

Sample Student Logbook and Unit of Learning Plan

This resource was developed as part of a Wood Technology CPD 2019/2020 workshop which took place during the 2019/2020 school year. All materials used during this workshop can be viewed in the Technologies section of www.jct.ie within the CPD Workshops tile.

CPD Workshop Link:

https://www.jct.ie/technologies/cpd_supports_wood_technology_cpd_workshops_2019_2020

This unit of learning was showcased during this workshop and focused on how a teacher activated the learning outcomes and key learning with their students and school context in mind. This sample resource may assist you in planning and developing materials suitable for your student's context. The focus of this unit of learning was for students to experience a design problem, follow a design process to arrive at a design solution, and then afford them the opportunity to advance their bench skills by realising their solution. Planning for this unit outlines the selection of learning outcomes from across the strands and elements of the Wood Technology specification thus ensuring an integrated approach to learning and teaching was achieved. A video recording that captures this planning approach can be found - [here](#). This approach can also be viewed on slides 68 - 86 of the Wood Technology CPD 2019/2020 presentation.

What is included in this PDF?

1. Sample unit of Learning

Included is the sample unit of learning developed by the teacher for their students in their school context. Contained in the plan are the learning outcomes and key learning activated by the engaging with the worksheet.

2. Student Logbook and sample activities

This PDF contains activities which were engaged with and discussed in the context that is outlined in slides 68 – 86 of the Wood Technology CPD 2019/2020 presentation. It is important to note the learning outcomes, key learning and the action verbs in the unit plan which contextualise the logbook activities.

Useful Links:

Some of the following links will provide further context to this resource

[Design Guide](#)

[CPD 2019/2020 PowerPoint Presentation](#)

[An Integrated Approach to Design in the Wood Technology Classroom](#)



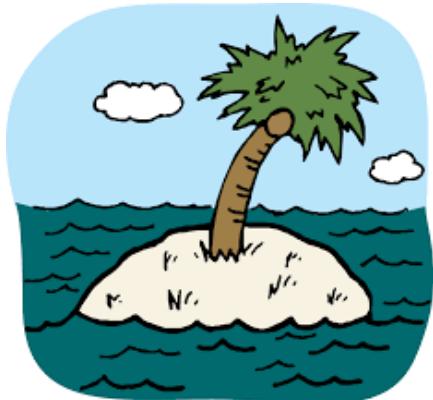
A big thank you to the teachers involved for making this resource available to the JCT4 team.

Note: It is recommended that you view the CPD workshop materials in conjunction with using this resource to contextualise the resource and develop a better understanding of how the unit of learning was developed.

