My NASA Data - Mini Lesson/Activity

Surface and Air Temperatures Throughout the Day

Grade Band

• 6-8

Time

• 30 minutes

Overview

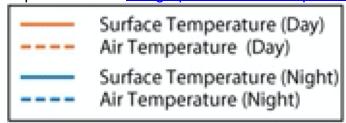
Students will analyze a line graph that shows how the surface temperature and air temperature values change over the course of 24 hours.

Student Directions

In this diagram, surface temperature refers to the temperature of the ground. Air temperature refers to the temperature of the air about two meters above the ground.

Steps

- 1. Review the <u>line graph of surface temperature and air temperature throughout the day</u> and answer the questions below. Check with your instructor on how to submit your answers.
- 2. Describe what the dashed and solid lines represent in the line graph of surface temperature

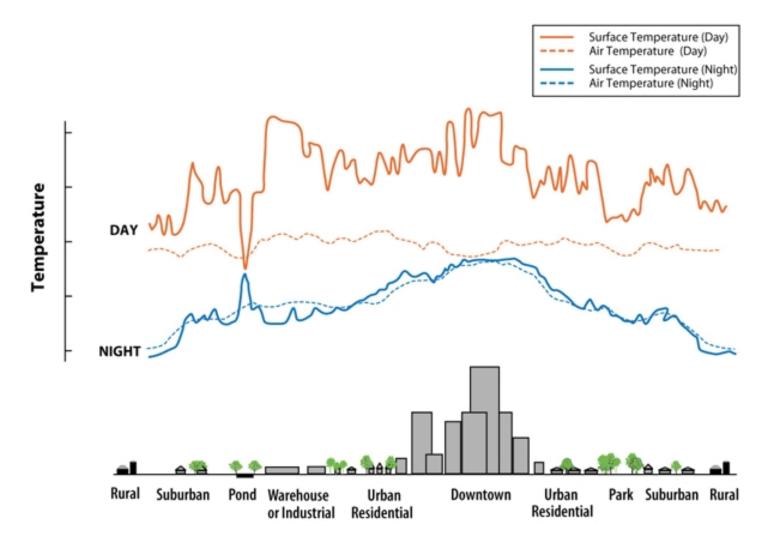


and air temperature throughout the day.

- 3. Describe the X Axis and what it represents.
- 4. Describe the Y Axis and what it represents.
- 5. Analyze the line graphs and answer the following questions.
 - 1. What do you see? Identify any trends and differences you see in the graph. Pay special attention to the trends in surface and air temperature at each time of day as

well as the difference in surface temperature between the day and night.

- 2. Describe the differences between city and rural areas.
- 3. Explain why these differences might occur.



This image displays a line graph showing how surface temperature and air temperature values change over the course of 24 hours.

Credit: EPA

https://mynasadata.larc.nasa.gov/sites/default/files/2019-11/505102main Figure4.JPG

Teacher Note

Teachers, these mini lessons/student activities are perfect "warm up" tasks that can be used as a hook, bell ringer, exit slip, etc. They take less than a class period to complete. Learn more on the "My NASA Data What are Mini Lessons?" page.

Teachers who are interested in receiving the answer key, please complete the <u>Teacher Key Request</u> and <u>Verification Form</u>. We verify that requestors are teachers prior to sending access to the answer keys as we've had many students try to pass as teachers to gain access.

NGSS Three Dimensional Learning

NGSS Disciplinary Core Ideas

• ESS2A: Earth Materials and Systems

Crosscutting Concepts

- Cause and Effect
- Scale, Proportion, and Quantity

Science and Engineering Practices

• Analyzing and Interpreting Data