

Name: _____

Lab 1. Weather Data

There are many observation stations worldwide recording frequent measurements of many weather variables. In this lab, you will practice accessing and visualizing meteorological data so that you can understand current local and regional conditions and how they evolve with time.

Data sources

If you make a web search for weather information, you will get many hits. Here you'll explore what is available in several different outlets.

Penguin Station

(2 points)

You can access the Penguin Station on the web at <https://ambientweather.net/dashboard/ad35a4845a7dd868dc3361b34903cdd4>. Even better, there is a console in class that reads its output directly.

The default display is "tiles." Tell me what quantities are displayed, and what units they are displayed in.

On the web, you can also select "Charts & Graphs." What is displayed on this page?

Do you have any control over what is displayed?

National Weather Service

(5 points)

Google National Weather Service, or just go to weather.gov. Input a location into the Search window. (Begin with "Limestone, ME.") The page should display current conditions and a five-day forecast.

What current conditions are reported?

Look for hourly forecast. What weather variables does this forecast?

What is the display format for the hourly forecast?

How far ahead is the hourly forecast?

How far ahead can you display?

Click on “3 Day History.” What weather variables does this show?

What is the display format for the 3 Day History?

University of Wyoming Weather Web

(5 points)

Access this at <https://weather.uwyo.edu/>. Select “Surface Observations,” and “Global Surface Operations.” To start, select “Northeast United States.” The dots on the map are observation stations—there are *five* stations in the County! Identify the Caribou station by hovering over it, and then click to select. Note that you can get different displays by selecting from the menus above the display.

Caribou Station

What is the default display? Is it easy to interpret?

Display a “GIF Meteogram.” What variables does it show, and what is the format?

The GIF Meteogram display has a link to a guide on how to read the display.

Other Station

Find a station on another continent and read its output.

Where is the station?

Tell me about the current and recent weather there.

Weather Underground

(1 point)

Search for Limestone. Find the conditions reported there.

What weather variables are displayed?

What is the display format?

Find what you can about the local observation station. Where is it?

Accuweather

(1 point)

What information can you find from Accuweather?

Something else

(1 point)

Google search another weather site. Explore it.

What is the site?

What information does it display?

What do you think?

(4 points) Which of the sources you accessed today would you prefer to learn the local values of the following quantities?

Temperature?

Humidity?

Wind speed and direction?

Recent trends in weather variables?

Weather at exotic locations?

Cloud cover?

Precipitation?

(1 point) Which of the sites would you prefer to find a weather forecast?

(1 point) Which of the sites would you prefer to find analysis and interpretation of the data?

(4 points) Compare and contrast the National Weather Service and University of Wyoming Weather Web sites that you explored today. Tell me advantages and disadvantages of the displays and products of each site.