



Y12 Lighting Project Y11 – Y12 Transition Sessions

We will have 4 lessons of Transition and will attempt to cover tasks 1-3 below. This is the project that we will be doing in Y12. We will pick up from task 3 in September and start with the Spec and Initial Ideas work.

Name _____

Target Grade _____

Project Title _____



Desk Lamp / Lighting Project Design Brief

Ikea want to expand their range of Desk Lamps / Moodlights on sale in their UK shops. The marketing department want to target the 14-25 year-old, unisex student target market. Ikea want to see stylish and innovative designs which will appeal to a wide range of people to maximise sales. You will design, develop and prototype a lamp concept using a standard light fitting and bulb **or** a moodlight using LED's or Electroluminescent wire. The specific focus area of the target market is up to you. There is a free choice on use of materials (we will be covering wood, metal and plastic processes during lessons, plus laser cutting and engraving using paper / board, timber and plastic.)

The Tasks - Some tasks were completed in June during the Y11-12 transition sessions:

Task 1) Considerations. Start with a considerations brainstorm where you list all the issues you need to think about / research before you start designing. Ask yourself a series of questions using the list below as guidance. Use a prioritised CAFE QUE (start with your most important issue – remember the holy trinity – Aesthetics – Function - Ergonomics)

EXTENSION TASK If it helps – create a moodboard of existing lamps.

Cost

How much will the light cost? How will it offer value for money? What affects the selling cost? (Think about cost to make, cost of materials and profit)

Aesthetics

How will it be designed to look appealing? Think about the type of light source, shape, colour, style, materials, surface finish, proportion, symmetry as they affect the way a product looks.

Function

What will the lamp do? Will it be Functional lighting (reading/studying/hobbies?) or Aesthetic/Mood lighting. How will it do it? Adjustability? Are there different ways of doing it? Which is best? How do similar products which are already available function?

Ergonomics

How can your light be designed to make it more comfortable or easy to use? Think about size, shape/form, grip and texture of the parts that you touch or hold. Good ergonomic design is very important. See below for details on Ergonomics:

- Ergonomics is all about making a product more comfortable and easy to use. A designer does this by making the product fit the human form by shaping it and using grip or texture to make the product easier to use. E.g. look at the design of a toothbrush handle, a chair, a TV remote or the handle on a handbag/rucksack. Think about any adjustable parts or touch points on a lamp.

Quality

How will you design the light to make sure it is good quality? Think about materials, how will it be made and assembled? Also think about quality standards and testing.

User

Who is the light aimed at? This group of people is the user group or target market. How will your product be suitable for this target market? Think about age, gender and price range as they will determine the colour, style and overall aesthetics of the final design.

Environment

Is your product harmful to the environment during use? Think about power source – Battery or mains electricity Are the materials of your product and it's packaging **sustainable**? (Wood, paper and fabrics are, plastic is not. Plastic needs to be recycled as it is from a non sustainable resource (oil) and it does not biodegrade). How easy is it to recycle the materials used?

Research

Task 2) Product Analysis: (1 page) we want detail and content – rough draft, handwritten only! NOT CSWK QUALITY

- Start with a clear photo of the product and state the name of it and the price.
- Now decide on your priorities from CAFE QUE and 3 new subheadings - **materials, methods of assembly and methods of manufacture**. For each subheaded section you must explain the key + and – features of the design. Use lots of close up photographs to illustrate your writing. Number the photos and refer to them in the text. To highlight the +/- points either colour code them or subhead each set of comments.
- To finish add a **conclusion** and list the overall key+ design features that you will retain and the key – features that will need improving on. **WE WILL USE THIS CONCLUSION TO STRUCTURE TASK 3-COMPARISON**
- **Cost** - How much does the product cost? Is it good value for money? Why / why not – explain!! Look at function, aesthetics and materials. What do you get for your money? Is it worth it?
- **Aesthetics** - Does the product look good? Why / why not? Explain! Think about shape, colour, materials, proportion, symmetry, surface finish, style (modern, traditional, contemporary)
- **Function** – What does the product do? How well does it do it? What makes it easy / difficult to use? Are there any components that don't work well? Why – why not? Think about safety issues.
- **Ergonomics** - How is the product designed to make it easier or more comfortable to use? How is it held, gripped or touched by the user. Think about size, shape, form and grip / texture. Is it easy to use? Why / why not?
- **Quality** – How has each component been made and how has the product been assembled? (see me if unsure) Is the product well made and are the materials good quality? How can you tell? Comment on any damage, scratches to the materials or individual components.
- **User** - Who is the product aimed at? Think about age, gender and price range. Is it suitable for this target market? Is the function and appearance suitable for them? Why / why not?
- **Environment** – Complete a life cycle analysis of your product using the following headings:
 - **Design:** Is it made of sustainable materials (wood, metal)? If it isn't (plastic) has it been designed to make it more sustainable? Has the designer reduced the amount of plastic used, or is it really chunky?
 - **Making:** How has waste material been kept to a minimum? How is your product assembled? Could it be flat packed to reduce packaging? Has it been made from recycled plastic? Has it been packaged? Is the packaging sustainable?
 - **Use:** Does your product cause pollution when in use? Does it need batteries or electricity, as these create pollution from power stations used to create the electricity?
 - **Disposal:** How easy is it to recycle the product? Is it easy to disassemble in to its separate components? (remember, if it has plastic components, it needs to have the recycling logo on it to identify the type of plastic)

Task 3) Comparison Using the negative design features identified in your product analysis conclusion as a checklist, compare the first lamp's negative points to the other lamps. Make a note of the main features that are BETTER on the comparison lamp. Subhead this work the same way as the Product Analysis. REMEMBER – you are just trying to identify the design features that are BETTER than the original – any features that are worse, (or equally as bad) don't need mentioning.

