

2009

*Materials
Technology
Wood*
PROJECT REPORT
STUDENT GUIDE

MTW
TECHNOTEACHERS ASSOCIATION



Analysis of brief:

ORDINARY LEVEL; 10 MARKS, HIGHER LEVEL; 10 MARKS

Why have you selected to take this particular brief at this level?

Now that you have made the choice, you need to examine what the brief is really asking you to do. You must identify the problem to be solved. The best way is to write out the brief on a page, then using a highlighter or coloured pen underline all of the key words these describe what needs to be done. You must now look up an explanation for these words particularly the ones you do not understand. Now re write this brief in your own words.

List the requirements of the design; ask what must be done to satisfy the brief. Examine the wording to see if there is a theme or function. How might this be included so that it will not look like an add on or afterthought. Has it to be any particular size and will its appearance be important?

At this stage, you should reflect on your woodwork skills and the tools and machinery available for you to use in you school. The time available to you should be calculated allowing for progress with your theory lessons.

Write out Brief

Underline/ highlight key words

Explain these words

List requirements of the design

Calculate your time

INVESTIGATION AND RESEARCH:

ORDINARY LEVEL; 10 MARKS, HIGHER LEVEL; 10 MARKS

Now that you have a good understanding of the problem, it's time to start looking for the answers.

Show evidence at all stages of this work (sketches, cut outs, photos and written notes from people you received advice) looking up books, magazines, interviews etc. Try to see other designs of this item in catalogues at home etc. and make notes and sketches of their key design points. Use your textbook and other sources to research joints, glue and a suitable finish to suit your design. Remember to include safety considerations with adhesives and finishes.

Ask your teacher what they think of your findings and if you are stuck, they will help you get back on track. If using the internet, do not copy material straight from computer to report. Cut and paste text and drawings / pictures, stick onto page and write your own notes on these.

Write a letter to the makers of different products which you may use, requesting information about their goods, show copies of these and replies which you have received.

Take Measurements of items, which are to be stored or accommodated in, or on the piece, these will assist you in the design. (For example for a phone holder, you need to measure a range of different models to ensure your design will work)

Research other designs of the item

Research joints, glues, finishes, materials to suit your design

Write notes on all your findings

Write a letter or email requesting information

Take measurements of related items

Show evidence of your research, using notes, pictures, photos, sketches, etc

DESIGN IDEAS / SOLUTION:

ORDINARY LEVEL; 10 MARKS, HIGHER LEVEL 20 MARKS

Do out at least three different designs using sketches on blank or isometric or square grid paper. The sketches should show a progression or link from the first to the last. They must show a link with your analysis and research. You must show by notes and sketching how the project will be put/joined together; include written notes around sketches to help explain each design. Use colours in your sketches where appropriate. Remember these are possible solutions to the brief. Evaluate each design idea write out why they are not fully meeting the brief or maybe you just do not like it.

Show on a separate sheet a sketch or drawing of your chosen design this will be inspired closely from your three design ideas. Name the materials you hope to use and show that you have examined the final design with user safety in mind. (e.g., Childs toy, table Lamp.)

Mark your ideas, Design Idea 1, 2, and 3. From the chosen design solution (explain clearly, why you chose this design and why), develop this design idea further if possible a small-scale prototype of the chosen design idea using cardboard and cellotape or other material will help finalise your design. At the end of this section, you must ensure that your project design is different from other students. Your teacher will be the person to assess this. So show them your design before starting the next section.

Sketch a least THREE different design ideas, with:

- Progression or link from first to last
- Links to your analysis & research
- Notes explaining design: evaluating idea, reasons for/against
- Colour and/or shading

Develop ONE of the design ideas further:

- Explain why you selected this design
- Make a small prototype/model
- Main dimensions

Make sure you design idea is different to your classmates

SKETCHES / WORKING DRAWINGS:

ORDINARY LEVEL; 10 MARKS, HIGHER LEVEL; 20 MARKS

For the execution of the preferred solution, show sketch of elevation, plan and end elevation and any other detail needed e.g. show how a particular joint goes together.

Make out a proper working drawing to scale, showing all measurements needed to make the project. From the working drawing write out a specification for the project of how it will be made, which will include the following; a material list, a plan of procedure i.e. marking out and making. Show by notes and sketches where and how Joints are used.

Make a fully dimensioned orthographic drawing of your design use scale where needed. Ask yourself if the information and detail you provide would be enough for someone other than you to make the artefact. If you have access to CAD in your school, you could use it to prepare or add to your drawings and sketches.

Make a Cutting list, which should include a description of materials, their sizes, and the quantity you need (screws, dowel, Hinges, Mirror, and Lamp Fittings etc.) Some projects will be very hard to draw orthographically so you could make a 3d drawing in oblique or iso metric, which might be more suitable for your project

Alternatively, a Well-proportioned freehand pictorial sketch with key dimensions included might be an option.

The use of Patterns in paper or cardboard can be useful for difficult shapes. A time plan listing what and when you intend to do things would be a very worthwhile inclusion. This will help you to complete your project on Time.

Draw, to scale, a working drawing:

Plan, elevation, end elevation

Any other detail needed – e.g jointing method

Dimension drawing with full scale measurements

(This drawing can be done using CAD)

Make a 3D drawing of your project – freehand or using drawing instruments. Use colour

Complete a specification for the project:

Materials (cutting) list

Jointing methods

Time plan

Templates or patterns needed for project

Plan of procedure –marking out & making

EVALUATION:

ORDINARY LEVEL; 10 MARKS, HIGHER LEVEL; 10 MARKS.

Well the hard work is done at this last stage. Evaluate the project by asking,

- *Does the design meet the purpose it was made for?*
- *Is the appearance pleasant or otherwise, were materials used effectively?*
- *Should there be modifications or alterations made to the final presented work?*
- *How effectively was the project executed?*
- *Are you happy with the overall result?*
- *If you were to start again would you do anything differently?*
- *Is the realisation Safe and stable for its intended use? and if not list the things which require improvement.*

Have you received any help in making the project? Describe that assistance in this section. (It is ok to get routeing or pieces cut by the teacher just acknowledge the work done) The person reading this section will want to know what you learned by doing the project so describe in detail using sketches and photographs if necessary what went well and what did not.

Answer key evaluation questions

Describe any modifications made

Acknowledge any help received

Presentation of your Brief and Realisation

All pages should be fixed in a folder and any small items or large drawings put into plastic sleeves for safekeeping.

- *The cover must have your exam number, the level and project title e.g. 76543 Higher level No2 Trophy and it is important to include your name so that the school can organise the projects for correction.*
- *Using Dividers, have the sections separate and in the order as listed above.*
- *Make sure your Prototype has your examination no securely attached, and the project itself has the label fitted, which the SEC provides.*
- *Make sure you attach your number to any separate parts, which might get mixed up while being moved about the school.*

Make a front cover for your folder

Fix your pages together, in a folder or another binding method

Divide your folder into sections

Make sure your exam number is on all parts of project: folder, project etc.

**You can only be awarded marks for the work, which can be clearly identified by the examiner to be yours.
This is your Responsibility.**