

TITLE: Graphing Temperature

OVERVIEW: Temperature changes during the day and impacts how we choose to dress. Students will generate graphs of the temperature changes that occur during a school day.

CONNECTIONS TO THE CURRICULUM: Math and Science

STANDARDS: Program of Studies: MA-P-DAP-SES3 Students will use tools (including technology when appropriate) to organize and display student collected data. Core Content: MA-EP-4.1.3 Students will organize and display data.

GEOGRAPHIC SKILLS: Choose the skills that pertain most to your lesson:
Acquiring Geographic Information
Organizing Geographic Information

TIME: 45 minutes over a two day period

MATERIALS REQUIRED: Mesonet live data, chart paper, and Microsoft Excel

OBJECTIVES: The students will observe temperature changes that occur during the day. The students will generate line graphs. The students will explain the information on their graphs.

SUGGESTED PROCEDURE:

Opening: Ask, "How are we dressed in the morning when you come to school? How are we dressed in the afternoon for wellness? Why aren't we dressed the same? What changes have occurred outside and why? What tool do we use to measure temperature? Today we will be writing down the temperature during four different times during the day. "(Show students how to write the symbol for degrees and F for Fahrenheit.) Say, "Today we will be using our computer to check the weather on our computer using Mesonet live data as our temperature source."

Strategies/Activities: Use Mesonet live data to collect temperature every 2 hours beginning at 8:00 a.m. – 2:00 p.m. Record the temperature each time on a sheet of posted chart paper. The next day students will generate their own graphs using the data they have collected. Post the chart paper and discuss how to locate Microsoft Excel on their computers. Provide assistance to students to each step on the computer.

Closing: Today we have graphed the temperatures that we collected yesterday. What tool did we use to measure temperature? How do we write temperature? Who can write our lowest temperature? Who can write our highest temperature? What caused the temperature change during the day? What can we observe from our graph?

SUGGESTED STUDENT ASSESSMENT: Students will be assessed by the correct responses that they give during our class discussions. Students will be assessed by the correct responses they give about the information on their graphs.

EXTENDING THE LESSON: Students will predict the changes that will occur to the temperature as there is less daylight and night approaches. Students will make predictions about the cycle that occurs with temperature each day. Students will discuss factors that could change the temperature pattern that we have observed and graphed.

ADAPTIONS:

Challenged Learner: Provide assistance and guidance during the graphing process. Make sure the student understands the information on his or her graph.

Challenging Learner: Have the student write the temperature on the chart using the correct use of symbols for degrees and Fahrenheit. Use the student as an official time keeper to make sure that the temperature is checked and recorded every 2 hours.

RELATED LINKS:

- [Kentucky Mesonet Website](#)
- [National Weather Service Website](#)

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