

Weather Journal Instructions

Lab: *Weather & Climate Change* | Weather Journal

Create an Electronic Weather Journal

This week and next you will apply what you have learned so far about weather toward keeping an electronic weather journal. Start with the following software tools:

1. **Microsoft Word**, to record your observations. You may already own this program, however, if you do not, you can use an online version for free.

Go to www.office.live.com, click on the blue Word Online icon, and create an account with a username and password (or have your parent do so). Once you have signed in, you can open a new blank document. This document will be saved in an online storage system called OneDrive, and you can access it online any time you sign in.
2. **A program that allows you to take screenshots.** If you use a Windows machine, your computer should already have a program called “Snipping Tool”.

☞ On a Windows 7 computer, you can find it under Start > All Programs > Accessories.

🔍 In Windows 8, go to the Start menu, click the arrow at the bottom of the screen to view Installed Apps, and Snipping Tool will be under the Windows Accessories heading.

🍏 If you use a Mac, you can download the “Snip” program from the App Store for free.

Both of these simple programs allow you to take and save screenshots, and draw on the screenshot with your mouse.

How to Begin Your Journal

1. Open a new Word document, and insert a title at the top, such as “My Weather Journal.”
2. Then write “Day 1” and today’s date.
3. Create the following headers in your Journal:
 - Morning
 - My Prediction for Today
 - Current Conditions
 - The Forecast
 - Evening
 - Recorded Conditions
4. For this project, you will collect a lot of information

from websites. Did you write these websites? Did you draw the pictures on them? Most likely not! Therefore, as with all research, you need to give credit where credit is due. We won’t ask you to include formal citations according to a particular documentation style this time, but you can easily insert a footnote and paste in a URL (web address) to show where you found an image or stats for a forecast. Please include footnotes for the following types of information:

Statistics and other facts you didn’t observe from a thermometer or other weather measuring apparatus yourself

Borrowed images

For more information—including instructions for how to insert a footnote, see the “Give Credit!” section at the end of these instructions.

Record Entries in Your Journal

5. You will record observations twice a day for the next two weeks: once in the morning and once in the evening. In the morning, go outside and make some **general observations** about the weather.

Describe the sky: is it clear or cloudy? What type of clouds do you see? Is there any precipitation? Is it windy? What is the temperature? What other weather do you experience? Type out these observations in your Weather Journal, under the “Morning” section.

See page 39 in *Weather & Climate Change* to help you identify the clouds.
6. Next, make a **prediction** about the day’s weather based on what you observe. Look for and identify the clouds you see, and use your book or the educational websites below to predict the weather. For example, if you see a few high, wispy cirrus clouds, the day will likely bring clear weather. Puffy altocumulus clouds may indicate that you can expect afternoon rain. Here are some websites that can help you make predictions:

[Predict weather help: Site 1](#)

[Predict weather help: Site 2](#)

7. Search for some weather data about the **current conditions** online. Here are some sites we recommend:
 - Weatherbug: weather.weatherbug.com
 - The Weather Channel: www.weather.com
 - AccuWeather: www.accuweather.com
 - Weather Underground: www.wunderground.com

Weather Journal Instructions

Enter your city/state or zip code into the location search bar on one of these websites, and find the current conditions for your area (**but try not to look at the forecast yet!**).

Record the following information for your journal's forecast. Don't forget to add footnote citations:

wind speed

humidity level

temperature (if you don't have an outdoor thermometer at your house)

look for information about the **average temperatures** in your area during this time of year, and for record highs and lows

- Look on the weather website for a forecast map which shows the different fronts moving over your area. (If you don't find them easily on one site, try another.) Study the picture, and then **recreate your own weather front map** for your journal: take a screenshot of a blank map and then draw the fronts on it in your screenshot tool. When you're finished, paste your version of the map into your journal.¹
- Now, record the day's forecast from your weather website. Don't forget to cite where you found the information.
- Add some pictures to your journal to give it some visual appeal, either by taking screenshots or by copying and pasting pictures from the weather website. You can add images in several ways:
 - You can include images from the weather forecast site by right-clicking the image, and then clicking "Copy Image" from the drop-down menu. (If your mouse doesn't have a right-click button, you can right-click by pressing "control" on your keyboard as you click.) Paste the image into your document by clicking the "Paste" button in the top left of your word document, or insert your cursor where you'd like to paste the image, hold down "control" [ctrl] and then press letter V on the keyboard.
 - You can also search for other pictures that relate to today's weather (sunshine? clouds with raindrops for an afternoon shower?) to use in your journal too. Simply take a screenshot, save it, and insert the picture into your document.

- On a PC:** Open your snipping tool. It will direct you to drag your cursor around the area on your screen you want to save. Once you have captured the image, you can draw or write on this picture directly in the snipping tool. Click the pen tool and use your mouse to draw. Click the tiny arrow next to the pen to change the color. Use this tool to draw the red and blue front lines on a weather map. You can then save this image to your computer.

- On a Mac:** Open your Snip tool. When you first open this program, it will pop up a window asking you where you want to save files, either to your Pictures folder or your Downloads folder. Each subsequent time you use Snip, it won't open a large window or other screen on the front of your desktop; instead it adds a little scissors icon to the top right of your screen, near the date and time and WiFi symbols. Each time you want to take a screenshot, click the scissors, and select "Capture" from the drop-down menu. The full screen will become darker and your cursor will become a + sign. Drag your cursor around the area you want to save. Next, you can draw in different colors on the picture by clicking the marker icon. You can also type on the picture, or add shapes using the other icons next to the marker. Snip will automatically save this picture for you in whichever folder you selected the first time you used it.

