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Sinagua High School

School-Met 2002-2003

Weather Prediction: Why Aren't Those Guys Right ALL The Time?

OBJECTIVES:

Students will:

1. Collect and post accurate data daily from the weather station.
2. Compile data in a table format over time.
3. Identify, analyze & discuss trends and patterns in weather data.
4. Predict an outcome (forecast the weather) based on the data.
5. Research weather information on the Internet

ARIZONA STATE EARTH SCIENCE STANDARDS: 6SC-P6, PO4 & PO5; 6SC-P7, PO2

MATERIALS:

1. School weather station & computer (provided by school)

LAB A

2. Tracking Weather Table
3. Pencil
4. White board & Pen

LAB B

2. Weather Table: Forecast and Actual Sheet

PROCEEDURE: Lab timeline 2-4 weeks

Lab A

Students will take turns on a daily basis recording the data supplied by our weather station on a white board in front of the class. Each student will then record this data on his or her individual **Tracking Weather Table.** Over a three week period students will periodically have a chance to discuss in class what the data suggests to them concerning trends or patterns in weather data.

Lab B

After this three-week time interval students will have a chance to apply their knowledge in forecasting the weather. For the 5 day school week students will enter the actual data from the weather station on their **Weather Table; Forecast and Actual Sheet,** on Friday students will forecast the weather based on the trends they see in the week's data. The students can then discuss their findings on Monday. Is it easy to forecast what will happen in the future based on what you know currently?

1. Have students check on the Internet *NOAA weather sites in the surrounding areas to see if data from those other areas will help them with their forecast. As an example: for Flagstaff, AZ students would check Las Vegas, NV/ Albuquerque, NM/ Los Angeles, CA & Phoenix, AZ.

2. In the city of Flagstaff, AZ we have several microclimates. Will data from other schools in town bear out this fact? This can likewise be applied to other areas of the country e.g. the Great Lakes, Denver CO heading east from the Front Range and in Alaska moving inland from the coast.

   - For Flagstaff, AZ http://www.wrh.noaa.gov/Flagstaff
     For the whole US http://www.nws.noaa.gov/