**Electricity, Heat, and Matter Learner Outcomes**

**[4.PS.1a]** Students will be able to explain how when an object is broken into smaller pieces, when a solid is dissolved in a liquid or when matter changes state (solid, liquid, gas), the total amount of matter remains constant.

**[4.PS.2a]** Students will be able to explain how energy transfers from hot objects to cold objects as heat, resulting in a temperature change.

**[4.PS.2b]** Students will be able to demonstrate how electric circuits require a complete loop of conducting materials through which an electrical energy can be transferred.

**[4.PS.2c]** Students will be able to demonstrate how electrical energy in circuits can be transformed to other forms of energy, including light, heat, sound and motion.

**[4.PS.2d]** Students will be able to analyze how electricity and magnetism are closely related.