

## Formative Assessment #3

### The Weather Around Us

<b>Concept(s) Assessed</b>	Density and differential heating affect onshore and offshore breezes. Pressure, wind, and temperature affect the air around us contributing to weather.
<b>Time</b>	30 minutes
<b>Materials</b>	<u>Whole Class</u> Document Camera <u>Individual</u> Copies of assessment Pencil Science Notebook
<b>Advance preparation</b>	None

#### Procedure:

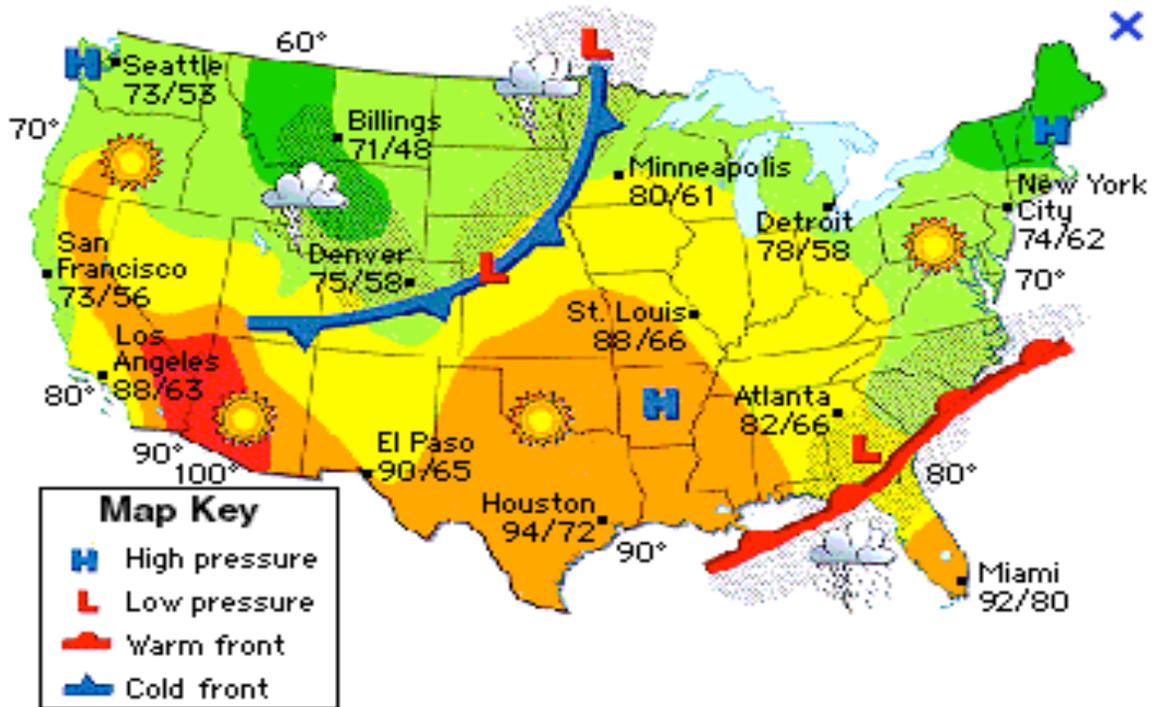
1. Tell students they will have an opportunity to share what they understand about the winds and weather.
2. Distribute the prompt to each student and ask him/her to do his/her best work.
3. When students have completed the prompt, use R1 Rubric to score the work.
4. After scoring the student work, ask students to tape their writing into their notebook.

Name \_\_\_\_\_ Date \_\_\_\_\_

## The Weather Around Us



1. Given the picture above, the wind will be blowing in which direction during the day? Use the words differential heating and density to explain your answers.
2. Will the wind change its direction in the evening? Use the words differential heating and density to explain your answers.



According to the weather map above:

- Name 2 places where there is rain \_\_\_\_\_ and \_\_\_\_\_.
- Is the pressure high or low in these places? Explain.
- If you were going to St. Louis for the weekend, what would you pack to be prepared for the weekend weather in the city?
- As the warm front approaches Atlanta, do you expect the humidity to be high or low? Explain.

**The Weather Around Us (Assessment)  
Answer Key**

1. During the day, the wind will be coming from the ocean. Due to differential heating the air above the land is warmer than the air above the ocean. The warm air is less dense and rises, allowing the cooler air from the ocean to blow in over the land.

The direction will change at night. Due to differential heating, the air above the land will cool faster and the air above the water will stay warmer. The warmer less dense air above the ocean will rise, allowing in the cooler air from the land to blow out to the ocean. .

2. Colorado (Idaho, Denver also acceptable), North Dakota, Florida (Gulf Coast also acceptable).
3. The pressure is low causing the air to rise and cool, which will condense and form rain clouds.
4. I would pack a raincoat because the cold front is heading in the direction of St. Louis bringing the rain.
5. As the warm front approaches Atlanta, the humidity will be high because there is rain in that area which means that there is a high percentage of water vapor in the air. The warm front is coming from the Atlantic ocean, bringing the moisture from the ocean with it.