CONNECT2COLLEGE

CONSTRUCTION

PRE-ENROLMENT RESOURCE PACK

Plastering

Ofsted Good Provider

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No.1 COLLEGE IN GREATER MANCHESTER

L1 Diploma in plastering: What is it all about?

The level one Diploma in plastering is a great way to get started in the construction trades. If you want a worthwhile, satisfying career, then plastering is the trade for you.

It is an ideal course that will enable you develop and progress at your own pace. With enthusiasm, commitment and determination you can achieve so much.

Here is a list of what you will learn:

- The history of plastering, Health and safety, P.P.E.
- Good working practices, background preparation,plasterer's tools and equipment
- Setting up working and mixing areas and tool manipulation
- Applying two coat render and two coat lightweight plaster work.
- Fixing plasterboards and EML
- Relevant calculations and formulas every plasterer needs to know
- The principles of building

You Tube videos:

How to hard plaster a brick Wall - DIY At Bunnings - 3:37min (floating)

https://youto.be/bCf-xtUd9LK

Tommy's Trade Secrets - How to plasterboard A Stud Wall - 5:45min (boarding)

https://youto.be/ARKaOCKqxM

How to plaster a wall with Wickes - 4:49 (skimming) https://youto.be/6155_YC1T0g

Why do you want to do Plastering?

Why do you want to do plastering?

1. How long do you think Gypsum (Plaster) has been around?

2. Who do you think were the first recognised people to have used Gypsum?

3. Can you think of any differences that are used today as regards to 4,000 years ago?

Please watch the video (Archive film on boarding, floating with sand and Gypsum plaster and finish with lime) https://youtu.be/-1CACkgUJcU

1. From the video can you tell me what you may think we do differently today when boarding?

2. Why was the aluminium foil on the back of the boards in the 1950s?

3. Today a vast majority of internal plasterwork is board and skim or tapped (dry-lining) but as then and now what is the benefit of direct bond (board and skim)?

4. On the second part of the film where the plasterer is applying a sand, Gypsum cement plaster mix, would we use the same tools even though this film is over 70 years old?

5. A modern aggregate was mentioned in the video, this was perlite and vermiculite do you think we would use these aggregates today?

6. The finish coat used in the film was lime putty would we still use lime putty today?

7. The process he was using was, the application of two coats of lime putty or skim/finish plaster material (roughing on and then laying down) he then did what?

If you watch the next film which is only 2 minutes long, this film is a modern day plasterer skimming a wall.

https://www.youtube.com/watch?v=xbjrivVEAFY

1. Where did the plasterer start to apply plaster?

2. He was using something to stand on to reach the top of the wall, do you think that was safe?

3. He was using a mechanical mixer to mix his plaster, it was plugged into a wall socket, is this correct or safe?

From the film clips - one from over 70 years ago and one recent - you can see that yes plastering materials may change, improve and even in some instances make them easier to use but from the Egyptians to today the method of application is very similar.

This is one example of an ancient plastering tool that can be seen at the Manchester Museum. The wooden float pictured below was excavated from the pyramid of King Senwosret dating back to 1880–1874BC. That's 3,887 years old!

This is one from today, Can you see the similarity between ancient and modern plastering tools?

You will never be out of work if you work hard, embrace the skill that only through practice and effort you can learn unlike reading an instruction from a text!

Plasterer's Tool Kit

Task: Below is a list of tools found in a plasterer's tool kit. Using the internet price up the cost of **each item**. Once you have a price for each item, add up the **total cost** of all the items. What is the cheapest price you can get all the equipment for? You might near to compare prices from different sites.

1. Finishing trowel (Marshall town 14 inch) = £
2. Hawk/hand board = £
3. Gauging trowel = £
4. Bucket trowel = £
5. Plastic/polyurethane float = £
6. Darby = £
7. Tape measure (3m) = £
8. Spirit level = £
9. 14 litre bucket = £
10. 42 litre Gorilla/flexi bucket =£
11. Mixing drill / whisk = £
12. **Grand Total = £**

Prepare background surfaces and mix plastering materials

Information

Suction

Suction: is a term that describes how the backgrounds react with the plaster material when applied.

