

### **Checkout Questions**

## **Lab 16. Surface Materials and Temperature Change: How Does the Nature of the Surface Material Covering a Specific Location Affect Heating and Cooling Rates at That Location?**

1. If all objects are in the sunlight for the same time, why do some objects increase in temperature more than others?
2. Using data from your lab, explain how the design of cities contributes to heat islands. Make a recommendation for an urban planner on how to reduce the degree to which a city is a heat island.

# LAB 16

3. An experiment is one possible method for answering a question in science. In an experiment, scientists develop a systematic plan for recording data. They do not manipulate or change any variables in order to answer their questions.
  - a. I agree with this description of an experiment.
  - b. I disagree with this description of an experiment.

Explain your answer, using an example from your investigation about surface materials and temperature change.

4. Theories and laws are both important in science. Theories provide explanations for why phenomena occur, and laws provide descriptions of phenomena.
  - a. I agree with this statement.
  - b. I disagree with this statement.

Explain your answer, using an example from your investigation about surface materials and temperature change.

## Surface Materials and Temperature Change

*How Does the Nature of the Surface Material Covering a Specific Location Affect Heating and Cooling Rates at That Location?*

5. Natural phenomena have causes, and uncovering causal relationships is a major activity of science. Explain what a causal relationship is and why it important to identify causal relationships in science, using an example from your investigation about surface materials and temperature change.
  
6. In science, it is important to understand what factors influence rates of change in a system. Explain why this is so important, using an example from your investigation about surface materials and temperature change.