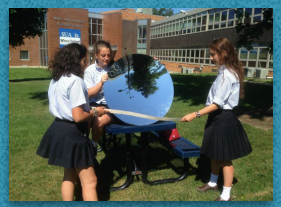
FOCIS
Furthering Ohio's Carbon Initiative for Sequestration

Our Purpose:
To find a cleaner, greener, safer, and cost effective method to sequester atmospheric carbon

Methods



Repurposed Solar Tube

Parabolic Mirror

This did not work

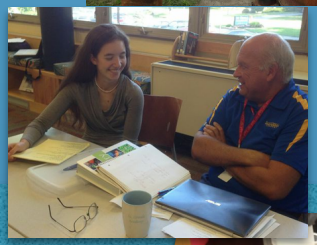
Twigs put into a coffee-thermos-like tube in a low oxygen environment

This worked we found our solution!

We were also able to produce biochar in the winter

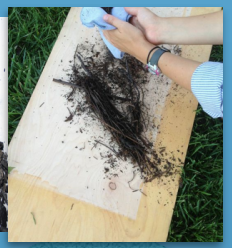
Brainstorming and Research

- Communicating with an inorganic chemist and local graduate student
- Observed biochar production at the University Church Garden.
- Use of various websites
  - biochar-international.org
  - biochar.info.org
  - InnovateToMittigate Library



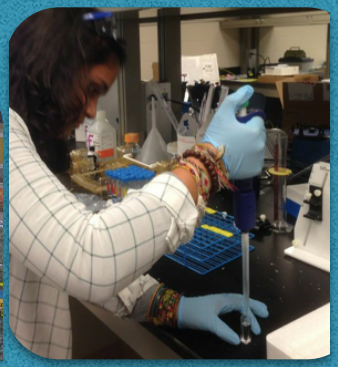
Standard Biochar vs. Our Biochar

Standard Biochar



Our Biochar

Lab Testing



Results

Tests showed slow release phosphate leeching in charred material only.

Conclusion:
We were able to make biochar quickly, cleanly, inexpensively, and safely in amounts useful as a soil additive fertilizer to local landowners while helping reduce atmospheric carbon.

St. Ursula Academy STEM Club, Toledo, Ohio Fall 2014