

SPECIFICATION

On this page I am going to create a specification in which I can refer back to throughout the rest of my AS coursework. The purpose of this is to help me identify what my design needs to entail, whilst also helping me understand the importance of the different terms I have selected, emphasising their meaning, and helping me understand how I am going to test the success of the product. I am also going to identify whether the terms I am going to select from Pugh's plate are quantitative or qualitative- whilst ranking the terms to help me understand which are the more important aspects of my specification. I am going to be referring back to this specification throughout the rest of my AS portfolio, from designing initial ideas, to creating my final product and evaluating the different aspects of it. The specification is shown to be one of the most important aspects when narrowing down, designing and manufacturing a product.

DESIGN BRIEF

Utility want to expand their range of lighting products for a particular target market. Utility is synonymous with highly stylised and modern products. Your product must therefore fit in with this design philosophy

Key Definitions

Quantitative- “ of or pertaining to the describing or measuring of quantity”

Qualitative- “pertaining to or concerned with quality or qualities.”

rank	term	Meaning	Importance?	How am I going to test to success of the product?	Quantitative or Qualitative
7	Safety	The quality of averting or not causing injury, danger, or loss. The checks that are made to ensure that danger is less likely to occur- therefore making the product to a higher standard. This also prevents the cause of hazards to not only the consumer, but also the manufacturer when creating the product- and prevents the possibility of getting sued by the consumer.	Safety is one of the most important features which a product could have- if a product is safe, this ensures that the consumer is not going to be inflicted harm when using it- emphasising the ability to be user friendly and safe. Also, if the consumer believes that the product is not safe, and brings harm to them, then the consumer could sue the manufacturer and designer, as its their rights to have a safe product.	To ensure that this product is of a high safety standard, I will check if the product meets up with the British safety standards and the European kits mark, making sure that it meets the requirements of the European legislation. It is important to test the success of this, as safety is one of the most important things to consider when creating and designing a product- as making sure that it's the highest standard of safety, appeals to the target market to a greater standard.	Qualitative
15	Testing	“the trial of the quality of something: to put to the test.” this therefore means that testing something, can emphasise whether the end product is to the standard in which it should be. Testing can be shown through many different ways, and can be tested in a numerous amount of ways. One of these could be both function modelling testing, and size and aesthetic modelling- using different materials such as cardboard, plastics and other relevant materials to test the important aspects of the design before creating the final one	Testing is an important aspect in designing and creating a product , as it shows whether the design to is to a high standard or not., and to help me, as a designer, get a grip of how well the design can be developed, and what possible materials the product could be made out of to best fit the purpose of the product, as well as understanding the function and the success of the function, making sure that the product is in the best possible form in which it could possible be.	I can test the end success of this by creating models of the potential product, and asking my target consumers to get feed back. This is shown to be a good way to get feedback from the target audience, as the main function of the lighting product is which I am going to Target Audience, therefore emphasising the importance to get the target audiences opinions throughout the designing, manufacturing and whilst creating the final product- to make to product as fit to purpose as it possible can be.	Qualitative
13	Environment	In this case, this is asking whether the product is going to be made out of recycled materials/materials in which could be recycled- and the wasted energy/output it gives out on the environment itself. . Eco friendly materials also are usually more attractive in modern day anyway, although the function may not be to the highest standard in which it possible could.	Environmental factors are important as it gives the product a positive feature, and may attract its target audience more, than if it was to be made out of non environmentally friendly materials. The cost is also affected by this by making sure that the government don't have to pay money to send the product off to a building site when its life-span was over.	I am going to research into the materials in which I am going to use, when I have designed the final product in which I am going to create. This will give me an understanding on whether the materials I am going to use are environmentally friendly or not, and whether they also make the function to the highest standard possible.	Qualitative