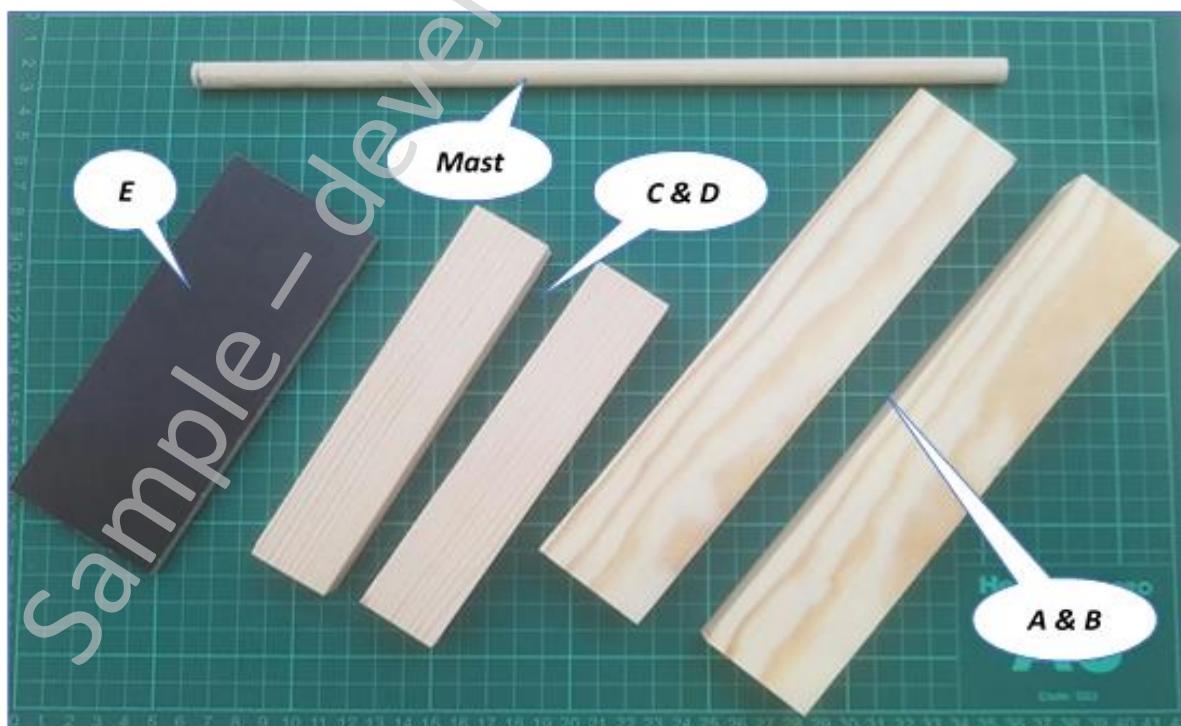
Student Name: _____ Date: _____

Design Problem/Task: (Stimulus)

A person has been shipwrecked on a desert island. They have no means of communication with civilisation. Their only chance of survival is to build a 'craft' of some description to make their way home. They can only use the materials available to them on the island.



Component	Quantity	Thickness (mm)	Width(mm)	Length(mm)
Pieces A & B		20mm	44mm	
Pieces C & D				
Piece E				
Mast		Ø9mm		
Sail				





Task

Imagine you are shipwrecked on the island facing the task of building a craft/boat/raft to get back home. Using the material provided design and build a prototype of a suitable craft which will enable you to escape the desert island. Your solution must include suitable jointing methods to ensure stability of the craft. These pieces may be cut, shaped, and jointed in any way to realise your design. The design must be sail driven...i.e. there is no engine, oars, etc.

1. Reflection Point:

What am I being asked to do?

Success criteria

What will make this design successful?

2. Is there any aspect of the problem I need to find out more about?

Shape?



Structure?



Stability?



3. Reflection Point:

Use this space or your notebook to record any additional information that will assist you in the design of your solution.

Sample / developed for use with JCT4

4. My skill set

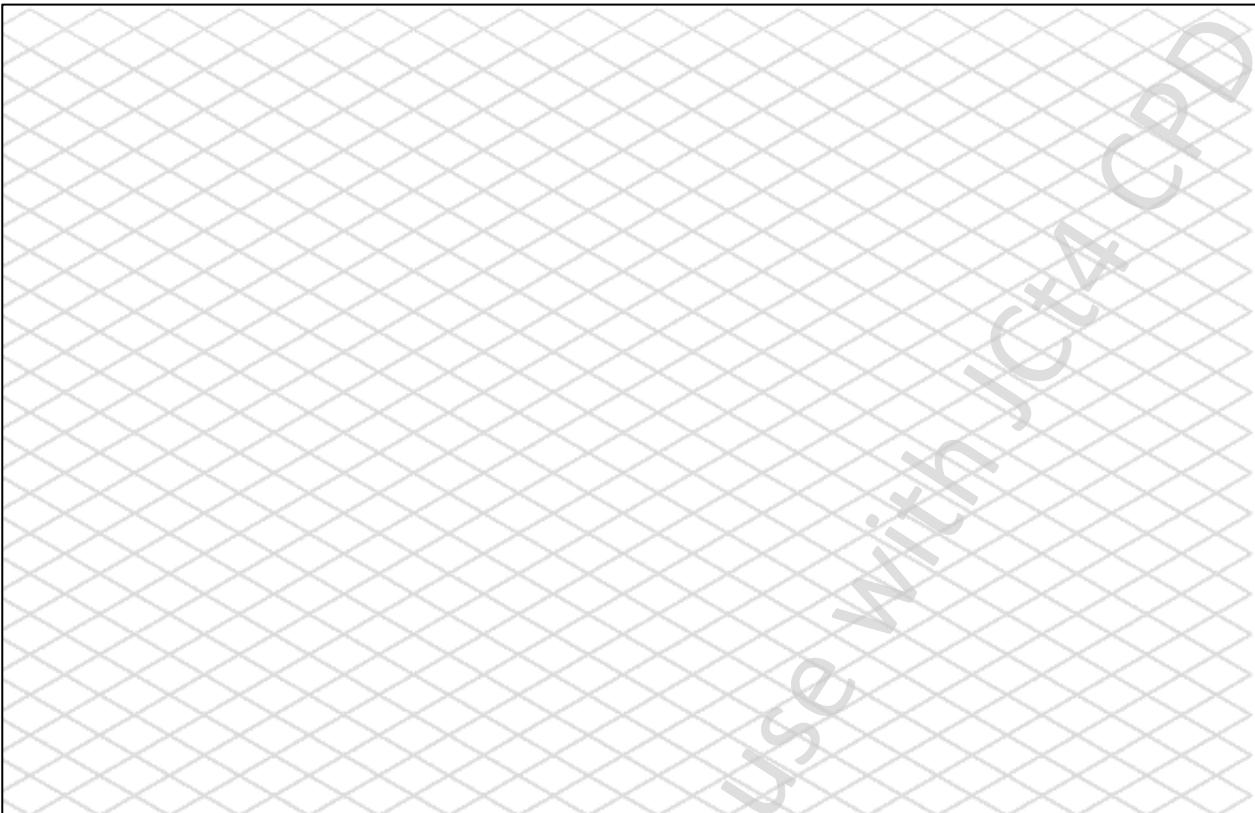
Have I designed the project based on my ability and my Wood Technology skillset? Is there any part of my design that requires me to develop new skills?



