4TH GRADE CURRICULUM
Ending project: Testing and Building Solar Ovens

Lesson I: 4th Grade
What is Energy?
- Brainstorming activities to begin discussion
- Discussing 4 forms of energy: mechanical, thermal, electrical, chemical
- Experiments exploring energy conversion (ex. running in place–mechanical energy into thermal energy)

Lesson 2: 4th Grade
What is Potential Energy?
- Create Energy Matrix Conversion Charts
- Candle burning experiment–discuss potential energy

Lesson 3: 4th Grade
Embodied Energy & Energy Fuel Sources
- Discuss renewable and non-renewable fuel sources
- Fueling our bodies
- Energy Stories Puzzle Pack exercise: different energy sources (natural gas, electricity, wood, solar)

Lesson 4: 4th Grade
Radiant Energy
Solar Energy: A Renewable Energy Source
- Discuss the solar system and the sun as an energy source
- Exercises about absorption and reflection
- Introduce solar ovens: a brief history, different styles, where and why are they used

Lesson 5: 4th Grade
Maria Telkes: Mini-book
- 10 lesson mini history exercise about Maria Telkes and the history of solar cooking

Lesson 6: 4th Grade
Cooking Internationally with Solar Ovens
3 Solar Oven Projects
- Kenya: building solar ovens with Kenyan communities
- India: a government sponsored program
- Haiti: local volunteers work in Haiti building solar ovens and teaching classes

Lesson 7: 4th Grade
Solar Oven Experiments
- Measuring inside temperature of solar ovens with IR thermometers
- Heat water using a solar ovens
- Graph and chart data

Lesson 8: 4th Grade

Building Solar Ovens

- Working in small groups, build 2 different Minimal Solar Cookers

Lesson 9: 4th Grade

Building Solar Ovens

- Continue building the Minimal Solar Cookers

Lesson 10: 4th Grade

Cooking with the Solar Ovens

- Cook different foods (beans, rice, bread, stews) in the solar ovens