12	Competition	Competition is when there are two or more rival companies selling the same type of product, this is very common and can be shown to be an inconvenience for the company, by maybe reducing the amount of custom in which they would have, and therefore decreasing the amount of products in which the company are going to sell- this therefore affects the amount of revenue in which the company or business get.	Competition is important when creating a product as it makes the designer, manufacturer and business itself work to the best of their abilities. This therefore makes the products and designs to a higher standard- as it emphasises an increase in the work rate in which they withhold- and therefore having an added affect on the sales of the product, showing an increase probability in the sales of the design and/or product.	I can test the end of this by researching my initial ideas, to see if there are any major companies of whom already sell this product. This will therefore make sure that I am not copying any product or lighting design which has already been created. This is extremely important that I do this, as the use of intellectual properties are used more commonly, therefore the needs for research throughout my AS coursework is needed in much more detail, not just at the beginning of the coursework, but the end of the coursework also.	Qualitative
16	Packing	The purpose of packaging is to protect the product in which it holds in the inside of it- as well as showing an aesthetically pleasing design; making people want to buy the product. This is usually the first thing the consumer see's, so its essential that the design, colours, images and aesthetics of this is of a high standard- as well as protecting the product to an extremely high standard.	The packaging is shown to be an important aspect as it protects the product from any serious damage, making sure that the product is to the highest standard in which it possible could be, when opened and used by the consumer. This is also shown to be a great importance, as the quality of the product is shown to be one of the main features of creating a quality design and product.	I am going to test the success of the packing by asking the consumer opinions on whether the packaging is to a high standard, this will therefore show me what standard the packaging is at, and what I need to do to improve it greatly.	Qualitative
10	Innovative	Innovation simple means something in which is 'ahead of its time', therefore giving the consumer something in which they haven't had before. It also means that the consumer is technically up to date, therefore makes use of the technological availability of the modern day. Innovation is a key aspect of making a successful design through its unique natures and indifference.	This is important as if the product is innovative, it appeals more to the target audience as its unique and indifferent to other products which are available on the market- therefore increasing the demand for you product, and therefore having an increase on the sales and profit in which the product makes. I need to show great innovation when designing my product, as my target audience is shown to be technologically up to date.	I am going to test this through, once I have designed and chosen my final product, I am going to research the whether the product in which I have designed and chosen fits in well with a gap in the market, and research whether there is a demand for the product and design in which I have created.	Qualitative
11	Product Life Span	This relates to how long the product is going to last through is 'product life'. As lighting products are used everywhere in modern day, people will not get bored of the product, although the style may depend on the life span, as the style and colours may go 'out of fashion'- therefore emphasising a small life span.	I believe that this is an important feature, as it explains on how long my product is going to last, and whether the likability and high standard is going to still be great in a few months, or a few years time. I need to make my lighting product durable and strong to make sure that the products life span is long.	I am going to carry out tests on numerous parts of my lighting product to ensure that the product is as durable as it possibly could be, therefore enhancing the possible product life span in which my light- and increasing the standard which it is at.	Qualitative

