

Name: _____

Understanding Urban Heat Islands

1. Why would you feel warmer on a hot sunny day wearing a black tee-shirt compared to wearing a white tee-shirt?
2. What affects the temperature in a city?
3. What types of **building materials** found in a city **absorbs** and **reradiates** the greatest amount of heat?
4. What types of **building materials** found in a city **reflects** heat?
5. What is an **urban heat island**?
6. According to the sketch of an urban heat island profile, what types of areas **absorb and release the least** amount of heat?
7. According to the sketch of an urban heat island profile, what types of areas **absorb and release the most** amount of heat?
8. List 3 things that communities can do to **reduce the impacts** of urban heat islands.
9. How can planting trees in a city **reduce** the city's temperature?
10. What is **evapotranspiration**?
11. List 4 ways trees can benefit the environment?

12. What is a **cool roof**? How does a **cool roof** keep material cooler and help reduce the heat island effect?

13. What are **cool paving materials** and how can they **reduce** a city's temperature?

14. Why is using a light-colored paved area for a city plaza a better choice than a dark, colored asphalt paved area?

15. How do porous (or permeable) pavements reduce heat?

16. Imagine you were given 10 million dollars to reduce the heat island effect in your city. What would you do to most effectively **reduce** the city's temperature?