

# STEM Education for Sustainable Development



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## Biochar and bokashi in education

### HORTICULTURE



Organic farming methods.



Recycled and natural materials.

- Biochar and bokashi promote a circular economy.
- produced in an oxygen-free chemical process
  - ecological fertilizers and improve the soil
  - carbon is stored in the soil for thousands of years.

We

- established test areas in our gardens
- studied b&b effect on plant growth
- guided the children's parents.

### Biochar



Pyrolysis >450°C

### BIOCHAR RESEARCH

- construction of different kilns
- wood moisture
- temperature measurement
- porosity test: comparison of quality
- water storage capacity.

### Bokashi

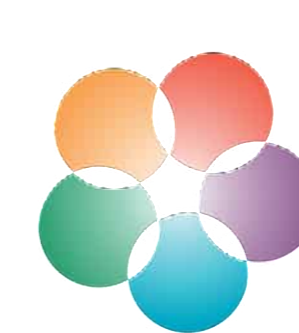
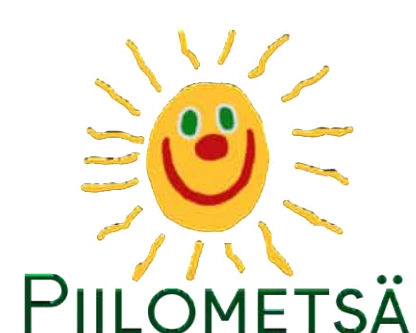
### BOKASHI RESEARCH

- composition of the biowaste
- diy bran with EM microorganisms
- construction of different bokashi bins
- pH measurement.



- Nitrogen
- Phosphorus
- Potassium

We can teach to produce plant nutrients self-sufficiently, with ecological and inexpensive fertilizers.



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