Pearson

Entry Level Certificate
Design and Technology (8911)
Resistant Materials

Level 1 – Portfolio guidance

Introduction

This material is provided for guidance only, it is by no means compulsory and centres can and are encouraged to use their own interpretation.

The examples are taken from real portfolios that have been presented for moderation in past years.

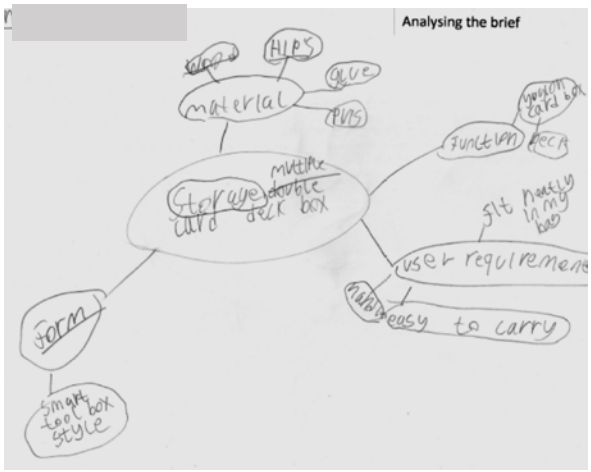
The notes that go with the examples are written to give guidance to centres so that it is clear what the Principal Moderator is looking for under each title in the Candidate Assessment Booklet.

The portfolio can be either A4 or A3 in size and suitably bound to keep the pages in order, it may be more advantageous to the student to use A4 at this level so that filling the sheet is not too daunting. Students can design some of their own sheet layout for a portfolio but will need careful guidance with most sheets prepared by the teacher. These teacher prepared sheet should give guidance but not be too restrictive or prescriptive.

The work can be on a formatted design sheet with a border and title block. Cut and paste techniques enable mistakes to be made without wasting a whole sheet. The last task to be completed in the portfolio is to number the pages which makes annotation easier.

Investigate: Analysing the Brief

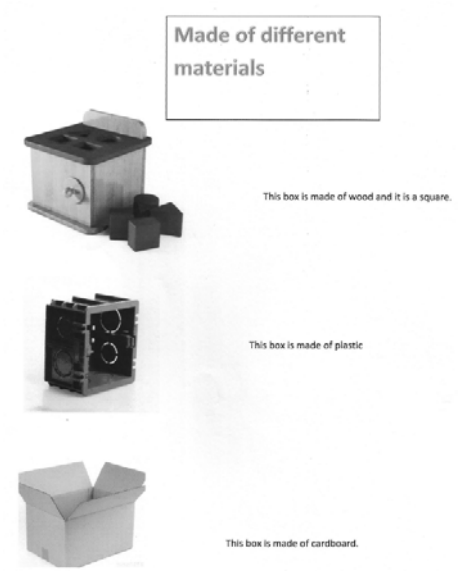
Use your design brief to help you decide on some things to research.



Either a brain storm as a group or a series of statements selected from a teacher prepared sheet to guide students as to what research to complete.

Research

Present research that addresses the statements made in your design brief.
Investigate a similar existing product to find out some information that will help your designing.



Select information from given sources to help inform the design of a product. Work in a group to disassemble a product or to analyse a product and record some key parts to inform their design work

Specification

Develop some specification notes about your product describing its form (what it might look like) and its function (what its purpose is).

AREA	Specification POINT	REASON
FORM	SMART FOLDING BOX	LOOK GOOD AND HOLD MORE IN SMALLER SPACE
FUNCTION	STORE CARDS	I NEED GOOD PLACE TO STORE MY CARDS
USER REQUIREMENTS	SMALL, STURDY	SO IT FITS IN MY BAG AND DON'T BREAKE
PERFORMANCE REQUIREMENTS	STORES CARDS AND NOT MIX DECKS	KEEP MY CARDS SAFE AND IN GOOD CONDITION
MATERIALS	WOOD (HOPEFULY OAK), GLUE AND TACKS	EASY TO GET
SUSTAINABILITY	USE OLD RECLAIMED OAK WOOD	IT IS RECYCABLE

Use some teacher prepared statements about the product they are to design to help make sure it fits the purpose of the brief.

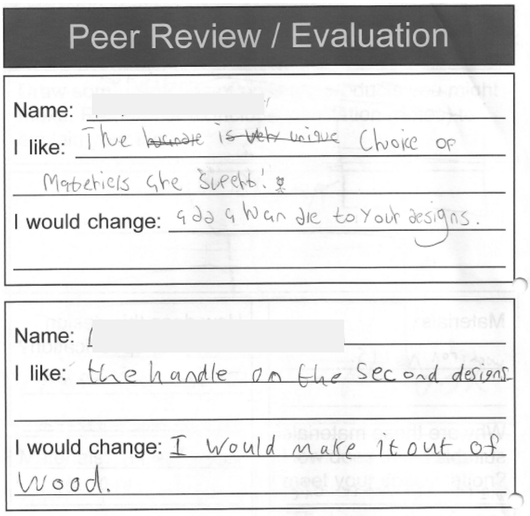
Design: Initial Ideas

Present design ideas that meet some of your specification ideas. **Annotate** your designs/plans showing the materials, components and processes you will need to make them. **Discuss** your designs with peers to help with improvements.

Draw two ideas of products that could be made to answer the brief. Add some notes to the designs to show important details or measurements. Get some comments from peers to help improve the designs.

Review

Review your designs to decide which **one** matches your specification notes best.



Peer Review / Evaluation

Name:

I like: The ~~handle is very unique~~ Choice of Materials are Superb!

