

WEATHER AND CLIMATE: WHAT'S THE DIFFERENCE?

PROCEDURE FOR MEASURING DAILY TEMPERATURE

NAME: _____ DATE: _____

Instructions:

1. Go outside and find a place away from the school building, preferably in the shade.
2. Wait two to three minutes to allow the thermometer to adjust to the outside temperature.
3. While standing, hold the thermometer at eye level.
4. Take a reading.
5. To confirm your observation, take two more readings after an interval of one to two minutes.
6. Record your final reading in the "Daily Weather Data" worksheet.

Things to remember:

1. Take the reading in a shaded area, away from direct sunlight.
2. Make sure the thermometer is not on the ground.
3. Make sure your fingers are not touching the bulb of the thermometer.
4. If it is raining or snowing, be sure to take a reading under an umbrella!

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WEATHER VS. CLIMATE SUMMARY

Temperature unit: _____°F or _____°C

		Weather data (recorded by class)		Climate data (daily averages from Weather.com)		
Date	Time	Temperature	Average high temperature	Average low temperature	Mean temperature	
Week 1						
Week 2						
Week 3						
Week 4						

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Daily Weather Data

Name: _____

Date: _____

Time: _____

The temperature is:

 °C °F

Unit conversion:

$$^{\circ}\text{F} = ^{\circ}\text{C} \times (9/5) + 32$$

$$^{\circ}\text{C} = (^{\circ}\text{F} - 32) \times (5/9)$$

Cloudiness (Circle one)

No clouds



Clear (clouds in less than 10%)



Isolated clouds (10-25% of sky covered)



Scattered clouds (25-50% of sky covered)



Broken clouds (50-90% of sky covered)



No blue sky showing (100% of sky covered)



Precipitation (Check one)

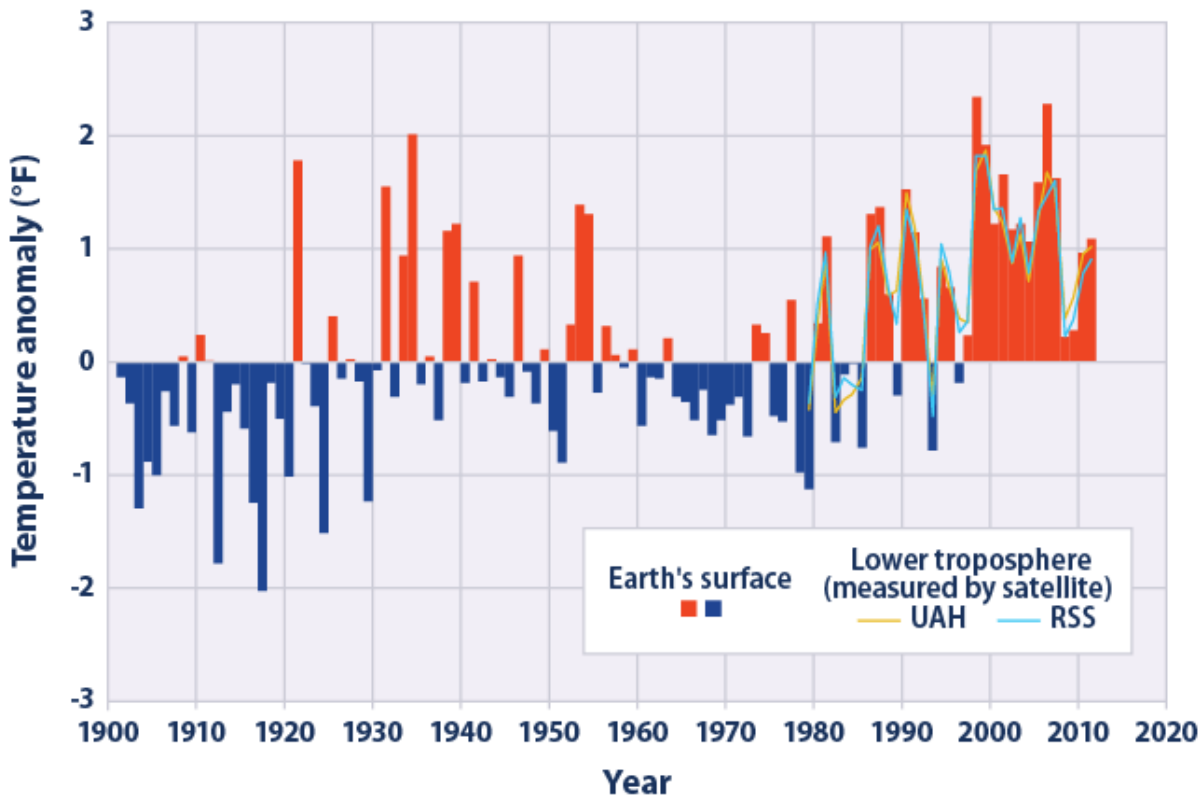
- Heavy rain
- Light rain
- Light snow falling
- Heavy snow falling
- Hail
- Other _____

Wind (Check one)

- Completely calm
- Light breeze (wind felt on face, leaves rustle)
- Moderate breeze (flags flap a little, small branches and leaves move)
- Strong breeze (wind whistles, umbrellas turn inside out, bushes sway)
- Gale (it's difficult to walk in the wind, tree twigs breaking)

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Temperatures in the Contiguous 48 States, 1901 to 2011



Climate is the average of daily weather data such as temperature and precipitation collected over a long period of time. This figure shows how average temperatures in the contiguous 48 states have changed since 1901. Surface data come from land-based weather stations, while satellite measurements cover the lower troposphere, which is the lowest level of the Earth's atmosphere. "UAH" (yellow line) and "RSS" (blue line) represent two different methods of analyzing the original satellite measurements. This graph uses the 1901 to 2000 average as a baseline for depicting change. Choosing a different baseline period would not change the shape of the trend.

Data source: U.S. EPA, *Climate Change Indicators in the United States*.

<http://www.epa.gov/climatechange/science/indicators/>.