

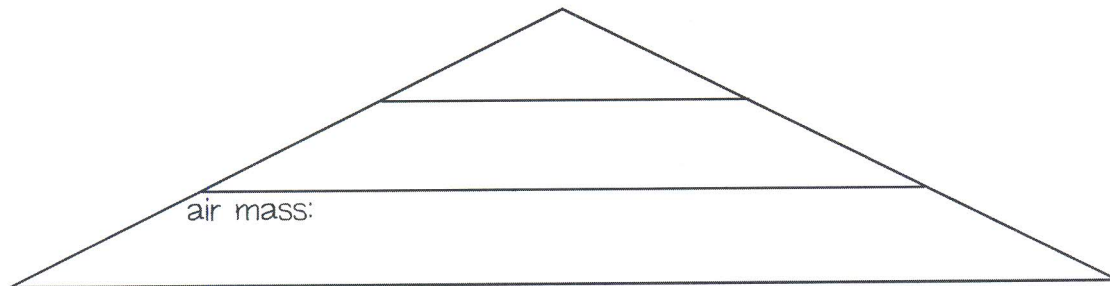
SECTION WEATHER CHANGES AS AIR MASSES MOVE.

3.1 Reading Study Guide B**BIG IDEA** The interaction of air masses causes changes in weather.**KEY CONCEPT** Weather changes as air masses move.**Review**

Air pressure changes with location and altitude.

Take Notes**I. Air masses are large bodies of air. (p. 79)**

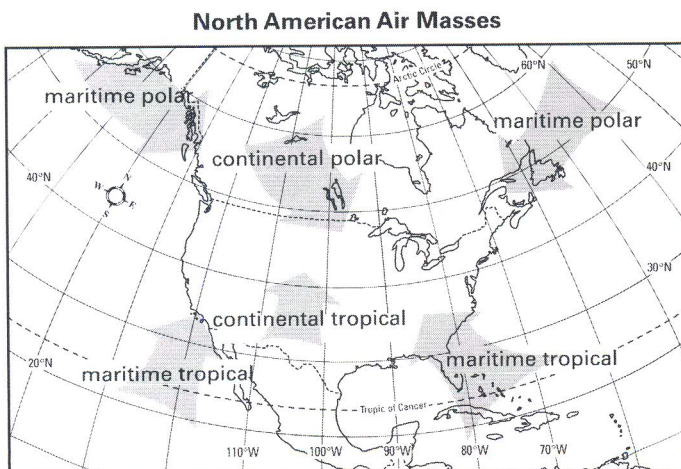
1. Fill in the word triangle for
- air mass*
- .



2. Describe how an air mass forms.

A. Characteristics of an Air Mass (p. 80)

3. Fill in the blanks about the different types of air.



maritime polar _____

continental polar _____

maritime polar _____

continental tropical _____

maritime tropical _____

Name _____

Period _____

Date _____

4. Fill in the chart to show characteristics of the surface where different types of air masses form.

	Tropical	Polar
Continental		
Maritime		

B. Movement of an Air Mass (p. 81)

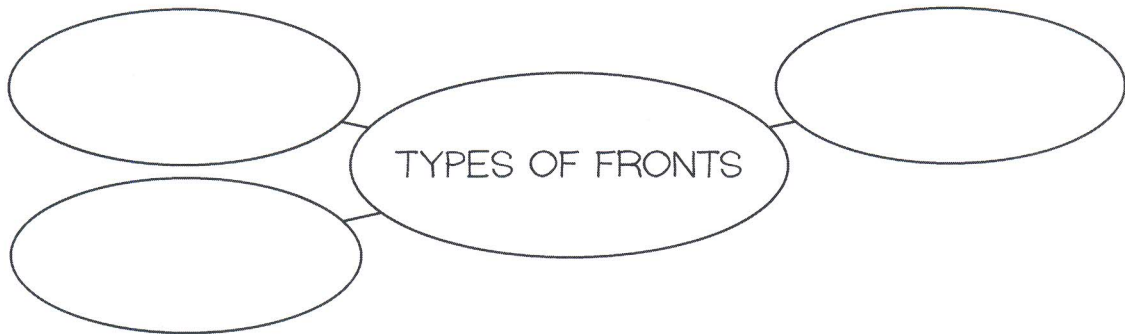
5. What happens to an air mass when it comes to a new region?

