



# 2050kids

## The Cookstove Challenge

*Introducing,  
The Climate Rescue Can  
Cookstove*



# The Challenge?

Your challenge is  
to build a biochar-producing  
cookstove using our infographic  
instructions and improve soils  
with biochar!

*Our goal is to create a universal tool for  
building the Climate Rescue Can Cookstove.*



# Climate Change



# Food Security



# Biochar & the Climate Rescue Can Cookstove



# How have you experienced climate change?



# In 2050

The world population could rise to more than **9 billion**.

Climate Change could cut improvements in food availability by approximately  $\frac{1}{3}$

Soil could release **55 billion tons** of CO<sub>2</sub>

# Food Security and Soil

- 95% of our food comes from soil
- One of our greatest threats to food security is degraded soils

What if we could improve soil while helping it retain CO<sub>2</sub>, one of the culprits of climate change?



# Biochar

Biochar is charcoal created by burning biomass. It was first used 2,000 years ago to enrich soils.

By adding it to compost or another 'activating' substance, Biochar:

- Enhances the microbial life of important fungi
- Regenerates soils depleted by agriculture by releasing nutrients to plants
- Holds and helps soil to retain CO<sub>2</sub>





# How is Biochar Made?

- Pyrolysis: burning biomass without oxygen
- How? **Special Cookstoves!**



# The Climate Rescue Can Cookstove

**Addresses climate change and other issues.**

- It's an 'improved' stove that can be made affordably
- It uses less fuel than traditional cookstoves
- It is made out of recycled materials
- It produces little to no smoke
- It makes biochar!



# Traditional Cookstoves

- Around 3 billion people cook on open fires (W.H.O.)
- Exposure to indoor smoke causes up to 4 million premature deaths every year (W.H.O.)
- Deforestation occurs from families gathering wood for fuel
- It's often the most affordable option
- Improved cookstoves, like the Climate Rescue Can Cookstove, are healthier for people and the environment



# Build your Cookstove,

make biochar and sequester carbon!

