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# Construction Studies

The Project (Coursework) & The Practical Skills Test



*By Val O'Connell*



*Val is a teacher of Construction Studies and Materials Technology Wood in Newpark Comprehensive School, Blackrock, Co. Dublin. He has taught Construction and Materials Technology Wood to 6<sup>th</sup> year and 3<sup>d</sup> year respectively.*

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## The Project

### What do I do for my project?

Your project must include a physical artefact that you have manufactured yourself and a written portfolio, documenting your design thoughts, research, and thoughts on manufacture. In addition to this your portfolio must include three building experiments.

There are three types of projects you can choose from:

#### *A building detail incorporating a minimum of three craft practices*

- A section of a building that includes three different crafts/trades. For example; roofing, block laying, plastering.
- Accompanied by a portfolio/report.

#### *A building Science Project relating to craft practices*

- Essentially it has to relate to a specific craft and be a proportioned size of that real life craft (trade). Like a stairs or the first few blocks of a wall.
- A furniture project with at least three different processes in it.
- Accompanied by a portfolio/report.

#### *A written/drawn project relating to craft heritage/ architectural heritage or the built environment*

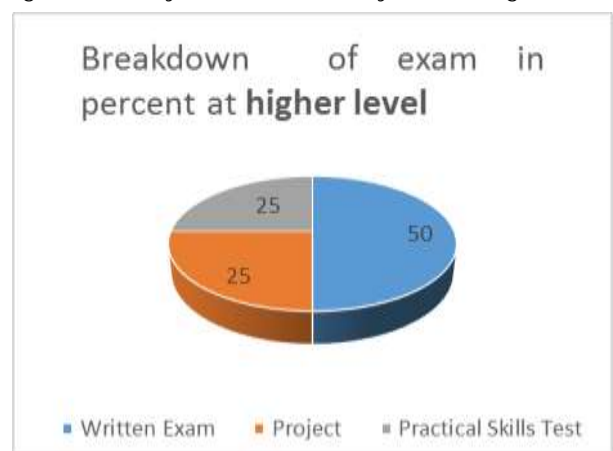
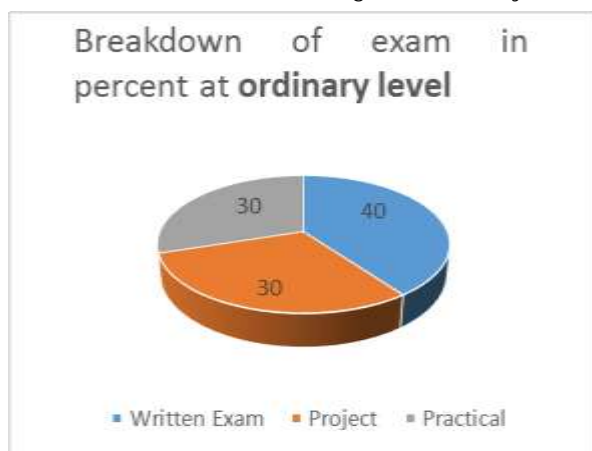
- Example; thatched roofing  
(Craft Heritage)
- Example; Vernacular architecture  
(Architectural Heritage).
- Passive House or New building Technologies.  
(Built Environment)
- It is accompanied by a scale model or model of the researched technology.



## Who grades it and how much is it worth?

Your project will be graded by your teacher. An examiner from the State Examinations Commission (SEC) will visit your school in June and select a random sample of projects to ensure your teacher's marks are accurate.

I would advise you to stick to specific guidelines and details given to you by your teacher and adhere to all advice and feedback given. As they will be marking it and they know what they are doing.



|          | Written Exam | Project (Coursework) | Practical Skills Test | Total |
|----------|--------------|----------------------|-----------------------|-------|
| Ordinary | 200          | 150                  | 150                   | 500   |
| Higher   | 300          | 150                  | 150                   | 600   |

Your coursework or project is worth 150 marks at each level out of this. Look the proportion of marks you receive for your project artefact for the time you spent on it is quite unfair. You just have to continue and take pride in it as it is something you are designing and making yourself.

| Portfolio | Manufacture of Artefact | Experiments | Total     |
|-----------|-------------------------|-------------|-----------|
| 60 marks  | 60 marks                | 30 marks    | 150 marks |



## How should I layout my portfolio & what headings should I have?

Below is a suggested format but remember stick to your teacher's advice.

