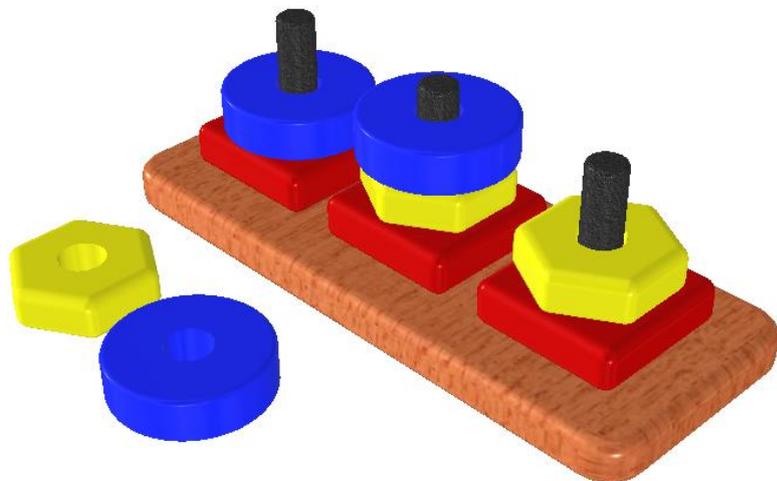
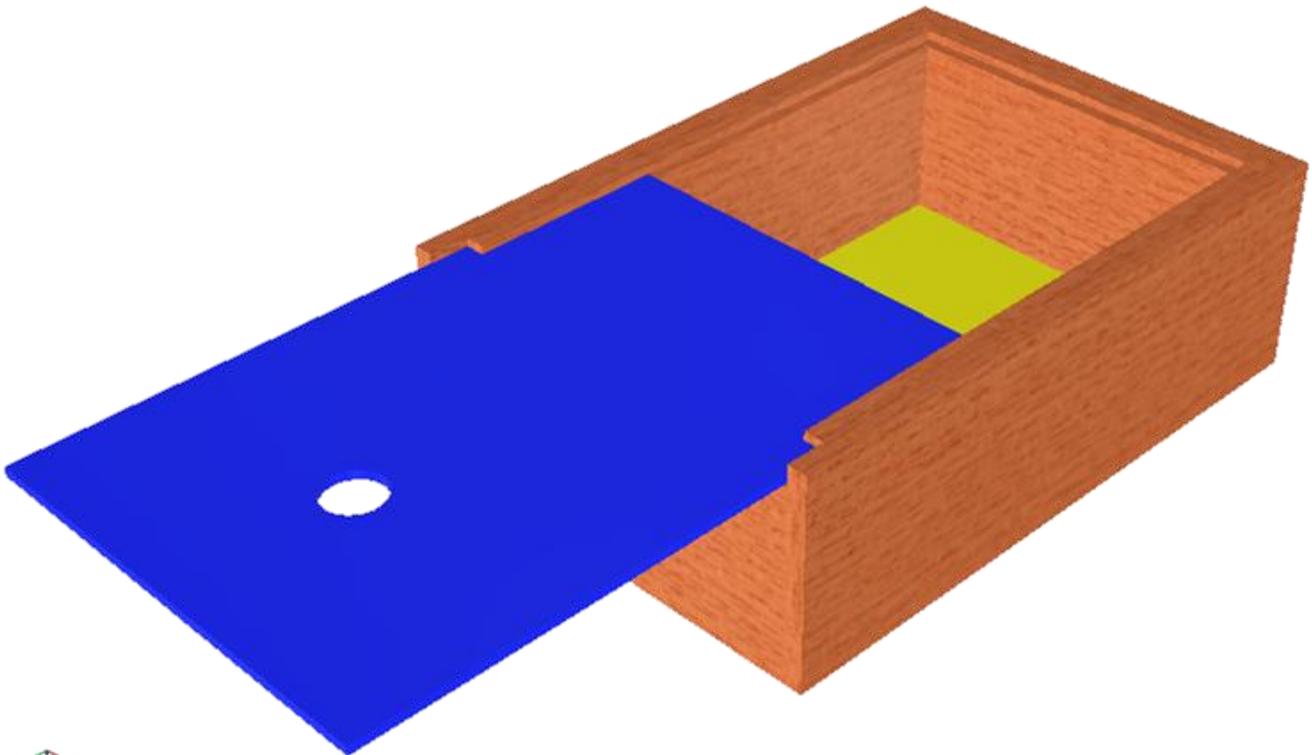


