Topic	Different Forms of Energy	Lesson 5
Objective	Students will investigate and observe solar, thermal, mechanical and sound energies using a green house model and will demonstrate their understanding by writing about how various forms of energy can be used or generated.	
Essential Question	What are some different forms of energy that we can observe?	
State Standards	**4.1a** The Sun is a major source of energy for Earth. Other sources of energy include nuclear and geothermal energy. **4.1b** Fossil fuels contain stored solar energy and are considered nonrenewable resources. They are a major source of energy in the United States. Solar energy, wind, moving water, and biomass are some examples of renewable energy resources. **4.1d** Different forms of energy include heat, light, electrical, mechanical, sound, nuclear, and chemical. Energy is transformed in many ways. **4.5a** Energy cannot be created or destroyed, but only changed from one form into another. Page 30-31	
Related Standards	ELA Standard 1 Students will read, write, listen, and speak for information and understanding. ELA Standard 3 Students will read, write, listen, and speak for critical analysis and evaluation.	

Components:

Hands On	Students construct a greenhouse solar tower. The air underneath a clear plastic bag is warmed by the sun (heat lamp) and acts as a greenhouse. The black plastic bag, set up "inside" the greenhouse is to maximize energy absorbed. As the air heats, it rises out of the black Pringles© chimney. While exiting the chimney the rising air turns a small turbine inside.
Discovery	Students will start with the sound they hear (sound energy) and write a brief paragraph about where else that energy is used/generated. They will then work backwards to the solar energy, writing a paragraph about each type of energy they encounter. (*ie. Why do we hear the sound, blades spinning = mechanical energy. Why do blades spin? Moving air = wind energy. Why is air moving? Heat = thermal energy. Why is air hot? Sun = solar energy.)*
Real World Application	
Results/Assessment	
Enrichment or Further Development	Click here for a "Who Wants To Be A Millionaire"™ style online game entitled Kinetic vs. Potential Millionaire Game.

POPS	