

A glowing lightbulb is the central focus, with its filament illuminated. The background is a soft, light blue gradient. Overlaid on the background are faint, white circuit board traces. A dark, rounded rectangular box is positioned in the center, containing the main title and subtitle in white text.

# A-LEVEL DESIGN & TECHNOLOGY

Y11 TO LOWER SIXTH FORM BRIDGING WORK

# BRIDGING WORK AIMS

This pack is designed to enable you to show case to your new Design and Technology teachers some of the skills and abilities you have. It will give us a good indication of your skill level and what areas you are competent in and areas that will need some development.

You will choose a design challenge and then produce examples of the following:

- Project Choice
  - Brief
  - Client
  - Initial Research
- Product Analysis
- Brief and Specification
- Design Ideas
  - Hand Sketches
- Development of Idea
  - Hand Sketches and CAD work

# DESIGN CHALLENGE THEMES

Please look carefully at the design challenge themes below and pick one that will help to show case your skills, remember you will need to research, write a brief and specification and then design some possible solutions. This work can be done either on paper or on a computer.

You will choose a design challenge from the following:

- A games controller for a disabled user who only has the use of one hand.
- A water bottle for a cross country runner.
- Solar powered torch for explorers.
- A Desk/Bed side table organiser for a teenager.
- Re-using a pallet/pallets for use in the garden for a young adult.

# SECTION 1 - INTRODUCTION

On this page you will present the design challenge you have chosen and some initial research you have carried out into the theme of the challenge.

You will need to include the following parts on this page:

**Project Task** – (write the description of the challenge you have chosen)

**Client/User** – Each design challenge mentions a potential client, you will need to expand this and explain more about your potential client.

**Initial Research** – Images of similar or existing products, information about the problem, design considerations.

## SECTION 2 – PRODUCT ANALYSIS

On this page you will show that you have the skills to analysis the work of others. You will need to find some products that are on sale that are similar or related to your design challenge.

You will need to include the following parts on this page:

- Pictures of the product/products
- A detailed analysis of the product (you could use an analysis tool like ACCESSFM or other)
- Summary, what useful information did you gain from doing this exercise for your design work.

Hint.

Remember that this page focuses on the work of others, that actually exists. It is not necessarily exactly what you plan on designing, that might not exist yet!!



# SECTION 3 – DESIGN BRIEF / SPECIFICATION

On this page you will show that you can create a design brief and detailed specification.

You will need to include the following parts on this page:


## **Design Brief**

Write a detailed brief that shows you have considered the needs of the client and that you understand the concept of the design challenge.

(State what you will be designing and making. Explain the needs of the user, explain how and where the product will be used)

## **Specification**

Write a detailed specification with justified points linking to the needs of the client. You will use this to help aid your designs.



## SECTION 4 – DESIGN IDEAS

On this page you will present a range of design ideas.

Make sure that your designs are imaginative and creative.

You should try to include some innovation in your designs if you can.

Avoid design fixation (make them look different).

Designs should be annotated to highlight features and explain how the design works

**Hint.**

Use presentation techniques to show off your skills and make the products look realistic.

If you need there are many superb videos on sketching and presentation techniques on YouTube, Sketch-a-days Spencer Nugent is excellent.

# SECTION 5 – DEVELOPMENT OF DESIGN

This is where you will pick one of your design ideas and develop the design towards an idea that could be manufactured. If you haven't already you will now need to consider the following in your design

## **Materials**

What could your design be made from.

## **Dimensions**

Do you need to use anthropometric data, how big will it be.

## **Features**

What will your design do? How will it work?

You should develop your design towards a final design, showing how it has developed from your first ideas.

If you have access to CAD programs at home you can show some CAD designs for your design.

Google Sketch Up for 3D drawing is free to use if you use the online version.



## Extension work.

You could provide some evidence of your best work you have complete so far, things you have designed/sketched or made.

If you feel you want to spend more time on things that could get you prepared for your A-Level course I would recommend following.

- Working on your sketching and presentation skills.
- Practicing some CAD design work
- Improving knowledge of industrial practicies – watching How its made on YouTube or programs like Richard Hammonds BIG or Mega Factories. The BBCs Inside the factory is also a superb series to watch.

If you have any concerns or issues and feel you need to get in contact with me then please use my email address shown below.

Both Mrs Middleton and myself (Mr Sparkes) look forward to meeting you soon.

## CONTACT DETAILS

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