6	Weight	The weight of a product, is the 'heaviness' or 'mass' of a product. This can vary dependant on the type of product in which is going to be created- in this case, I am creating a lighting product; which again, can be varied dependant on whether I am going to design a table lamp, a chandelier, or an ordinary lighting product. The weight of the product also depends on the materials used.	The importance of weight is important, as if a product is too heavy, then it is not easily transportable, but if the product is shown to be too light-weight, then it is shown to be weak. I believe that there should be a happy medium in weight when creating a lighting product, as I believe that it shouldn't be too heavy to lift and move, but it should also show great strength.	I will end test the weight of the product, by asking the consumer whether they believe the product is easy to move around. I am also going to end test this through weighing the product, and comparing the weight of my product to the weights of other products in a similar lighting categories.	Quantitative
5	Size	The size is the measure of a "stature". As I am creating a lighting design, I will mostly be working with "cm" and "mm" as they are the most realistic measurements for a lighting design. If I was to use the measurements 'meters' it would be a lot harder to understand when creating the product, using cm and mm is a lot easier and simpler.	Size is necessary when creating a lighting product as if the product is too large, the consumer would not be able to pick up, carry or move the product to the destination in which they want it to be, and if the product is too small, then the function of the product would be of a low standard, therefore emphasising that the product needs to be a "happy medium".	I am going to test the size of the product, by measuring the created product with equipment, such as a ruler, tape measure etc.. I will then use this to compare to the size of other successful lighting products, I would therefore gain an understanding on whether my product will be of an adequate size for a lighting product.	Quantitative
14	Processes	The processes are a series of actions, changes or possible function, to help me reach the final goal, which is the creating of the product. Processes can do a variety of different things to help enhance the way the product functions, and the way that the product look aesthetically.	The processes are an important part in the creating of my product, therefore the importance of this is shown to be an extremely high; as if it wasn't for the processes when making the product, then the product would not be created and designed to a high standard for my target consumer.	I will carry out tests of these processes whilst I create my product, making sure that there enhancing the product in the best possible way- making sure I carry out the processes to a high enough standard for my target consumer.	Qualitative
1	Function	The function of the product emphasises the main purpose in what the product is set out to do. In this case, the function and purpose of a lighting product, is to light the intended area efficiently, whilst also showing great aesthetics in an ornamental fashion.	In my opinion, I believe that the function of the product is the most important aspect of a design, as if the product does not function correctly or work, then the target consumer would not want to purchase the product, and would emphasise that the product is of an extremely low standard.	I am going to end test the function of my product, by checking how well the product carries out it function- I am going to do this by evaluating my product, using consumer opinions, and my own knowledge on how a lighting product should function.	Qualitative
4	Performance	The performance of a product describes how well the product under-goes the purpose in which it was created for. In this case, the performance of a lighting product, would be the brightness of the lighting product, and explaining why the voltage is fit for purpose. This must perform to a high standard to make the customer happy.	I believe that this is an important feature of the product, as if the product does not perform to the standard in which it has been advertised as, then the customers would be dissatisfied and therefore lowering sales, as well as lowering the demand for the product from the consumer.	I am going to carry out numerous tests throughout the many different processes in which I am going to use to create my product. I am going to evaluate each important process in which I use, whilst also researching the correct and most efficient way to carry out the process. This is helpful as it gives me an insight on how I can improve the way I'm going to create my product.	Qualitative
8	Life in service	The life in service of the product, is how long the product which I have created will last. Will it last years, or will it last months? The longer the life span in, the more attractive and desirable a product is- as the target audience would not have to keep wasting money buying low quality products; when they could buy one high quality product.	This is important, as if my product breaks down during a short period of the consumer having it, then they will either demand for their money back, or they will be very unsatisfied. Therefore the aim is to make the highest quality product possible.	I will do this by testing the materials and use of the product, to see if it fits the highest standard in which it possibly could. I am going to test its Durability, Strength and Weight- therefore gaining a better understanding of the standard of my product.	Quantitative
9	Ergonomics	Ergonomics is the relationship between the ways in which the human body work, and the product in which the consumer want. For example, a chair can be rounded to the spine of the human form, therefore emphasising a high standard of ergonomics, and making the product more 'fit for purpose' and more 'enjoyable' for the intended user.	Ergonomics is extremely important as it helps and studies how to make the product more fit for the intended user. This therefore emphasises individuality in the product, as well as overall comfort for the intended user; therefore showing the product as a high standard, and making it attractive for the target consumer.	I am going to end test the success of the ergonomics of the product, through the use of questionnaires and poles apart, helping me understand what the consumer think of the ergonomics of the product, therefore eloping me evaluate and improve the product in different ways.	Qualitative
2	Aesthetics	The aesthetics of a product is how the product looks, whether the product is pleasing to the target audience, whether the product is eye catching, or whether the product is attractive to look at. A lot of people believe that modern day designs look at 'form over function' emphasising the increase use of greater aesthetics.	The aesthetics of a product is an important feature, as the product needs to be aesthetically pleasing to attract the target audience; as nobody really wants an unattractive product, in this case- an unattractive lighting design. This therefore increases the amount of consumers whom want to purchase the product. I have chosen to indicate form over function.	I will test the end product through the use of aesthetics by asking the target audience what they think of the aesthetics of my design and product, I will also measure this throughout my initial drawing, getting consumer opinions, making sure that I create the perfect design and product for my target market.	Qualitative
3	Materials	The materials are the things in which are used to make and withhold the product in which I am going to design and create. This emphasises the structure of the design/product. Choosing the material depends on the many different properties and characteristics in which you want your product to have.	The use of the correct materials is important when creating a product as it emphasises not only how long the product is going to last (durability and strength), but also how the product will look, for example, using only one material may make the product look boring, basic and unattractive.	I am going to test the materials of my product based on weight, durability and the cost of the materials. I am also going to tie this in with the aesthetics, as if the consumer like the look of the product, the materials used are of an aesthetically high standard.	Quantitative