II. Weather changes when air masses meet. (p. 82)

6. What happens at a front?

A. Fronts and Weather (p. 82)

7. Fill in the cluster diagram with the three different types of fronts.



B. High- and Low-Pressure Systems (pp. 84–85)

8. Compare and contrast high- and low-pressure systems by completing the chart.

	High Pressure	Low Pressure
Weather		
Clouds		
Direction of air flow		

SECTION

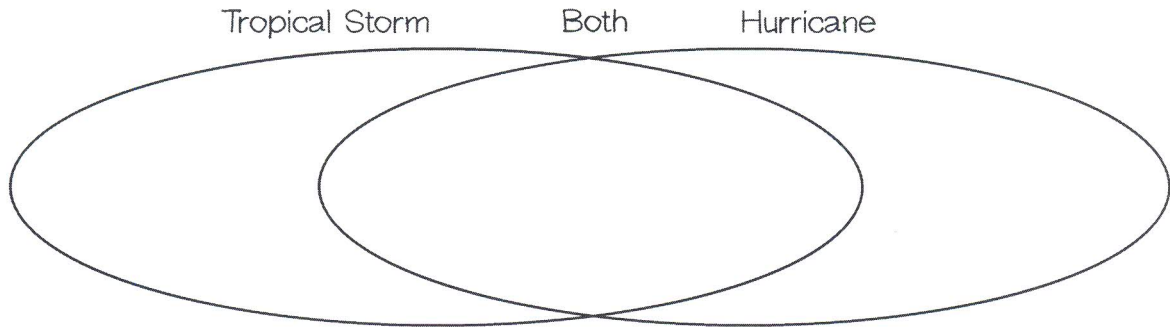
LOW-PRESSURE SYSTEMS CAN BECOME STORMS.

3.2 | Reading Study Guide B**BIG IDEA** The interaction of air masses causes changes in weather.**KEY CONCEPT** Low-pressure systems can become storms.**Review**

A low-pressure system brings stormy weather.

Take Notes**I. Hurricanes form over warm ocean water. (p. 87)**

1. Complete the Venn diagram to show how a tropical storm and hurricane are alike and different.

**A. Formation of Hurricanes (p. 88)**

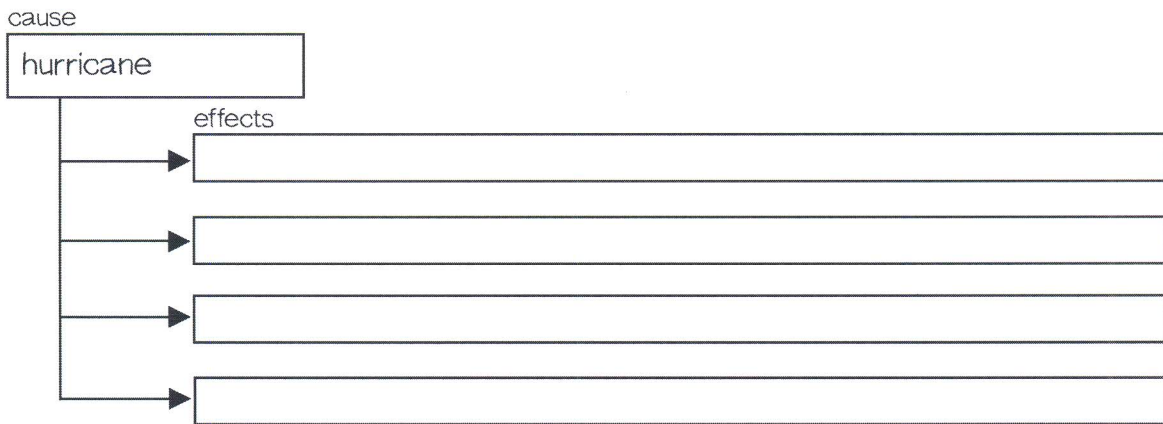
2. Why do hurricanes strike the eastern United States most often between August and October?

