5. The hurricane loses energy and begins to dissipate as it moves over land because it is removed from the warm water that supplies its energy.

Boiling Over!

ANALYZE THE RESULTS

1. Answers may vary. Accept all reasonable responses.

DRAW CONCLUSIONS

2. Answers may vary. Accept all reasonable responses.
3. Accept all reasonable responses.

Out of Thin Air

PROCEDURE

5. Liquid droplets formed on the outside of the container.
6. The liquid is water.
7. The air next to the cup cooled to below its dew point, and water vapor condensed on the cup.

Watching the Weather

ANALYZE THE RESULTS

1. It's the winter. A cold front is coming through. Temperatures are low where the cold front has passed.
2. The temperature is 42°F. The dewpoint is 36°F. There is broken cloud cover, light rain, and the wind is from the northwest at 3–8 mph. The barometric pressure is 1024.6 mb.
3. As the cold front approaches, the wind is generally from the south, temperatures are warmer, and the barometric pressure is low. As the cold front passes, the wind is from the northwest, temperatures are much cooler, and the pressure rises.

DRAW CONCLUSIONS

4. The temperature is 45°F. The barometric pressure is 965.4 mb, the dewpoint is 38°F, the sky is obscured, there is a thunderstorm, and the wind is from the south at 21–25 mph.

Let It Snow!

ANALYZE THE RESULTS

1. Answers may vary according to the water content of the ice or snow sample.
2. The volume changed because the water changed from a solid to a liquid.
3. Answers may vary.
4. Answers may vary.
5. Answers may vary. Sample answer: The water content of a snowfall— whether it is relatively wet or relatively dry—affects how much flooding may occur as the snow melts. A "wetter" snow has more water per volume and may cause more flooding than a "drier" snow.

APPLYING YOUR DATA

Every snowfall does not produce the same ratio of snow height to water depth. The ratio of snow height to water depth is dependent on several variables, including whether the snow is wet or dry.

Gone with the Wind

ANALYZE THE RESULTS

1. Answers may vary.
2. Answers may vary.

DRAW CONCLUSIONS

3. Answers may vary. Accept all reasonable responses.
4. Answers may vary. Accept all reasonable responses.

APPLYING YOUR DATA

Answers may vary. (Wind direction varies according to the type of front that is moving through.) Sample answer: You have to adjust the weather vane to account for the difference between magnetic north and true north. The adjustment will vary depending on where you live.

Original content Copyright © by Holt, Rinehart and Winston. Additions and changes to the original content are the responsibility of the instructor.