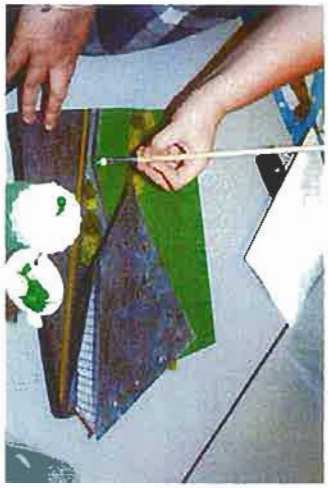
I chose Jellutong as the material for my bottle because it is a sustainable material and takes the spray paint finish well. It also is forms well on the lathe because it has a fine grain and few knots .

I used dowel to make the atomiser because it is already the correct size and shape to make the atomiser also it takes the finish of acrylic paint well as well.

For the graphics I used card, cut on the laser cuter because it gives a clean cut and also could bend around the bottle. It also took the paint finish well.

I used folding box board for my box because it is stiff and would hold my packaging sturdy. I used acetate to create the window in the box because it was transparent.

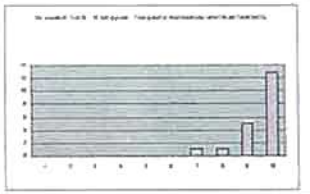
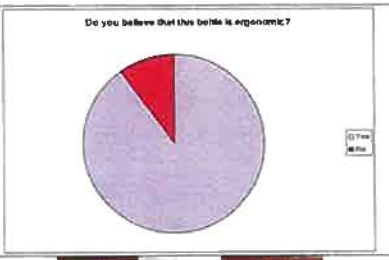
Product Manufacture- Perfume Bottle



Product Manufacture- Perfume Bottle


Freedom

Product Manufacture- Perfume Bottle

Specification Point	How you are going to test it and why	Results of the test	Evidence
The product must appeal to the target market of females aged 14-26 years old.	I am going to test this because if it does not appeal to my target market then I will not have met the main point of my brief. I will test this by asking 20 females between the age of 14 and 26 years old if they like my perfume bottle and would they buy it.	The results of my test show that the majority of the people I interviewed said they would buy my perfume. They also rated it as a 9 or 10 when saying whether they liked it or not. Therefore I think that my bottle has met this specification point.	 
The box must hold the bottle safely	I am going to test this because one of my specification points was 'The box must support and protect the bottle so the product is not damaged when it reaches the user.' Therefore if the box does not hold the bottle securely it will not meet this specification point. I am going to test this by visually checking the box to make sure that this is held securely.	The results of my test shows that the box does safely hold the bottle however it could be improved by possibly supporting the lid as well as the bottle.	
The bottle must have some form of identification on it e.g. an embossed image on the bottle so the make and brand is recognisable.	This is going t o be tested because if my bottle cannot be associated with its brand then the company may not gain a good reputation. I am going to check this by a visual check by someone within my target market.	The results of my test shows that out of the 10 people I asked 9 people thought the bottle had identification with the brand. The one person who didn't agree said the name didn't match with the design.	
The bottle must be ergonomically sound so it is easy to hold and comfortable for the user to apply	This needs to be tested because if the bottle is not ergonomic then it will be a bad design. I am going to check this by letting a group of people from my target group handle the bottle and give their opinion on the shape and feeling of the bottle.	The results from my test showed that 90% of the people I asked believed my bottle was ergonomic; therefore it has met the specification point.	
The colours of the bottle and the packaging must correspond as to make the overall image of the perfume smart and sophisticated	To make sure the bottle and box look sophisticated together and match so they don't look awkward together. I am going to check this by a visual check by someone within my target market.	The results of my test show that the bottle and the box match because they are the same colour. My subject from my target market also agreed that they looked good together.	

Product Manufacture- Perfume Bottle

Evaluation

I think my perfume bottle and packaging came out really well. I am very pleased with it. I think the best part of my design is the lid because it is unique and original. I think the lid is also the most eye-catching part of the design and this was my aim, to draw people in to look further. I like the overall shape of the bottle it is ergonomic and fits nicely in a persons clasp. I would improve the bottle by possibly elongating it so it was not so 'squat', by making it more round than oval in the main body it may make the overall look more sophisticated. Something that I would improve about my model would be the card I made my box from because it did not remain in good condition for very long once it had been finished. I would possibly use a thicker folding box board of about 600gsm if I were to remake this box. I would also place a support in the top of the box to support the lid whilst in transit. The logo on my box is very complex and to give my box a more rigid structure I would make it smaller to only fit around two or three sides rather than all four.

← One of my test participants thought the peacock feather may reduce the overall quality as it wears. So as a modification I would create a wire sculpture for the tail.

Also on my box I would reduce the size of the logo so it only went on 2 sides rather than 4 sides of the box to make it sturdier

Modifications

Third Party Evaluation

I like this perfume bottle however I am concerned that after a while the peacock feather will not look as good therefore reducing the overall look of the bottle.

I really like this perfume bottle, it caught my eye instantly and as long as it was within my budget I would buy it! My favourite bit is the peacock on the lid, it's unique.

I would buy this perfume bottle if I saw it in a shop. It's right up my street. The peacock feather gives it an almost vintage look. I also love the packaging; I've never seen anything like it before

It was the box that initially caught my eye. I've never seen packaging like this and the window makes it good because I can see the product. My only improvement would be to use a faux peacock feather which may be more substantial.