

My NASA Data - Mini Lesson/Activity

Analyzing Surface Temperature Differences



Student Directions



[Direct sunlight can heat surfaces well above air temperature](https://mydas.nasa.gov/air_surface_temperature_text%20%281%29.jpg)

Credit: NASA Earth Observatory photographed by Robert Simmon

[https://mydas.nasa.gov/sites/default/files/inline-images/air_surface_temperature_text%20%281%29.jpg](https://mydas.nasa.gov/air_surface_temperature_text%20%281%29.jpg)

Steps:

1. Observe the image above and answer the following questions. Check with your instructor on how to submit answers.
2. What time of year do you predict this to be? Explain your evidence.
3. What is the temperature of the air?
4. How do the temperatures of the grass measured in sunlight differ from grass in the shade?
5. What is the temperature difference between sunlit concrete and shaded concrete? What does this difference in temperature tell you about how surfaces are heated?
6. Based on what you have seen in this image, which type of area do you think is warmer, urban areas (cities and towns) or rural areas (countryside)? Why?

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 [Teacher Key Request and Verification Form](#). 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.

My NASA Data Visualization Tool

- [Earth System Data Explorer](#)