Lesson: Teacher DEMO

Unit Question:Why do cell phone batteries sometimes overheat?

NAME: _____

PERIOD: _____ DATE: _____

## Student Activity Sheet

**CONDUCTIVITY**

**1**. Your teacher demonstrated that a potato conducts electricity, but a potato chip does not. Why does this happen?

**2**. What did you observe about the presence of water in the potato and the potato chip? What assumptions can you make about the role of water in this simple electric conductivity exercise?

**3**. What must also be present (besides the previously identified water) in the potato if it conducts electricity?

**4**. Use your answers to Question 1-3 to help you explain what is going on at the **atomic scale** so the potato conducts electricity but the chip does not. You explanation should include:

- The role of water in conductivity and dissolving salts
- Why salts only conduct in certain conditions (express those conditions in terms of electrons and charge?