I would change: add a handle to your designs.

Name:

I like: the handle on the second designs

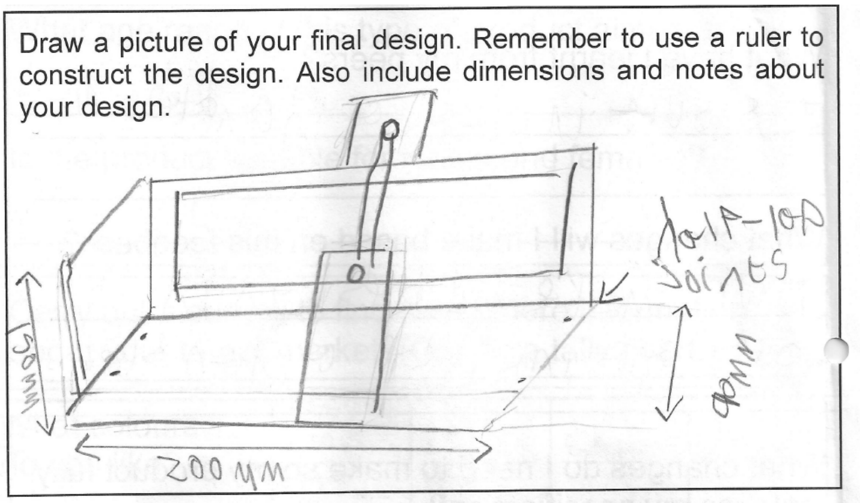
I would change: I would make it out of wood.

Comment on each design and select one to take forward to make.

Develop

Make changes to your original idea to produce a final improved design proposal.

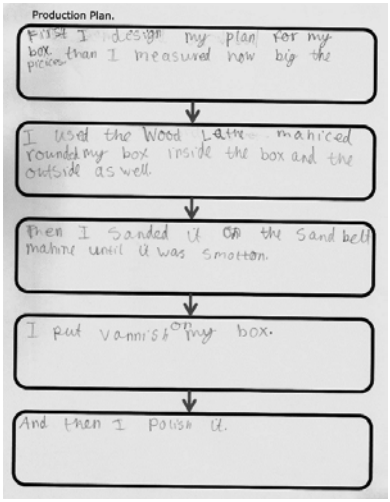
Draw your final design/plan showing some dimensions and materials or components that would be helpful in making your product.



Make some cosmetic changes to one of the designs and produce a working drawing with important dimensions and some construction detail.

Make: Production Plan

List some tasks that would be helpful when making your product.



Produce a plan for part of making one component for the product.

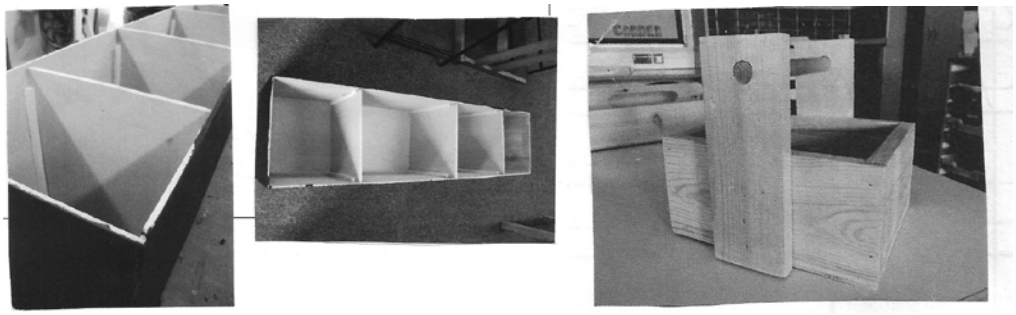
Making Skills

Make a product using a **range of different materials, components, equipment, techniques and processes** that functions in some aspects but not in others. **Understand** why specific tools, equipment and processes, including CAD/CAM where appropriate, are used to make different component parts. **Use** making skills that demonstrate **limited accuracy** in manufacture, construction and assembly of component parts. **Make** your product safely.

Produce a product or some components towards a final product that fits together, this could be with some assistance that needs to be noted on the Assessor Witness Statement.

Quality of Final Outcome

Make component parts that function as intended but remain either **unassembled or poorly assembled and finished.** **Produce** parts of a product that show some function related to the specification. **Produce** parts of a product that show **some function** related to the specification.



The Assessor Witness Statement and the photographs should show the quality of the work.

Test and Evaluate: Test and Evaluate Final Outcome

Test some aspects of your final product against your specification criteria outlining good points and bad points.

Evaluation

specification	Point
Form	My storage box is rectangular. I have met this specification point.
Function	It can hold 25 Xbox games.
User requirement	It does keep my games safe.
Performance requirements	It allows easy access of my games.
Materials and components	It is made from wood.
sustainability	The wood is recycled and reclaimed.

I wouldn't change a thing about it.

Carefully prepared templates will help students at this level to write a few sentences about what they have made by comparing their product against the specification..

Suggest Improvements

Identify one thing you would do differently to improve your product if it were made again**.**

Candidate Assessment Book (CAB)

Ensure the CAB is completed with some annotation. Basic page numbers is the minimum to show where the evidence assessed for each assessment point can be found in the portfolio.

Better annotation includes notes from the teacher assessor to help explain why that point has been accepted.

Assessor Witness Statement

Ensure the main processes are listed and commented on as to how well the candidate managed each task and what help or assistance they had during manufacture.

Make sure this is signed and dated by the teacher assessor.

Candidate Declaration

Ensure that the candidate and the teacher assessor both sign and date the declaration or the work may be returned to the centre for this to be completed.