Design & Manufacture

Practice Assignment 2020-21

Children's toy and toy box



Instructions for candidates:

Design Folio (Toy)

This applies to the 'design unit' for National 5 Design and Manufacture.

The 'design unit' has 55 marks out of a total of 100 marks available for the two units of the course ('design' and 'manufacture')
It assesses the following skills:

- ◆ Analysing a brief 8 marks
- ◆ Generating ideas 9 marks
- ◆ Developing ideas 20 marks
- ◆ Using models 6 marks
- ◆ Using graphics 6 marks
- ◆ Planning for manufacture 6 marks

Your teacher will let you know how the assessment will be carried out and any required conditions for doing it.

In this unit, you will have to design a solution in response to a design brief.

You will be provided with:

- ◆ a closed design brief
- ◆ a suggested layout
- ◆ a PowerPoint with hints and tips

Things to remember:

- ◆ Your proposal must suit the design brief
- ◆ Your work must be submitted on a maximum of seven A3 sheets (or equivalent).
- ◆ All the sheets must be single-sided, except the research page which may be double-sided.
- ◆ The work submitted must be your own.
- ◆ There are no restrictions on the resources to which you can have access. You may use books, notes or the internet if you require information.
- ◆ You must manufacture your proposal for your 'manufacture unit'. Therefore your proposal must allow you to demonstrate your practical skills.
- ◆ You need to produce suitable evidence for the skills being assessed. The following table provides guidance to help you generate appropriate evidence.

Skill	What you have to do	Notes
Analysing a brief	<ul style="list-style-type: none"> ◆ Carry out research into a range of issues appropriate to the brief, using appropriate research techniques ◆ Complete the specification using the information gained from the research 	<ul style="list-style-type: none"> ◆ Your evidence for this skill should be contained in your research pro forma (you may use both sides). ◆ Your research must be aimed at your chosen brief. ◆ Your research should be aimed at gathering information which can be included in the specification. ◆ Your research evidence may be in the form of sketches, notes, text, graphs or pictures. ◆ Your specification should be detailed in order to help you develop a proposal. ◆ Your specification points should be added to the specification on the pro forma.
Generating ideas	<ul style="list-style-type: none"> ◆ Generate a range of ideas which address the specification and are creative and original 	<ul style="list-style-type: none"> ◆ Your evidence for this skill may be in the form of sketches or photographs of models. ◆ You may use idea-generation techniques. ◆ You should aim to generate a large number of ideas quickly — your sketches or models may be rough at this stage. ◆ You may clarify your ideas by adding written comments.
Developing ideas	<ul style="list-style-type: none"> ◆ Develop ideas towards a proposal by: <ul style="list-style-type: none"> — exploring ideas — refining ideas — applying knowledge and understanding of design — applying knowledge and understanding of materials and manufacture 	<ul style="list-style-type: none"> ◆ Your evidence for this skill may be in the form of annotated sketches, drawings, or photographs of models. ◆ Your exploration should consider a wide range of alternatives. ◆ Your refinement should be aimed at producing a detailed proposal suitable for manufacture. ◆ You should use the specification to help you explore and refine ideas. ◆ You may display your knowledge and understanding through your sketches, drawings and models, and clarify through your written comments. ◆ Your knowledge must be used to help you develop the proposal. You will not receive marks for simply listing facts.