|                             |  |
|-----------------------------|--|
| Cover Page                  | This goes at the front of your project.  |
| Table of Contents           | The list and page number of your headings in your portfolio.   |
| Brief                       | Unlike Junior Cert Woodwork, you have to come up with your own brief i.e. reason to do your project area.  |
| Analysis of Brief           | Analyse, expand and evaluate the key problems you have identifies in the previous section.   |
| Research and Investigation  | Research and investigation into existing solutions to your project. Avoid using the internet too much, go out and take pictures.   |
| Development of Design Ideas | About three to four ideas. Use plenty of sketches to detail your thoughts and ideas. Incorporate lots of thumbnail sketches.<br>Incorporate pros and cons of each idea                     |
| Final Solution              | Sketch of final solution with dimensions. The examiner should visibly see how you arrived at this solution. <b>Include your justification or reasons behind why you chose this design.</b> |
| Materials                   | Analyse the materials out there and evaluate it and explain why you are choosing certain materials for your project.   |



|                               |   |
|-------------------------------|---|
| Joining Methods               | Sketches of the joints you will use, reasons behind the adhesives and fittings, joints you are using and why they are most appropriate.   |
| Working Drawings and Sketches | Elevations, End Elevations, Plans. Isometric, Exploded Isometric. If you know how to use Solidworks include this.   |
| Cutting List                  | Size and quantity specifications for pieces need.   |
| Time Planner                  | Guide of your time plan, update it as you go along.   |
| Project Manufacture           | Include pictures and sketches. Take/draw them as you go along don't leave it to the end. Avoid heavy text on how you made your project.<br><br>Document problems encountered and how you overcame them. |
| Finish Applied                | How you applied it, why you chose that finish, Health and safety issues.  |
| Tools Used                    | Pictures and health and safety issues. Include safe use of tools  |
| Evaluation                    | What have you learned? What would you differently and why?  |
| Conclusion                    | From your evaluation what can you gather that has significant importance for future work?   |
| Experiments                   | 3 building experiments.   |



## The Practical Skills Test

### What is it?

The practical skills test as it is known officially, but also known as the 'day test', 'skills test' or simply 'the practical' is an exam for your Leaving Cert Construction Studies.

It is a 4-hour test that is held in the month of May. The exam assesses a student's skills and knowledge in working with wood in terms of reading and interpreting drawings, marking out material, processing material and assembly of components to make the artefact drawn on your working drawing sheet given to you by your superintendent.

### Steps:

- Read and interpret the working drawing.
- Mark out and process material using *only hand tools*.
- Assemble.

### Who grades it and how much is it worth?

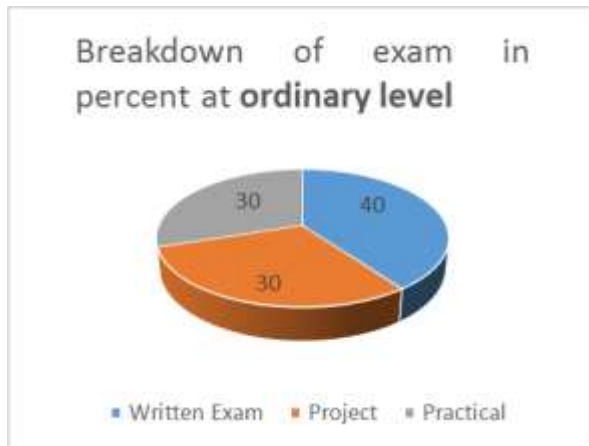
Your artefact is graded by an examiner of the State Examinations Committee (SEC). Your work is sealed in a plastic bag and sent to the SEC headquarters.

The practical skills test is worth 150 marks.

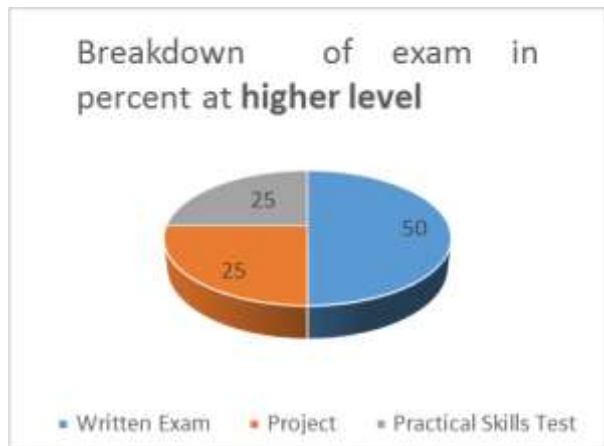
|          | Written Exam | Project Work (Coursework) | Practical Skills Test | Total |
|----------|--------------|---------------------------|-----------------------|-------|
| Ordinary | 200          | 150                       | 150                   | 500   |
| Higher   | 300          | 1500                      | 150                   | 600   |







The Practical Skills Test is worth 30% of your overall grade at ordinary level.