5. Work Plan

Outline your plan of work for making your project; what is the sequence you intend to follow in the making of your project?

- 6.** What joint(s) will you use in your project? What forces or pressure does the joint need to resist? Sketch the joint(s) that you plan on using in the space below.



Success Criteria

What indicates a successful joint?

- 7.** Is the type of joint chosen the best option for this situation? Does it make the design stable? Is there a better option or a way of making this joint more stable?

- 8. Reflection point:** Is my design idea clear? Does it solve the problem posed at the beginning?



Group work – basic design solution – overall shape

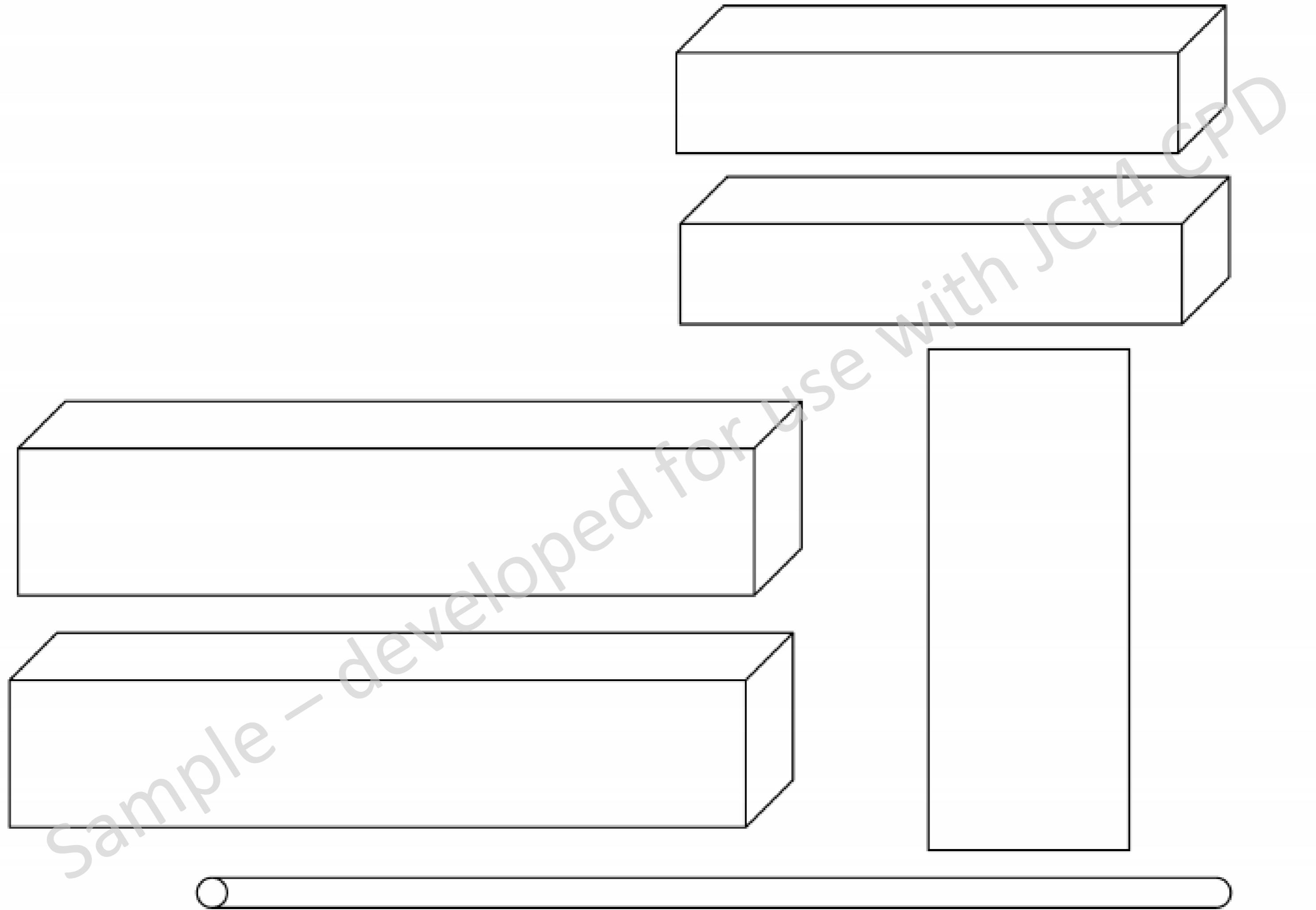
As a group discuss possible ways of assembling the pieces. Experiment with the pieces provided to explore different ways of arranging them to arrive at your design. Now as a group share and discuss the design ideas/suggestions you have