CONCLUSION OF SPECIFICATION

From my specification I am now able to start to correctly designing a suitable product that fits in with my target consumer, theme and specification- this is possible as I know how clear guidelines (the specification) to follow. For example, I understand the product needs to be a suitable weight, as well as enabling a high standard in both the function of the product, and the aesthetics of the product. For example, a product would need to have a correct balance of both aesthetics and function, and I should try not to emphasise 'form over function' or vice versa. From putting my specification in order, I have understood what are the more important aspects of the specification, and which are the least important- for example, I have understood that I believe that the packing is the least important- and the aesthetics/function are the two more important features.

I have also understood and researched the meaning of each part of the specification- and related it correctly back to how this is important when designing and developing a design/product. I believe this is important, as I can relate it correctly and efficiently to certain features of the product- for example, I would understand the important of why the design/product can not be too heavy, and can not be too light. It also helps to define each of the terms as I also know exactly what to include in my designs, therefore giving me a starting point on each of the designs- as well as giving me something to measure against.

In conclusion, I have gained a lot of information and knowledge on my specification to help me understand/to give me a starting point on how to create my designs. As I have 16 key points to follow, I am able to refer back to this page when I'm modelling/testing/CAD/Developing to measure against the different criteria in which I have selected my design to have. This will also help me when evaluating my designs/finished product- as it will give me a key indication on what aspects of the design I used correctly, and what aspects of the design I did not use effectively.

Design Specification

On this page I will evaluate all the research I have found and I will be making sure that my product will be successful by testing it in different ways, for example asking the consumer. I will also be ranking the aspects of my product in order of what is the most important for my product and what is the least important and not relevant to my product. I am also going to pick 15 aspects from Pugh’s plate that are most relevant and important to my product, which will help me I my designing.

Design Brief

Utility want to expand their range of lighting products for a particular target market. Utility is synonymous with highly stylized and modern products. So from this, I am going to design and make a product that must therefor fit in with this design philosophy. My intended consumer for this product is going to be, a young boy around the age of 8, that is interested in gaming and sports (but also could appeal to a girl), so my product must also be appealing to them.

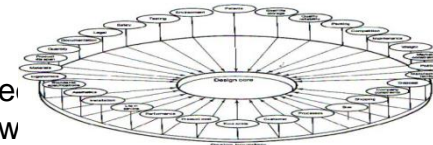
Key

Quantitative- The measurements of the product.

Qualitative- measured by quality not quantity

Essential- Something that the product need

Desirable- Something that the consumer want



Conclusion

From these 2 pages, they will be a tool to help me annotate sketching throughout the sketch book and will also help me in designing and developing the design to make it more successful and appealing to the intended consumer of the product. These 2 pages will also help me when I am testing the product to see if it was successful and appealing.

Ranking (importance) and Term	Definition of Term	Quantitative or Qualitative	Essential or Desirable	End testing
1- Aesthetics	Aesthetics is a set of principles concerned with the nature and appreciation of beauty and the looks of the product. This relates to my product because my product is aimed at young children who prefer the look of the product over the function of the product.	This is qualitative aspect of the product because it is how the product looks and if it looks appealing to the consumer it will be successful.	This is a desirable aspect of the product and it is not essential to the product but makes the product more appealing to the consumer and makes the product more successful.	I will test this by asking the intended consumer (Questionnaire) about the end product and if they find it aesthetically pleasing , to see if this aspect was successful.
2-Consumer	A consumer is a person who purchases goods and services for personal use. This relates to my product because I want my product to be successful because of the consumer it is aimed at.	This is qualitative because the product has to appeal to the intended consumer to be successful which means it has to be good quality.	This is essential because without the consumer the product would be unsuccessful because the product would be useless, so this is essential.	I will test this aspect by checking if the product was successful and who found the product appealing (Questionnaire).
3-Quality	Quality means the standard of something as measured against other things of a similar kind; the degree of excellence of something. This relates to my product because this is one of my main aspects and is very important for my product to be successful because it is aimed at young children.	This is a qualitative aspect of the product because it is the quality of the product which will make it successful, which means it needs to be a good quality product.	This is essential because if the product was not good quality it would not work and it would break, so it needs to be of good quality to be successful and to be appealing to the consumer.	I will test this by testing the end product on how well it performed the function and also by modelling the product before it is made to make sure the product works and is made from good quality material.
4- Safety	Safety means the condition of being protected from or unlikely to cause danger, risk, or injury. This is relevant to my product because my product is aimed at a young child which means that the product needs to be safe for the child to use for this product to be successful or appealing to the intended consumer.	This is qualitative aspect of the product because it is the quality of how safe the product is for the intended consumer and can not be measured, so it is a qualitative aspect of the product.	This is essential for the product because with out this aspect the product wouldn't be appealing for the consumer and therefore would not be successful in the market.	I will test this aspect by modelling the product before it is made to make sure it is safe for the consumer to use and by also testing the end product to make sure it is safe and suitable for the consumer.
5- Performance	Performance means the action or process of performing a task or function. This relates to my product because it has to perform to a good quality other wise the product will not be appealing to the consumer. It also means that the product needs to work properly and efficiently to be appealing to the intended consumer and their parents.	This is a qualitative aspect of the product because it is how the product works and performs and to what quality for the consumer. This will also be a big aspect in making the product successful and appealing.	This is essential for the product to work, be successful and appealing to the consumer. If the product didn't perform well then the product would not work and therefor would not be appealing to the consumer and their parents.	I will test this product aspect by testing the parts of the product to if they work properly and function and I will also end test this product to see if it is suitable for the consumer and functions properly and is of a good quality.
6- Weight	Weight means a body's relative mass or the quantity of matter contained by it, giving rise to a downward force; the heaviness of a person or thing. This relates to my	This is a quantitative aspect of the product because this can be measured or weighed, to see how	This is essential for the product to be successful and appealing to the intended consumer because if the	I will test this aspect by modelling the product before it is manufactured and testing the model and I will also test