The Practical Skills Test is worth 25% of your overall grade at higher level.

The practical skills test is examined at a common level i.e. both ordinary and higher level students make the same artefact.

**Note:** Marks are awarded for marking out components, processing them and assembling them. If you marked a piece out and did not process it, you still receive marks. **Essentially everything you do is worth a mark.**

### When is the Practical Skills Test?

The practical skills test will be held in your school in May. This will be shortly after the deadline for submission of project work has passed.

The exam will be held in the woodwork rooms in your school. As each room can only hold 24 students max, most schools divides their students into groups and give each group a different day or time.

Thus you will have to find out from the school, your group, date and time that you will be doing the exam.





## What do I need to know?

1. The different marking out tools and how to and when to use them.
2. The different hand tools for processing material i.e. when to use a coping saw or tenon saw.
3. The different joints available to use in woodwork and how to manufacture them.
4. How to read working drawings (elevations, end elevations, plans and pictorial views) and mark the information onto your work pieces. Also how to assemble pieces.

**Note: you should not use any machine tools for the exam.**

If you do, you lose 50% of the marks available on that component.

You may be allowed to use a cordless drill, the instruction sheets on the day will specify.

## How can I prepare for the test?

The practical skills test from afar can seem impossible to prepare for as you need hand tools, a workplace and material to practice for it. However, it is important to note it is very possible to study for. Below are some tips on how to prepare for it.

- If you see fitting, designing a project for your coursework element that will have a lot of joints in it can prove helpful.
- Buy a few marking out hand tools, i.e. a try square, marking gauge etc. Practice marking out pieces at home. You don't want to be wasting time making mistakes on marking out. *They aren't expensive.*
- If permitting, buy some hand tools and practice past years at home. Remember to work safely! *They aren't expensive.*
- **Or** arrange a time with your teacher to allow you to practise in the woodwork room. Many teachers hold mock exams before the test. Make use of this.
- Take into account that the practical skills test is held in May not long after you submitted your project. You need to balance your study.
- I recommend no more than one hour a week of preparation for the practical skills test during the project.



## Tips for the test

### 1. *Manage your time efficiently*

- Spend 10 minutes reading the working drawing.
- Marking Out: 105 minutes
- Processing: 110 minutes
- Assembly: 15 minutes

### 2. *Label every component in every view and put your exam number on each one.*

(No harm to colour your exploded pictorial too.)

### 3. *Be organised, tidy and consistent*

- Lay your components out on the desk similar to how they will be assembled before marking.
- Stick to your layout all the way through now.
- When you finishing marking/ processing a piece, leave it back in its original position. This will help you visualize where different joints go etc.
- Use a different labelling system for your joints like 1A, don't use the same labels as what you have written on individual pieces.

### 4. *Follow the table below:*

| <u>Marking out</u>              | <u>Processing</u>   | <u>Assembly</u>  |
|---------------------------------|---|--|
| Work from right to left         | A good rule of thumb is to start with the piece with the most joints and the most difficult joint been the first. | No glue/adhesive can be used in the assembly   |
| Establish Face side & Face edge | If you have dovetails use the pins to mark the tails  | If your joints are tight don't force them, pare required areas to fit snug but still with appropriate tightness. |



|  |   |   |
|--|---|---|
| Mark overall length of the piece                       | Try to keep your pieces as long as possible for as long as you can. Small lengths of wood are hard to process.  | After you have neatly assembled your pieces then remove waste wood carefully. |
| Mark in joint position i.e. how far in the mortise is. | If you have 10 minutes left and <b>you won't get it finished</b> . Shape the components specified in the working drawings. There can be up to 20 marks for this. A lot of marks for 10 minutes' work. |   |
| Mark in joint detail i.e. the mortise.                 |   |   |
| Mark in waste.   |   |   |





*Best of Luck!*  
I'm sure you'll do great.

