

# How to make an eco-stove.

## You will need:



Fibre from a palm kernel (In the UK sawdust would do).

An anthill (In the UK clay would do).

Water.

A long, sharp cutting tool.

A tall tin or metal cylinder.

A plastic bag.

## Did you know?

*Coconuts grow all over Sierra Leone so it is very environmentally friendly to use the fibre which would otherwise go to waste.*

*Anthills are made by termites and can be found near bushes around most open spaces in Sierra Leone.*

*This means that the materials for the eco-stove are free which is very important.*

## What to do:

1. First, break up the fibre from the palm kernel so that it is separated into loose pieces.



2. Next, mix the fibre and the anthill together thoroughly using a spade or similar implement.

It might be necessary to add a little water to make the mixture soft and sticky.



3. After that wrap a plastic bag around the tin can so that it can be used again **and easily pulled out**. The tin can will be used as a mould to make the hole in the centre of the stove.



4. Now start to push the fibre and anthill mixture firmly around the mould.

5. From time to time use a wet knife to shape and compact the stove.

6. The stove will be ready when it is approximately the same height as the mould and the shape of a volcano. This shape will help push the heat upwards and make the stove more efficient.



7. Then pull the mould carefully from the middle of the stove! Keep the tin can and plastic bag because they can be used again.



8. Make a fairly large hole **on one side** of the eco-stove using the long, sharp cutting tool. It should be rectangular in shape. The exact size is difficult to specify but it should be less than half the height of the stove and about one eighth of the circumference. If the hole is too large the stove will collapse as it dries, if it is too small the wood won't fit through!





*Top tip: You could use the piece of clay cut from the bottom of the stove to make something interesting or fun!*

9. Next cut three shallow channels in the top of the stove so that smoke can escape when the stove is being used.



10. Finally, leave your stove to dry for about two weeks. When it is dry it will be ready to use anywhere you like!

### How to use the eco-stove



- Put lit firewood into the centre of the stove through the hole in the base.
- Sit the cooking pot on the top of the stove.
- Leave your food to cook!



### Did you know?

*Eco-stoves are much more environmentally friendly to use than the traditional 3 stone open fires because they need much less fuel. The heat from the burning wood is forced up through the central column and directly onto the pot. In the more traditional method the heat radiates in all directions and so more fuel is used.*



*Eco-stove*



*3 stone stove*

*The benefits of eco-stoves include:*

#### Environment

*In Sierra Leone deforestation is becoming a real problem so it is important to find cheap, fuel efficient alternatives to traditional cooking methods.*

*A reduction in deforestation leads to a reduction in soil erosion making the land less productive and increasing the risk of flooding.*

*There is a reduction in CO2 emission because less fuel is used.*

*Less charcoal is required.*

#### Social

*Cooking takes less time*

*Mothers **are healthier (less smoke to inhale during cooking)** and have more time to spend with their children.*

*Children don't have to spend as much time searching for firewood so they get to school on time.*

#### Economic

*Less money is spent on buying wood or charcoal.*

*There is more time for doing work that can generate money.*