For example, Thermalite blocks are **high** suction. This means that if untreated they will suck the water out of the plaster, thus making it difficult to apply**.**

Smooth concrete is **low** suction. This means that it will not suck the water out of plaster that is applied. It is important to control suction – or use an appropriate plaster in order to combat the suction – otherwise your plasterwork may fail.

What can happen? Bond failure, cracking, crazing and also reduce the strength of the material.

Background surfaces

Common breeze block: This is the most commonly plastered block surface in new build properties medium to high suction.

Concrete block: low suction.

Common red brick: Sometimes used in the construction of interior walls-Medium suction

Stone: Irregular stone can usually be found in older properties and generally requires specialist sand and lime plastering. Low/medium or high suction may occur all in one wall due to type of stone used.

Thermalite block: Frequently used block; distinctive wavy lines on face; very light and can be cut by a saw-High suction

Engineering brick: Not generally used in internal wall construction; used mainly at below DPC level, ie cellars-Low suction

Dense breeze block: Very heavy breeze block (compacted)-Low suction

No-fines block - A very heavy block that has no fines added to the mix (sand) but just large aggregate and cement-Low suction

Smooth concrete: Can be pre-cast and fixed on site or shuttered. If poured on site; (shuttered) it is called 'constructed in situ'-Low suction

Textured coating: WARNING! MAY CONTAIN ASBESTOS! Textured coatings may be re-skimmed. If the pattern is deep floated, use a backing plaster before skimming-Low suction.

Composite background: A composite background for plastering is a wall that has **more than one material** in it; this could include: red brick/breeze block, stone/Thermalite block, etc.

Old plastered wall: Old finish plaster on walls may deteriorate over the years due to decorating, hanging pictures, poor patching, etc. As long as the plaster is sound and not hollow, you may re-skim the walls.

Expanded metal lathing: Hi-rib metal lathing sheeted metal lathing systems known as EML (expanded metal lath) fixed to walls/ceilings and plastered-**No suction**

Plasterboard: Comes in various sizes and various types, eg fireboard is fire resistant-Low to medium suction Note: **waterproof/water resistant** plasterboards will need treatment prior to plastering**.**

Timber backgrounds: Stud partitions are classed as a background. New studwork does not need any preparation prior to fixing plasterboard if plumb and set out correctly. Previously plaster boarded stud partitions will need de-nailing and the studwork checking for alignment prior to fixing plasterboard.

Breeze block

Common red brick

Stone

Concrete block

Breeze block

Engineering brick

Textured

Composite

TASK1: Prepare background surfaces and mix plastering materials

1. If one bag of finish plaster covers 10m², how many bags of plaster are required to plaster a room, including walls and ceiling, measuring 3m x 4m with a height of 2m?

    a) 3 bags
    b) 4 bags
    c) 5 bags
    d) 6 bags
    e) 7 bags

2. Area = 25m² length = 5m what is the width =

3. Area = 36m² length = ... Width = 3m

4. If the area is 153m² and the width is 9m calculate (what is) the length =

5. 72m² is available for a playground area in the local park. The length must be 12m because of the nearby houses. How wide must it be =

Task 2:

1 What does suction mean?

2 How does low suction affect materials being applied?

3 How does high suction affect materials being applied?

4 What type of background (brick/block etc.) has the highest suction?

5 What type of background could incorporate various suction properties?

6 What type of block can be cut with a saw?

7 If concrete has been created at the job (shuttered) what is the term used?

8 If a background has a lot of different (a mixture, brick, block or stone) properties within, what is that background called?

9 What backgrounds have no suction?

Task 3:

Draw a line to the correct material and circle the correct type of suction for each.

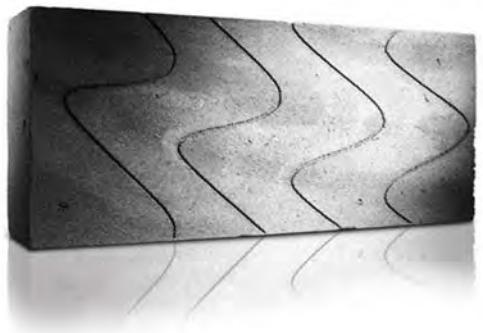
Read handout 3 document for the answers

Red brick Low medium high

Breeze block Low medium high

stone Low medium high

Concrete block Low medium high



Engineering brick

Low medium high

Thermalite block Low medium high