- To insert a saved image in your document, click the "insert" tab in the top left of your word document. Click the picture icon. In the window that pops up, choose a picture you've saved to your computer.
- You can also take your own pictures of the sky, load them onto your computer, and insert them into your document.

- In the **evening**, go outside and once again make some observations, similar to those you made in the morning. Record them in your journal.
- Next, research some statistics about the weather today and list them under the Recorded Conditions header. You can use the weather websites to also look up weather data from the past.

www.weather.com has a "monthly" tab that will allow you to see observed information as opposed to forecasted information.

1. For a school project, it's okay to borrow images from other people's websites, but it is best to tell your readers where you found the content you included if you didn't draw the map or snap a photo yourself. For this project, simply add footnotes that provide the URL of the websites where you found images next to each image. For more information about how to insert a footnote see the "Give Credit!" section of these instructions.

Weather Journal Instructions

Weather Underground (www.wunderground.com) has a link to Historical Weather that you can access from the drop down list found under the “More” tab on the home page.

These sites will help you find the recorded high temperature for the day, etc. List the following information in your journal:

wind speed

average humidity

Today’s high temperature

Today’s low temperature

total precipitation

13. Finally, compare the recorded data to the forecast data and write a sentence or two about the **accuracy** of the forecast. Were the forecast highs accurate? Did you get a surprise shower? Did the temperature rise more than predicted? Or was the day cooler than expected?

Continue Your Journal...

Make observations twice each day for the next two weeks. You can copy the headers from Day 1, paste them under a new Day 2 header and then delete the rest of the data to help you remember what to record each day.

You will have some “touch-base” questions to answer in your Activity Sheets on your regular lab day next week, so be sure to look for those on Day 4. And, at the end of the second week, you will need to complete the wrap-up assignment, also included in your Activity Sheets.

See the final page in this instruction file for a sample weather journal entry page.

Give Credit!

Once you’ve added forecast information or an image from a website, add a footnote to show your readers where you found it. Do it as the very next step, right after you paste the or fact, so you don’t forget where you found each piece of information. Here’s how to do it quickly so you don’t lose your train of thought.

1. Paste the image into your document.
2. Leave your cursor next to the image and go to:
(For Word Online) Insert > Insert Footnote
(For Word on your local machine) References > Insert Footnote
3. Go back to your browser and copy the URL from the address bar at the top.
4. Return to your document and paste the URL into the footnote.
5. To help your readers know how long ago you accessed the website, you can add a short sentence that simply says “Accessed...” followed by the date you accessed the site.
6. To simplify the citations, you can cite all of the decorative images you add once, as long as you gather them from the same site consistently. To do so, you could add a footnote near the first one and simply say in the footnote “All weather-related illustrations were found here: [url].”

My Weather Journal

Day 1: July 17

Morning:

Time: 9:15 a.m.

General Observations:

Sunny, clear blue skies, no clouds.

My Prediction for Today:

Warm and sunny



Current Conditions:¹

Wind: 9 mph, SSE

Humidity: 46%

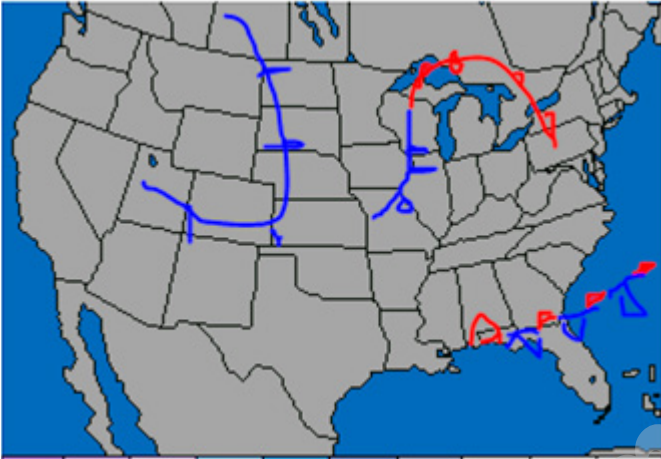
Temperature: 63 degrees F

Seasonal Average Temperature: 86 degrees F

The Forecast:

92 degrees F and partly cloudy.²

³



Evening:

Time: 6:15 p.m.

General Observations:

Sunny but cooling down, clear blue skies, no clouds.

Recorded Conditions:⁴

Wind: 7 mph, South

Average Humidity: 40%

Today's High Temperature: 89 degrees F

Today's Low Temperature: 55 degrees F

Precipitation: 0 in

Forecast Accuracy: The temperature did not get as hot today as expected, though it was warmer than the seasonal average. However, it didn't rain today, which was true to the forecast.

Day 2: July 18

Morning:

Time: 9:20 a.m.

General Observations:

Sunny, blue skies, high cirrus clouds.

My Prediction for Today:

Warm and sunny. Light breeze at times.

Current Conditions:⁵

Wind: 6 mph, SSE

Humidity: 42%

Temperature: 65 degrees F

Seasonal Average Temperature: 86 degrees F

The Forecast:

92 degrees F and partly cloudy.⁶...

1. www.weatherbug.com Accessed July, 2015.

2. www.weatherbug.com Accessed July, 2015.

3. www.accuweather.com Accessed July, 2015.

4. www.wunderground.com Accessed July, 2015.

5. www.weatherbug.com Accessed July, 2015.

6. www.weatherbug.com Accessed July, 2015.