Skill	What you have to do	Notes
Using models	<ul style="list-style-type: none"> ◆ Use models to: <ul style="list-style-type: none"> — generate ideas — test and evaluate — resolve issues — communicate the design proposal 	<ul style="list-style-type: none"> ◆ Your evidence for this skill will be in the form of photographs at appropriate places in your folio. ◆ You must consider the purpose of model(s) before you make them. ◆ The model(s) must be used to develop and communicate your proposal. ◆ You must record information gained from the model(s). ◆ You will not receive marks for simply making models.
Using graphics	<ul style="list-style-type: none"> ◆ Use graphics to: <ul style="list-style-type: none"> — communicate the proposal and its development — communicate detail about the proposal and its development 	<ul style="list-style-type: none"> ◆ Your evidence for this skill will be in the form of sketches and drawings throughout your folio. ◆ You should use graphic types which suit their purpose. ◆ The graphics will vary through your folio, eg your sketches of your initial ideas are likely to be produced quickly and therefore will be less refined than graphics which communicate detail of your final proposal.
Planning for manufacture	<ul style="list-style-type: none"> ◆ Plan for manufacture by producing: <ul style="list-style-type: none"> — a dimensioned sketch or drawing — a sequence of operations — a cutting list 	<ul style="list-style-type: none"> ◆ Your evidence for this skill should be contained in your planning for manufacture pro forma (one-sided only). ◆ You should have at least one sketch or drawing with key sizes to allow your proposal to be manufactured. ◆ You should complete the sequence of operations table. ◆ You should complete the cutting list.

Brief:

This applies to the 'design unit' for National 5 Design and Manufacture.

Task 1 - To manufacture a toy box from given dimensions which can safely store a child's toy

Task 2 – To design and manufacture and toy for a specific market. You will create a folio of work as per the guidance above.

The toy must fit within the box detailed below, which you will also manufacture. The box must be made with Corner Rebate joints, manufacture from a linear metre of Red Pine and have an MDF lid and base. You can adapt the way that the box opens, with a hinged or sliding lid.

Instructions for candidates: Practical project (Toy Box and Toy)

This assessment applies to the 'practical unit' for National 5 Design and Manufacture.

The 'practical unit' has 45 marks out of a total of 100 marks available for the two units of the course ('design' and 'manufacture')

It assesses the following skills:

- ◆ Measuring and marking out 9 marks
- ◆ Using hand and machine tools 18 marks
- ◆ Assembling components 5 marks
- ◆ Finishing 9 marks
- ◆ Evaluating 4 marks

Your teacher will let you know how the assessment will be carried out and any required conditions for doing it.

In this assessment, you will have to manufacture the proposal you developed in the 'design unit'.

You must discuss your plan for manufacture, completed in the 'design unit', with your teacher or lecturer before you start this Project.

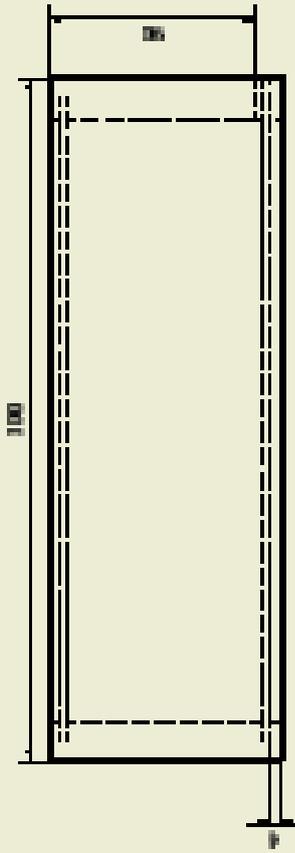
Things to remember:

- ◆ You are required to manufacture the proposal you developed in the 'assignment — design'.
- ◆ You should use the planning for manufacture page you completed as a

