Practical Clay Brick Making

A Basic Guide for Namibian Learners

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Introduction

Brick making is an ancient and useful skill that allows people to build homes, schools, and other structures. In this booklet, you will learn how to make bricks using simple tools and natural materials.

Materials Needed

- Clay or soil with a high clay content
- Water
- Sand
- Straw or dried grass (optional, for added strength)

Tools Needed

- Shovel (for digging and mixing)
- Wooden mold (to shape the bricks)
- Bucket (to carry water)
- Trowel or wooden stick (for smoothing)
- Drying area (a flat, sunny place)

Skills You Will Learn

- Mixing the right amount of materials
- Shaping bricks using molds
- Drying bricks properly
- Understanding the importance of good-quality materials

Safety and practical advise

Remember, **safety comes first** thus wear protective gear where appropriate, be mindful about sharp objects when handling clay and make sure not to over exert yourself whilst making bricks.

✓Use the right soil with enough clay to hold the brick together. ✓ Mix the clay, sand, and water thoroughly to make a strong brick. ✓ Let the bricks dry in the sun for at least 5-7 days before use. ✓ Keep the drying bricks covered if it rains. ✓ Handle the bricks carefully to prevent cracks. ✓

✖ Don't use too much water, or the mixture will be too soft. ✖ Don't dry bricks in the shade; they need sunlight to harden. ✖ Don't rush the drying process; weak bricks will crumble easily. ✖ Don't forget to test a small batch before making many bricks.

Obtaining natural materials for brickmaking

Termite mounds are fascinating structures made primarily of soil, saliva, and plant fibers. While they can be challenging to work with due to their hardness, they also offer valuable materials for

various uses. Here's how to utilize the materials from termite mounds as natural building material to make:

- **Sundried Clay Bricks** by mixing the soil of termite mounds with water and some fibrous material (like grass) to create "adobe" bricks
- **Plaster**: The fine soil can be used as a natural plaster for walls, providing insulation and aesthetic appeal.

NB: By utilizing the materials from termite mounds wisely, you can benefit your building projects while respecting the ecosystem.

Cow dung

Cow dung has been used for centuries in the construction of traditional Homesteads. We can apply this ancient knowledge when mixing Cow dung with Clay to make environmental friendly, natural bricks.

Steps to Make Bricks

1. **Collect the Soil**
   - Dig up clay-rich soil and remove any stones or debris.
2. **Prepare the Mixture**
   - Mix three parts clay with one part sand.
   - Add water slowly and mix until it becomes thick like dough.
   - Optional: Add straw for extra strength.
3. **Shape the Bricks**
   - Place the mixture into a wooden mold.
   - Press it firmly to remove air pockets.
   - Smooth the surface using a trowel or stick.
4. **Remove the Mold**
   - Carefully lift the mold, leaving the brick behind.
   - Repeat the process until you have enough bricks.
5. **Dry the Bricks**
   - Place the bricks in a sunny, open area.
   - Turn them after two days for even drying.
   - Let them dry for at least a week.
6. **Test the Bricks**
   - Tap a dry brick; if it sounds hollow, it is strong.
   - Drop a brick from a small height; if it doesn't break, it is ready.

Conclusion: Now that you know the steps to make bricks, try making your own! Brick making is a fun and useful skill that can help build homes and structures. Keep practicing, and happy brick making!

Memory Quiz: Test your knowledge

1. What is the main ingredient needed for making natural bricks?

- A) Sand
- B) Clay / Dung
- C) Water
- D) Grass

2. Why do we add sand to the mixture?

- A) To make the bricks colorful
- B) To make the bricks harder and prevent cracking
- C) To make the mixture more watery
- D) To make the bricks lighter

3. How long should bricks dry in the sun?

- A) 1-2 days
- B) 5-7 days
- C) 2 weeks
- D) 1 month

4. What happens if too much water is added to the mixture?

- A) The bricks will be too soft and weak
- B) The bricks will dry faster
- C) The bricks will be stronger
- D) The bricks will become waterproof

5. Why should we test a small batch of bricks first?

- A) To check if the mixture is good
- B) To waste materials
- C) To make fewer bricks
- D) To make them colorful
