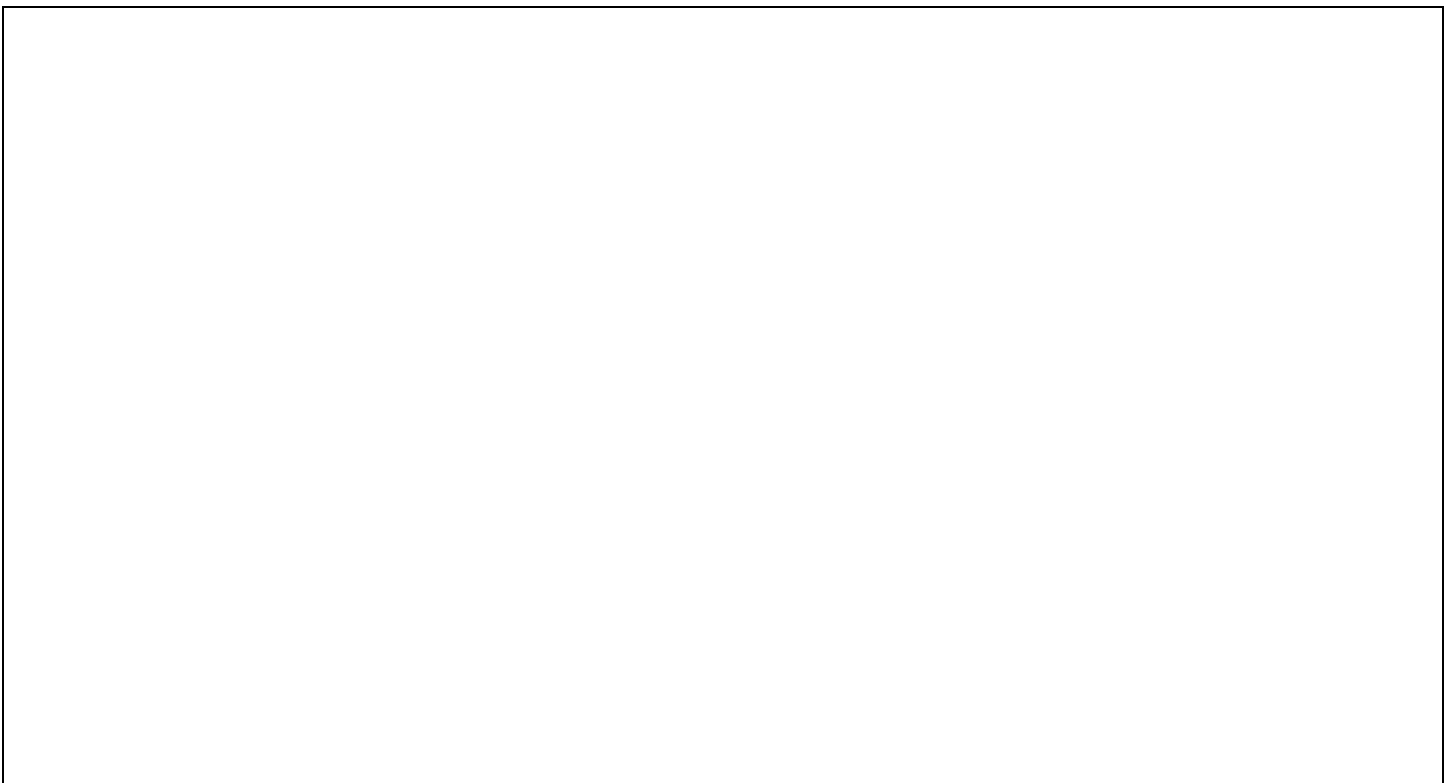


Air Mass Assessment

Part I: Weather Log

- Open up your weather log.
- **Delete the example row data (row 2).**
- Delete all information in each of the following rows except for the number. Highlight the following columns one at a time to create a graph. Then, click the + sign in the top right and insert a chart. Insert each graph into the box below. You can choose to create either a bar graph or a line graph.
- Create ALL three graphs FIRST so that you can compare your answers.

Pressure Graph



What is the highest pressure found on your graph?	
What was the wind speed like on that day?	
What is the lowest pressure found on your graph?	
What was the wind speed like on that day?	

Wind Speed

You will need to delete ALL information except the # for wind speed in this column.

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What is the highest wind speed found on your graph?	
What was the temperature like on that day?	
What is the lowest wind speed found on your graph?	
What was the temperature like on that day?	

Temperatures

Highlight both HIGH and LOW temperature columns for this graph.

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What is the highest temperature found on your graph?	
What is the lowest temperature found on your graph?	

In the space below, using your graphs and other resources, explain the relationship between temperature, pressure, and wind speed.

Connections to Air Masses

Which type of air mass does Chicago have? How do you know?

Is our air mass stable or unstable? What might cause Chicago's air mass to be stable or unstable?

Part 2: Weather Scenarios

Look at each of the scenarios below. Choose **TWO** scenarios and answer the related questions.

Please note that the National Weather Service categorizes 13-18 mph as moderate wind speeds.

Scenario 1 Data

Category	Day 1	Day 2	Day 3
High temperature	40°	44°	50°
Wind speed	19 mph	13 mph	12 mph
Pressure	Moderate	Moderate	Moderate
Cloud Cover	Cloudy	Partly cloudy	Partly cloudy
Precipitation	None	None	Light rain

Scenario 1 Questions

What type of weather front is this?	Claim: This is a _____ front.
What evidence do you have to support your claim? List 2-3 reasons and EXPLAIN each reason.	<ul style="list-style-type: none">•••

Which category was most useful in defining the front?	

Scenario 2 Data

Category	Day 1	Day 2	Day 3
High temperature	44°	44°	45°
Wind speed	9 mph	8 mph	12 mph
Pressure	Low	Low	Moderate
Cloud Cover	cloudy	cloudy	cloudy
Precipitation	Light rain	Light rain	Light rain

Scenario 2 Questions

What type of weather front is this?	Claim: This is a _____ front.
What evidence do you have to support your claim? List 2-3 reasons and EXPLAIN each reason.	<ul style="list-style-type: none"> • • •
Which category was most useful in defining the front?	

Scenario 3 Data

Category	Day 1	Day 2	Day 3
High temperature	55°	32°	35°
Wind speed	19 mph	21 mph	13 mph
Pressure	Low	Low	High
Cloud Cover	Cloudy	Cloudy	Clear
Precipitation	Thunderstorms	Thunderstorms	None

Scenario 3 Questions

What type of weather front is this?	Claim: This is a _____ front.
What evidence do you have to support your claim? List 2-3 reasons and EXPLAIN each reason.	<ul style="list-style-type: none"> • • •
Which category was most useful in defining the front?	

Part 3: For the 4! (Optional)

Choose a front and create a data set that would match the expected weather for that front.
Then, answer the questions below your data.

Category	Day 1	Day 2	Day 3
High temperature			
Wind speed			
Pressure			
Cloud Cover			
Precipitation			

How does the <u>temperature data</u> that you provided represent this front?	
How does the <u>wind speed data</u> that you provided represent this front?	
How does the <u>pressure data</u> that you provided represent this front?	
How does the <u>cloud cover data</u> that you provided represent this front?	
How does the <u>precipitation data</u> that you provided represent this front?	