	product because it means that the product will have to be light enough for the consumer (which is a child) to move, carry or use otherwise the product would not be appealing to the consumer.	heavy or light the product is and if it is suitable for the consumer to use, so that the product can be appealing.	product was too heavy then it would not be appealing and the consumer would not buy it because they wouldn't be able to use the product.	this aspect by testing the end model to see if it is a suitable for a young child to carry, use or move around, otherwise it won't be appealing.
7- Ergonomics	Ergonomics means the study of people's efficiency in their working environment. This relates to my design because my product is aimed at children which means that they need to be able to use the product, so it needs to be the right shape and size for them to be able to use the product successfully.	This is a qualitative aspect of the product because it is the way the product works and to what quality it does this which will make the product more appealing to the consumer.	This is desirable for the product because it does not affect how the product functions and if this wasn't included then the product would still work but it would be more appealing if this aspect was included.	I will test this aspect of the product by measure the consumer's hands to make sure that the shape and the size of the product suit the intended consumer, so that they can use the product successfully.
8- Materials	Material means the matter from which a thing is or can be made. Materials also relates to the product because the product needs to be made from good quality material because it needs to withstand wear and tear because of the intended consumer (children).	This is a qualitative aspect of the design because it needs to be made from good quality material otherwise it will not be appealing to the intended consumer.	This is essential for the design to be successful and appealing because it is aimed at older children, so needs to withstand wear and tear, to last and be appealing to the consumer.	I will test the materials by making sure they are suitable materials for the and make sure that the material are strong but not too heavy by testing them once the product is made and before.
9- Size	Size means the relative extent of something; a thing's overall dimensions or magnitude; how big something is. This also relates to the product because it needs to be a suitable size for the consumer to use and for the product to function properly.	This is a quantitative aspect because the size of the product can be measured out to see how big or small the product is and to see if it is suitable for the consumer.	This is essential for the product to function and work in the environment because it needs to be a suitable size for the consumer to use the product properly and in the right way.	I will test this aspect of the product by modelling to make sure that the size of the product is suitable for the consumer and will also test the product once it is made as well.
10-Product Cost	This means a cost is the value of money that has been used up to produce something (a product). This relates to the product because it needs to be at an affordable cost for it to be appealing to the intended consumer.	This is a quantitative aspect of the product because it can be measured and counted to see if the cost of the product is suitable for the consumer.	This is essential for the product to be successful in the market but has to be affordable and in a suitable price range for it to be appealing.	I will end test this aspect of the product by asking intended consumer about the price of the product and if it is suitable (Questionnaire).
11- Testing	Testing means is a process of measuring the extent to which a product fulfills the claims made by the manufacturer, often in comparison to other similar products. This relates to my product because without testing you wouldn't know if the product was successful or even if the product functioned.	This is a qualitative aspect of the product because it tests the product to see if it works properly and if the product is made from good quality material which will be suitable for the intended consumer.	This is essential for the products function and quality because this makes aware the negatives and the positives about the product and shows us what we need to improve for it to be successful.	I will test the testing of the product by evaluating the end product to see if the function works, also if the product is successful and is appealing to the consumer. Also by seeing what I can improve on the product.
12- Process	Process means series of actions or steps taken in order to achieve a particular end. This also relates to my product because it needs to have a easy and good quality process for the product to be successful.	This is a qualitative aspect of the design because it needs to have a good quality and easy process for the product to be successful to the target audience.	This is essential for the product to be successful and appealing to the intended consumer. It also needs to be an easy process for the product to be appealing to the consumer.	I will test the process of the product by ensuring that the product works properly before it is put on the market and to make sure the consumer can use the product successfully.
13- Lifespan	Lifespan means the length of time for which a person or animal lives or a thing functions. This relates to the product because it need to have a long lifespan, so that it will be appealing to the intended consumer.	This is both aspects but is more referred to as qualitative because it has to be a good quality product for it to have a long lifespan.	This is desirable for the product to have a long lifespan because it will still be appealing to the consumer if it didn't but is desirable.	The lifespan will be tested by modelling the product before it is manufactured, to see how long the product will last (be successful).
14- Time Scale	This means the time allowed for or taken by a process or sequence of events. This relates to the product because the product need to be made in a set timescale for it to be made successfully.	This is a quantitative aspect of the design because it needs to be measured, and made in a certain timescale.	This is essential for the product to be made successfully and still function properly. Also for the product to be appealing for the consumer.	The time scale of the product will be tested by making and plan to write down what has been done and when it was done (for the time scale).
15- Environment	This means the natural world, as a whole or in a particular geographical area, especially as affected by human activity, which relates to the product and should be environmentally friendly.	This is a qualitative aspect of the product because this makes it of better quality and has a longer lifespan.	This is desirable for the product because it would still be appealing to the consumer if it wasn't environmentally friendly.	This aspect will be tested by the product that are used to make the product and how it is made to make sure it is environmentally friendly.

