

HOW TO CONSTRUCT A COOKING STOVE FROM CLAY

Stoves made of clay or metal are better for cooking than a traditional 3 stone fire:

- They use less wood, saving money if firewood is bought, or time if firewood is collected.
- They produce less smoke, protecting the health of those in the kitchen.
- Stoves burn hotter, and will cook food quicker.
- Because stoves use less wood, they help preserve the trees and the environment.
- Often children are injured by fire. A stove reduces such accidents.
- A stove improves hygiene in the kitchen. Pots are easier to clean.



Any clay suitable for making pots should be suitable for making a clay stove. One possible source may be termite or anthill mounds, as often this is fine material dug from deep underground. If necessary crush the clay into dust before adding water.

The above design was first introduced in Uganda in April 2008. The stoves can be constructed using locally available materials, for a cost of maybe \$1 (US). A selling price of \$2 or more allows for creation of a profitable business, and still gives buyers a quick return on investment. A single stove can be constructed in less than one hour, once practice and experience is gained.

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1. Collect moist clay, suitable for making pots.



2. Form the clay into stick shapes.



3. Form a flat base – by rolling or from ‘sticks’.



4. Shape stove body over an existing pot.



5. Increase stove depth by adding further ‘sticks’.



6. Smooth off stove body with a stick and water.



7. Place stove on a supporting bed of leaves.



8. Cut a smooth top, and 3 slots for pot supports.



9. Insert pot supports.



10. Smooth off around pot supports.



11. Smooth off outside of pot supports.



12. Check the pot can now sit inside the stove. There must be a sufficient gap for smoke and flames to escape between the pot and stove. (For an alternative design, place 3 blocks around the top, for larger pots to sit on top of the stove.)



13. Cut 2 holes, and insert handle.



14. Smooth off handle. Repeat for 2nd handle.



15. Cut large hole for firewood. (Note this will leave the stove weak and fragile until dry.)

16. Leave stove to dry for at least 3 days.

17. Harden pot by firing in a kiln, if possible.

18. Consider improvements to next design:

- larger gap between pot and stove.
- extra air holes in base to help fire burn better.
- pot rests on top edge to allow for larger size pots.
- omit the handles, as they aren't necessary.
- strengthen pot supports.
- line with a 50:50 sand:clay mix, for insulation and to prevent cracking.
- (consider more improvements!)

Lots of alternative designs are possible, including:



(Stoves made with poor quality clay will have to be thicker, maybe built-in or fixed in place.)