Use the following prompt questions to guide your discussion.

How might we position or arrange the given timber to get the best possible solution to the problem?

Reflection Point:

What have you discovered from your research of sailing boats/rafts/craft? How will you use this information to help you in creating the design solution?





Consider the age, stage and prior learning of the students.
What learning do we want to focus on?
Explore both the strands and elements when choosing learning outcomes.

AGE AND STAGE:

April/May of first year

PRIOR LEARNING:

Basic bench skills, housing joint, cross halving joint, tee-halving joint, basic sketching skills

FOCUS OF LEARNING:

Advance bench skills, introduce Design Thinking, develop research skills, encourage students to reflect on their learning

EXPLORE STRANDS AND ELEMENTS:

Strand 1 and Strand 2 will be the focus here

CHOSEN LEARNING OUTCOMES

1.8 apply knowledge of and skills in a range of appropriate existing and emerging principles, processes and techniques

1.9 demonstrate principles of craft excellence through the design and realisation of tasks and artefacts

2.1 explore design problems

2.2 manage information and thinking to support an iterative design process

2.6 produce sketches, drawings and models/prototypes to explore design ideas

2.14 investigate how to minimise material use and manage waste

Identify the learning outcomes for your unit of learning.
Identify the key learning for students using action verbs to support your thinking.
Consider how we will assess and report evidence of learning

KEY LEARNING

Introduce Design Thinking

Design as a process, stages involved in design, incorporating prior learning into designing, Application of knowledge and skills accrued over previous projects.

Develop research skills

Research for a purpose, how to use the information, reflect upon and evaluate their findings.

Advance bench skills

Marking out, sawing, chiselling, jointing techniques, demonstrate their understanding of the material

ACTION VERBS

Apply: select and use information and/or knowledge and understanding to explain a given situation or real circumstances

Demonstrate: prove or make clear by reasoning or evidence, illustrating with examples or practical application

Explore: to think or talk about something in order to find out more about it

Manage: to work upon or try to alter for a purpose

Produce: make or manufacture from components or raw materials

Investigate: observe, study, or make a detailed and systematic examination, to establish facts and reach new conclusions

Develop ideas for how students could experience this learning.
How will I know they are learning?

HOW COULD STUDENTS EXPERIENCE THIS LEARNING?

Sketching, using research to assist making decisions

Design and make a solution to the problem presented

HOW WILL I KNOW THEY ARE LEARNING?

1.8, 1.9 Realise their solution using woodworking skills learned in previous projects

2.1, 2.2, Begin with group discussion on how best to assemble and joint the pieces.

2.6, Use sketches to support their reasoning and design decisions. Use of research presented by the students on a worksheet to support their influence/thinking

2.14, Using only the material supplied for the task to design and make the best possible solution in their opinion with the least amount of material wastage

All – teacher observation

All – teacher feedback

Completion of worksheet, accurate and safe use of tools and equipment in the workshop

Using your own classroom context, what methodologies and resources will support students in experiencing the learning outcomes.
Ensure assessment aligns with the learning outcomes and their action verbs

RESOURCES

Worksheet, materials list, powerpoint

METHODOLOGIES

Teacher demonstration

Groupwork

Teacher feedback

HOW WILL STUDENTS EXPERIENCE THE LEARNING OUTCOMES?

2.1, 2.2, Group discussion. Using any useful information discussed in the group to help in the creation of their own design sketches/idea.

Paired use of devices – phones/tablets to research areas where extra information is needed

2.6, generation of sketches to communicate their design ideas

2.14, economical use of the material supplied whilst still generating a response to the design problem

1.8, 1.9, realisation of their design through the application of processes and skills accrued in projects prior to this

ASSESSMENT

Realisation of design solution presented with student worksheet

REFLECTION

Click or tap here to enter text.