Page Aim: Now that I have completed my research and consumer profile I am now going to write a design specification to follow and refer back to throughout this project. The design specification will help me greatly when I am designing my product and coming up with ideas which could be relevant.

Key Definitions

Qualitative– Qualitative data is data which is open to interpretation meaning people could have different opinions on particular data.

Quantitative- Quantitative data is data which has numerical significance and can ultimately be added up and measured.

Essential – A aspect of a product which is essential is a criteria which is needed in order for the product to work, without this criteria the product would not work properly.

Desirable – A aspect of a product which is desirable is a criteria which is not needed to make the product work but adds to the product in different ways which add to the valuable and makes it more wanted by the consumer.

Design Specification

My design specification is what I am going to refer back to throughout this project and follow when designing and making my product, it will set me guidelines to follow in order to create the best product I can. I have selected 15 aspects of Pugh's plate to write about include in my specification, I will be ordering these aspects in in order of importance. I will also be identifying each criteria from Pugh's plate with a definition, whether it is qualitative or quantitative, essential or desirable, how important the particular criteria is and how I am going to test the success of my product in terms of each individual criteria.

		Definition	Qualitative or Quantitative?	Essential or Desirable?	Importance	How am I going to test the success of the product?
1	Aesthetics	The aesthetics of a product is the overall appearance of the product and how it is designed from its shape to the colours used and materials. A product is considered aesthetically pleasing if it looks good.	This is Qualitative because quality of design is based up on opinions.	This is Desirable because good design is not essential to the function.	The aesthetics of a product is extremely important as a consumer wants to a buy a product which they like the look of. A consumer will not buy a product which does not appeal to their tastes therefore a product should be designed to be aesthetically pleasing to specific consumers.	I will test the success of the aesthetics of my product by interviewing sample consumers to give opinions on whether they like the look of the product and if they would buy the product purely based on its aesthetic qualities. The opinions of the sample will determine whether this aspect of my product is a success.
5	Customer	The customer is who the product is designed for and who is going to buy the product. A product should be designed specifically for a customer and consumer group to ensure its success. Consumers have different opinions on different products therefore meaning products must be catered for different consumer needs and wants.	This is Qualitative as consumers have different opinions which cannot be measured.	This is Essential because if the customer does not need or want the product then it is not a success as they will not buy it.	The customer of a product is important because the product is based upon a customers wants and needs and is designed completely for them. If a product is not designed correctly for the customer they will not buy it as it may not be the product for them. The consumers I interviewed in my research preferred different products meaning some have different preferences.	I will test that customers like my product by also sampling a group of consumers who will rate the overall product including all of its features and design. I will ask the group if they would buy the product and if they say yes it will be a success and I will have achieved this aspect of my specification. I will interview the same group I used in my research due to them having different preferences.
8	Ergonomics	Ergonomics is the relationship between the user and the product and how the product is designed around the human body to make it easy to use, product with good ergonomics will be easy to use for the consumer and it will be instantly recognisable to somebody to how to work the function of the product and its user interface.	This is Qualitative as the interaction quality with a user cannot be measured numerically.	This is Essential as the relationship between a product and user needs to be there for the user to be able to use the product.	The ergonomics of a product is important to a product as a product needs to be easy to use but also easy to recognise how a product is used to ensure that the product is a success. If a product is hard to use in terms of ergonomics it may put consumers off the product.	I will test the success of the ergonomics of my product by getting my consumers to test my product and give their personal opinions on the ergonomics of my product. I will also test the ergonomics of my product myself to see if works smoothly and also to see if it is obvious how to work the product.
6	Materials	The materials are what a product is made of. The quality of the materials reflect the overall quality of a product and add value with to the product. The materials of the product also will add to the product life span if they are of good quality and are lasting.	This is Qualitative as the quality of the materials is based up on opinion and preference.	This is Desirable because good quality materials are not necessary to making a purposeful and functional product.	The materials used in a product are important as they represent the overall quality of the product. Generally, the higher quality materials used in a product the overall higher quality of the product therefore materials are extremely important to make a good product. My product analysis showed me that higher quality materials can effect price also and make products premium.	I will test the quality of the materials of my product through a number of tests including a 30cm drop test. I will also test the success of the materials by getting consumer opinions on the materials I have used in terms of how they look and also if the quality is sufficient. I will also be rating the success of the materials through their cost and whether they are good value for money.
7	Product Cost	The product cost is how much the product costs to make and how much the product is going to sell for. These are directly linked as the more it costs to make the more it retails for to ensure the most profit. A product should be good value for money.	This is Quantitative as the cost of making the product and retail cost can be accurately measured.	This is Essential as product costs need to be kept down to ensure consumer satisfaction and profit.	The cost of the product is very important as it determines whether a consumer is willing to a buy a particular product, if a product is priced to high a consumer may not be willing to purchase a product however if a product is priced low a consumer may not buy the product as it may come across as being a cheap product.	I will test the success of the product cost in a number of ways. One of the ways I will test the product cost will be by analysing whether the costs of making the product are as low as possible. I will also be testing the success by asking sample consumers whether they would pay the price for my product which will help me to determine the success of the product cost.
13	Product Life Span	The product life span of a product is the whole life of a product from being bought by a consumer to being thrown away or recycled. It is essential to make a product which has a long product life cycle to ensure the most use out of the product and to keep the consumer happy with their purchase.	This Quantitative as we can predict and estimate the life span of a particular product.	This is Essential as a product needs to be durable for a consumer to buy it over a different product.	The product lifespan of a product is important to the designer and maker of the product as they need to plan out the life cycle to determine how long the product will last and when it will be thrown away. A good product lifespan will last a long length. My research rankings table showed the more modern designed products lasted longer, I will need to take this into account.	I will test the success of the lifecycle of the my product by testing the durability of all of the aspects and build of my product including the materials, the components used for its function and the overall quality of the build to estimate when the products life will finish and whether it has a long or short span.
11	Time Scale	The time scale is how long I am going to set myself to create and finish my project. This how long I will have to make and design the product and complete the whole of my project.	This is Quantitative as I am measuring the time numerically.	This is Essential as I need to meet my target dates to ensure I complete my product in time.	Time scale is very important to the success of my product and project. I must be able to stick to the time scale in order to ensure that I complete my product on time and also ensure that it is working and functional by a set date. The products I have a previous analysed will have had a set date to be retailed and completed.	I will test the success of my timescale of the making of my product and overall project through a referring to my Gantt chart at the front of my folder which will indicate whether I am meeting my set targets and whether I a being successful in my time scaling and management.