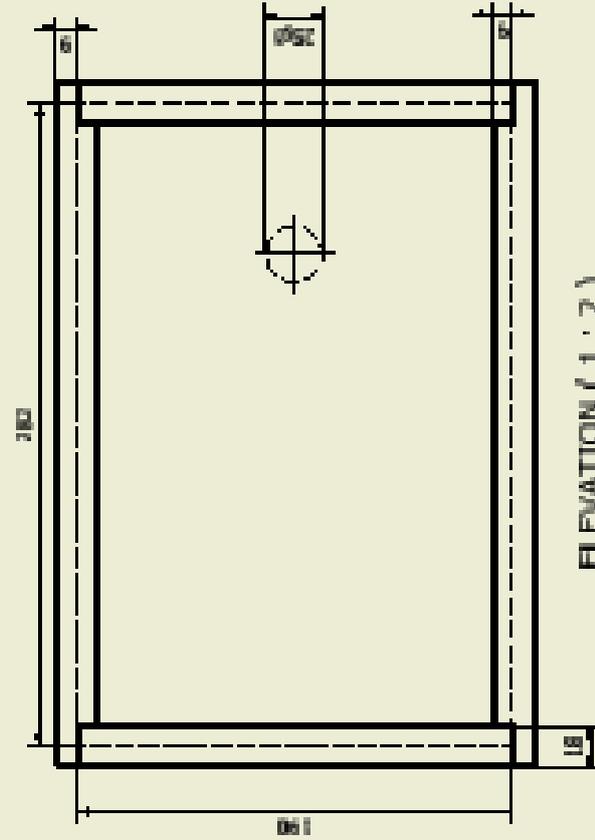
guide to completing the 'practical unit'.

- ◆ You may ask your teacher or lecturer for assistance if required. They will take this into account when awarding marks.
- ◆ There are no restrictions on the resources to which you can gain access. You may use books, notes or the internet if you require information.
- ◆ You have to produce suitable evidence for skills being assessed. The following table provides guidance to help you generate appropriate evidence.

Skill	What you have to do	Notes
Measuring and marking out	<ul style="list-style-type: none"> ◆ Measure and mark out accurately by using correct tools 	<ul style="list-style-type: none"> ◆ The evidence for this skill will be demonstrated in the marking out of your proposal. ◆ The accuracy of your measuring and marking out will be judged against your dimensioned drawings or sketches in your pro forma. ◆ You may also demonstrate measuring and marking-out skills in producing a physical template or former. ◆ Producing a template using CAD will not allow you to demonstrate appropriate skills.
Using hand and machine tools	<ul style="list-style-type: none"> ◆ Use hand and machine tools accurately to cut, remove or form materials 	<ul style="list-style-type: none"> ◆ The evidence for this skill may be demonstrated in the cutting, shaping or forming of your proposal. ◆ The accuracy of your use of machine and hand tools will be judged against your marking out and/or information from your planning for manufacture pro forma.
Assembling components	<ul style="list-style-type: none"> ◆ Assemble components accurately by using correct resources 	<ul style="list-style-type: none"> ◆ The evidence for this skill will be demonstrated in your assembled proposal. ◆ You should select appropriate resources before starting the assembly. ◆ You should use appropriate tools for assembly and checking for accuracy. ◆ Your assembled proposal should be square, level, true, and secure.
Finishing	<ul style="list-style-type: none"> ◆ Finishing by preparing surfaces using application techniques 	<ul style="list-style-type: none"> ◆ The evidence for this skill will be demonstrated in your finished proposal. ◆ Your proposal should be prepared by removing any glue and any marks left from cutting or marking out. ◆ Your finish should not have runs, be patchy or uneven or have bristles or marks from brush strokes.
Evaluating	<ul style="list-style-type: none"> ◆ Evaluate your proposal by using evaluation techniques 	<ul style="list-style-type: none"> ◆ The evidence for this skill will be demonstrated in the form of a written evaluation. ◆ Your evaluation must be based on more than personal opinion. ◆ You should use evaluation techniques to gain information.



PLAN (1 : 2)



ELEVATION (1 : 2)



END ELEVATION (1 : 2)

SCALE 1:2 ALL DIMS. IN MM

DESIGN & MANUFACTURE
PRACTICE ASSIGNMENT 2020/21

DRAWN BY - SCH'S D&T

WORKING DRAWING TOT 1000

