

Wind

Goal: to see how wind and pressure differences in the atmosphere are related

Pre-Reading

1. In what situations do we see high winds?

2. How do you think wind is created?



3. Where do you think the energy might come from? What makes you think this?

Read the section titled *Wind* on page 15 of the *Monster Storms* book.

4. What do they mean by "different air masses" in paragraph one?

5. In terms of pressure, what direction will wind move?

6. How are high pressure regions and low pressure regions created?

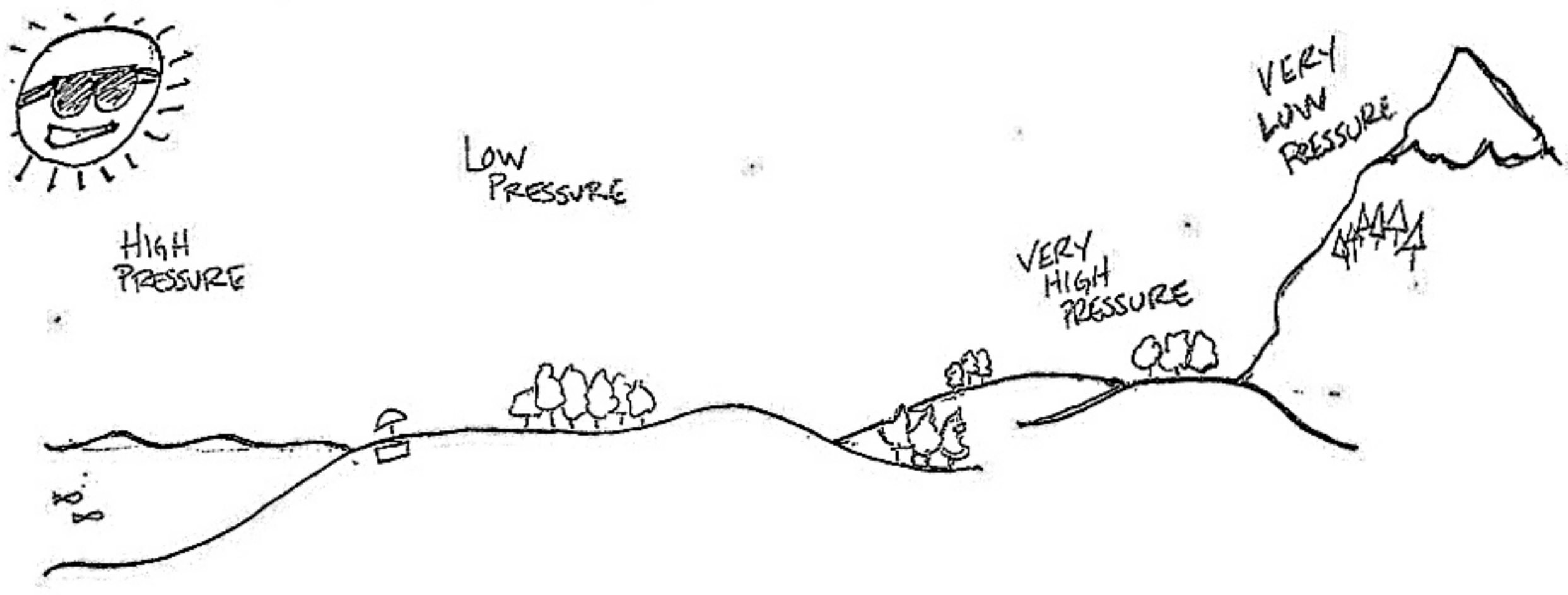
7. What determines the winds speed? There are a couple of things, make sure you explain how they affect wind speed.

8. How does the Aeorsonde help researchers? This question is on a couple of other sheets, make sure you have this question answered.

9. Describe places on Earth that would have higher pressure than other. Think about places you've been that typically have clear skies or cloudy skies.

10. What type of pressure, high or low, would be found in a monster storm? Explain your answer.

Application



- 11. Draw arrows in the picture that show the direction the wind might be moving.
- 12. Draw in clouds where they should be forming based on the pressure regions in the picture (hint: think about the cloud in a bottle demo).

Conversion Chart

Sailors and pilots will often use a measurement called "knots," you may have heard this term before. A knot (kn) is used to tell how fast an object is moving, or its velocity. Currents and wind speeds are commonly measured in knots. Knots measure how many nautical miles per hour something travels. A nautical mile is equal to 1/60th of a change in latitude. One knot is equal to 1.852 km/h (or 1.15 miles per hour). Use these conversions to fill in the chart, round up to the nearest whole number (ex. 53.9956 = 54).

Knots (kn)	km/h	mph
100 kn		
	100km/h	
		100mph