



Article Guide: Heat Islands in the Sun - How urban areas are increasing local temperatures

<http://scienceovereverything.com/2018/05/01/heat-islands-increasing-local-temperatures/>

Part 1: What are heat islands?

Directions:

- Read the section of the article titled “What are heat islands?”
 - Box vocabulary words or words that you have not seen before
 - Underline in the text where the focus questions are addressed
- Answer each focus question

Focus questions

1. How much warmer can cities get in the summer than the rural areas surround them?

2. Why do the buildings and roads in cities make a city warmer?

3. How do trees, plants, and other vegetation help keep temperatures lower?

Part 2: A problem to sweat over

Directions:

- Read each understanding question
 - Think about what you would need to know to answer that question
- Read the section of the article titled “A problem to sweat over”.
 - Box vocabulary words or words that you have not seen before
- Answer each understanding question

Understanding questions

1. Hot days require a lot of energy to keep buildings and people cool. What kind of challenges could this pose to a city or region? How could an increase in energy usage be a problem for individuals?

2. As cities grow in population, they tend to sprawl, taking up more and more land. How would an increase in urban surface area affect a city's heat island? What other problems could arise from urban sprawl?

Part 3: Neanderthals today

Directions:

- Read the section of the article titled "Cool solutions"
 - Box vocabulary words or words that you have not seen before
 - Discuss with a partner how you would address the extension questions.
 - Write a response to the extension questions
3. Infrastructure such as green roofs and green streets can help keep a city cooler but are usually much more expensive to build. Construct an argument convincing your city's leaders to change building codes to incorporate more natural vegetation in new construction projects. Explain the financial and ecological benefits of investing in green infrastructure.