		Definition	Qualitative or Quantitative?	Essential or Desirable?	Importance	How am I going to test the success of the product?
10	Weight	The weight of a product is how heavy a product is or the mass of a product. Dependent on what product it is lots of products can have a variety of weights as they serve different purposes.	This is Quantitative as the weight of a product can be measured numerically.	This is Desirable because weight is more of a luxury to a consumer rather than a necessity.	The weight of a product is important because if a product is too heavy it may be hard for a customer to carry or transport a product which could be a problem. The weight of a product is dependent on its purpose and therefore a products weight should be dependent and appropriate to its size and function. My research showed that weight can be a problem for some consumers.	I will test the success of the weight of my product by weighing the product and evaluating its weight by seeing if the average consumer could hold the product or move it around with ease and with no problems in regards to safety. The products shown in my analysis were considered not heavy and were considered successful in this aspect of their specifications.
2	Function	The function of a product is what the overall purpose of the product is, for example the function of lamp is to produce light. Some products can serve more than one function and can be considered multifunctional.	This is Qualitative as the quality of a function is based up on opinion and is unmeasurable.	This is Essential because a product without a function has no purpose and no point in being made.	Function is the most important aspect of products in my opinion, the function is important as it determines the purpose of the product and what its going to be used for. Function can attract lots of consumers and a product with a good function or multi-functionality is very important to the success of a product. My research shows me that function is very important to my particular consumer.	I will test the success of the function of my product in two ways. One of the ways I will test the function of the product is by analysing and evaluating the quality of the functions of product, for example the amount of light produced by the lamp. Another way I will test the function of my product will be getting consumer opinions on the function and purpose of the product and whether function is of a good quality and value.
9	Size	The size of a product is how big or small it is and its measurable dimensions. Dependent on what the product it is there can be variety of sizes. In the case of a lamp there can both be big and small variety's.	This is Quantitative as size can be measured and recorded easily.	This is Desirable because a product doesn't need to be particular size to function.	The size of a product is very important in regards to the consumer buying the product and the function o the product. If a product is too big or small for a consumers space they will not buy it and if a product is too bi g or small for its function it will not perform effectively therefore making size very important.	I will test the success of the size of my product in a number of ways. One of the ways I shall do this is by asking a consumer whether product would fit in their accommodation, this will help to determine whether my product is appropriate for my target consumer. I will also evaluate the size of my product in regards to its purpose, as my product analysis shows that floor lamps tend to be larger than table lamps.
12	Testing	Testing is the process of evaluating whether a product is fit for purpose and is a success in particular to its target market. In terms of lamps the function can be tested by viewing the output of the lamp and the aesthetics by asking for consumer opinions.	This is Qualitative as successful test of a product is based up on opinion.	This is Essential as if a product is not tested it could be sold with a bad or incomplete function or design.	Testing a product is very important to determining whether the product is appropriate for use and sale. If a product is not tested properly it could be retailed being faulty and be unsuccessful with consumers. Testing the design of products while designing is also important to find the best design possible.	I will test the success of my testing throughout my project by evaluating the different models I have made and highlighting all of the enhancements and improvements I have made to my models throughout the design and testing process. I will make sure to indicate how I have improved each design through the testing and modelling therefore showing the development and design process of my product.
