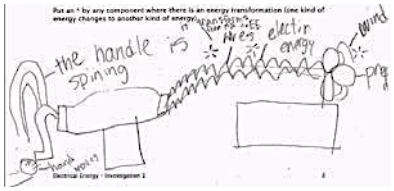
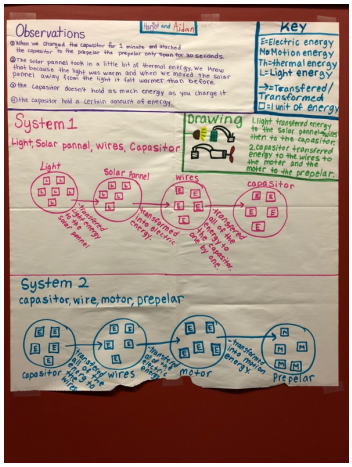
Sequence of Electrical Energy Unit Activities

Activity	Learning Targets Introduced	Representations	Image of Activity
1. What is the flow of energy when the propeller spins?			
Hand-cranked generator and motor with propeller	• The presence of electrical energy can be inferred by its transformation into another form. • Motion energy can be transformed into electrical energy by a generator. • Electrical energy can be transferred between objects through wires. • Electrical energy can be transformed into motion energy by a motor.	Student drawings, Energy cubes	
2. What if there's no wind? Can we store energy?			
Storing energy in a capacitor Quick Check	• Electrical energy can be stored in a capacitor.	Energy cubes	
3a. Solar Panels: Where does the energy come from and where does the energy go?			
Driving the propeller using a solar cell	• Energy carried by light can be transformed into electrical energy by a solar panel.	Student sketches, Energy cubes	 
3b. Solar Panels: Where does the energy come from and where does the energy go?			
Driving the propeller using a solar cell Wrap Up Probe	• Drawings and representations help students reason about energy flow and transformation in a scenario.	Student posters	

Focus on Energy: Preparing Elementary Teachers to Meet New Science Standards.
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