**Energy Experiment Stations**

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| **Geothermal**  [www.need.org](http://www.need.org) Sources of Energy Kit  (station 2) chemical reaction part 1 baking soda and vinegar  Energy Transformations:  Mixing baking soda and vinegar absorbed thermal energy. The bag foamed showing gas bubbles forming. A temperature change and new gas tell us that a chemical reaction occurred.  **Thermal ---Chemical** | **Solar**  [www.need.org](http://www.need.org) Sources of Energy Kit  (station 3) solar panel with pv cells, motor, wires and fan  Energy Transformations:  When sunlight shines on the solar panel, it makes the post spin.  **Radiant---Thermal---Kinetic---Motion---Sound** | **Biomass**  [www.need.org](http://www.need.org) Sources of Energy Kit  (station 5) apple battery: zinc nails, tin and copper wires, DC microammeter, apple, alligator clips  Energy Transformations:  The chemical energy in the apple is converted to electrical energy.  **Chemical---Electrical** |
| **Wind**  Thames & Kosmos Wind Power 2.0 experiment kit  Energy Transformations:  When the wind blows, it pushes against the blades of the wind turbines. The blades spin around They turn a generator to make electricity.  **Motion---Electrical** | **Water (Hydro) - Waterwheel**  Thames & Kosmos Hydropower experiment kit  Energy Transformations:  The kinetic energy created by the moving water changes to mechanical energy as it turns the wheel, which also makes sound and electricity.  **Kinetic---Mechanical---Sound---Electrical** | **Tidal – bucket & pinwheel experiment**  <http://www.sciencebuddies.org/science-fair-projects/project_ideas/Energy_p028.shtml#procedure>  Energy Transformations: The Tidal power is gravitational energy. It turns into potential energy as the water sits in the reservoir. This converts to kinetic energy in the turbine which is then transformed into electricity.  **Gravitational---Potential---Kinetic---Electrical** |