15	Competition	Competition is the similar products available to particular products. They all compete for similar consumers and try to make their individual products the best or good value for money.	This is Quantitative as the quality of competitors products cannot be measured numerically.	This Essential is essential as consumers want the best products in comparison to the competition.	Competition is important as it is necessary when designing and making a product to research similar products to see what is on the market. I have done this briefly in my research for 10 products and 2 products in depth this showed me there is a lot of competition in this market and it contains a variety of unique products and similar products.	I will test the success of my product in comparison to other products and competition by comparing my product to other products and highlighting differences and similarities, and positives and negatives in regards to both my product and competition. From my product analysis I know that many products have similarities and differences therefore it is right to assume that my product will as well.
3	Performance	Performance is how well the function of a product is executed. In the case of a lamp, one way performance could be measured is by evaluating the spread of light produced. In my product disassembly I found that the different lamps produced different light intensities.	This Quantitative as the performance can be measured in a number of ways in a product.	This is Essential because a product needs to perform well to appeal to customers.	Performance is important as a product which performs well is obviously considered better than a product that does not, this could mean consumers would choose better performing products therefore showing its importance. A well performing product may last longer as well showing a clear advantage. My product analysis showed that better performing product was preferred by consumers further supporting the importance.	To test the success of the performance of my product I will be measuring a number of things. I will be measuring the range of light it produces and seeing how well it lights up an area of a room. I will also be testing for whether the product heats up as this could be an implication of poor performance of the light. I will also be comparing the performance of my product in comparison to the products I have disassembled to compare which technology performs better.
14	Environment	Environment is how environmentally friendly a particular product is, this can be determined through use of particular materials and technologies which reduce the power used and can be recycled.	This is Qualitative as it is hard to measure how environmentally friendly a product is numerically.	This is Desirable as a product does not need to be environmentally friendly to function.	Environment is important as a product which is more environmentally friendly uses less power and its parts need to be replaced less often. Also consumers may prefer environmentally friendly products due to the prospect of them helping the environment and reducing there footprint. My product disassembly showed me that there are a number of different as of lamps and some are more environmentally friendly than others.	I will test the success of my product in terms of how environmentally friendly it is by analysing and researching into the origins of all of the materials used to find out if they are environmentally friendly. I will also look into to the lighting technology I used and how durable and power consuming it is as this is closely related to how environmentally friendly a product is.
4	Safety	Safety is how a safe a product is to use and the ultimate goal of reducing the danger of using the product. A product could be safe for one user and not safe for another showing how consumer orientated safety is.	This is Qualitative as the safeness of a product cannot be measured numerically.	This is Essential because an unsafe product cannot be sold.	Safety is extremely important with a product being sold to consumers. A product must be safe to use other wise it is not allowed to be sold, many regulations set rules on safety of products and it is imperative that he rules are followed to ensure the success of products otherwise they will be allowed to be sold.	I will test the success of my product in terms of safety by ensuring that my product meets all of the rules and regulations set by the UK and EU in terms of safety of products. I will also test the safety of my product by checking for any parts of its design which could cause harm to a consumer such as a sharp edge or part which could snap off and become a choking hazard.

Design Specification Conclusion: Now that I have completed my design specification I believe I have wrote a specification which would be appropriate to what Utility has asked to me to and to my chosen consumer and theme. This page will guide me when I am designing my product and tell me what I need to include when designing to meet it. The design specification has helped me to prioritise what aspects of Pugh's Plate are most important and therefore I should focus on most to design and make a successful product which meets the needs and requirements of the task set by Utility. I believe this specification is extremely appropriate for the ethos, purpose and style of the products and lamps Utility sell and Utility as a whole.