

Name _____

AQI Prediction Guide

Overview

- Part 1: Look up the National Weather Service's (NWS) air quality prediction.
- Part 2: Look up the weather forecast from the National Weather Service.
- Part 3: Adjust the Weather Service's air quality prediction based on the weather forecast.
- Part 4 (optional): Check for pollution blowing into the area, and adjust your prediction if necessary

Part 1: The National Weather Service air quality computer model

1. Go to NWS air quality computer model at: airquality.weather.gov
2. Click on the part of the map where you live to zoom in. You will need to click at least twice to get as zoomed in as you can go.
3. Look at tomorrow's forecast by clicking the +12Hrs button twice. You should see tomorrow's day of the week.
4. Click on the gray bar where it says "Daily 8Hr Ozone Max."
5. What does the map show about the ozone levels for tomorrow?

6. What is the maximum ozone level closest to you? _____ ppb
7. To convert this to AQI, go to: <https://www.airnow.gov/aqi/aqi-calculator-concentration/> and enter the information.
8. What is the AQI for this amount of ozone? _____

Part 2: The National Weather Service weather forecast

1. Go to the NWS weather forecast page: <https://www.weather.gov/>
2. At the top left where it says, "Local forecast by "City, ST" or ZIP code, enter your location and click Go
3. Find the **Detailed Forecast** and look at the forecast for tomorrow. Record the necessary information for the forecast:

- High temperature: _____
- Wind speed: _____ and wind direction: _____
- Precipitation: _____
- Sky condition: _____
- Humidity: _____

Note: humidity graph can be found on the graphs for Hourly Weather Forecast under Additional Resources

Part 3: Adjusting the AQI forecast based on the weather

1. Write the ozone AQI from the National Weather Service Model in the box below.
2. Look at tomorrow's predicted temperature. Using what you know about how weather affects air pollution, decide if this will make the AQI go up, go down, or stay the same. Circle the correct choice in the column for temperature.
3. Repeat step 2 for all the other weather factors.

Starting AQI (National Weather Service)	The temperature will make the AQI...	The wind will make the AQI...	The precipitation will make the AQI...	The sky condition will make the AQI...	The humidity will make the AQI go...
	Go up	Go up	Go up	Go up	Go up
	Stay the same	Stay the same	Stay the same	Stay the same	Stay the same
	Go down	Go down	Go down	Go down	Go down

4. Based on the weather forecast, decide how the AQI will change. Will it go up or down? Will it change a lot or just a little?

I predict that the AQI for ozone tomorrow will be: _____

The color for this AQI is: _____

Part 4: Adjusting the AQI forecast for pollution blowing into the area (optional)

1. Look up the wind speed and direction by going to windfinder.com and zooming in on the area where the school is located
2. What direction is the wind blowing (ex. from east to west)? _____
3. Look up the current AQI for ozone by going to airnow.gov and typing in your city, state or zip code. When the new page comes up, click the map where it says "Current Air Quality."
4. When the map comes up, use the "Monitors" menu on the left to change the pollutant to ozone. Then zoom in on the area that the wind is coming from.
5. What is the AQI in that area? _____
6. If the AQI is very high, then pollution from the area may increase your AQI prediction. Go to the space above and adjust your prediction based on this information.