3. Explain a hurricane's movement and where it gains and loses its energy.

4. Draw a diagram of a hurricane and label its parts.

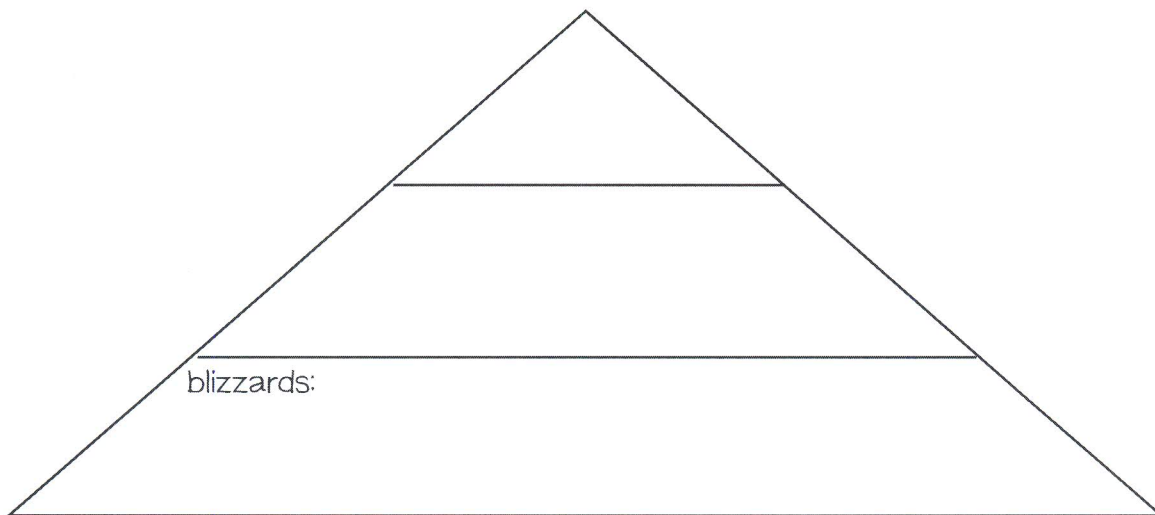
B. Effects of Hurricanes (p. 89)

5. Use the cause-and-effect chart to name the effects of a hurricane.

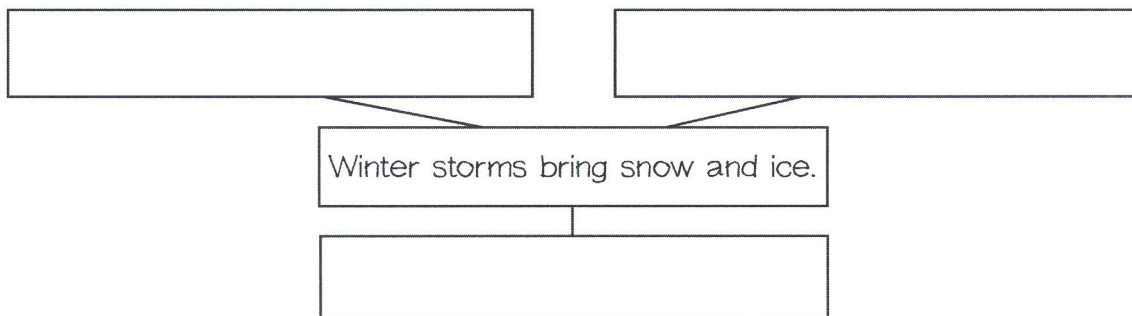


II. Winter storms produce snow and ice. (p. 90)

6. Fill in the word triangle for *blizzards*.



7. Fill in the main-idea web with the three types of winter storms.





Name _____

Period _____

Date _____

SECTION 3.3 | VERTICAL AIR MOTION CAN CAUSE SEVERE STORMS.
3.3 Reading Study Guide B

BIG IDEA The interaction of air masses causes changes in weather.

KEY CONCEPT Vertical air motion can cause severe storms.

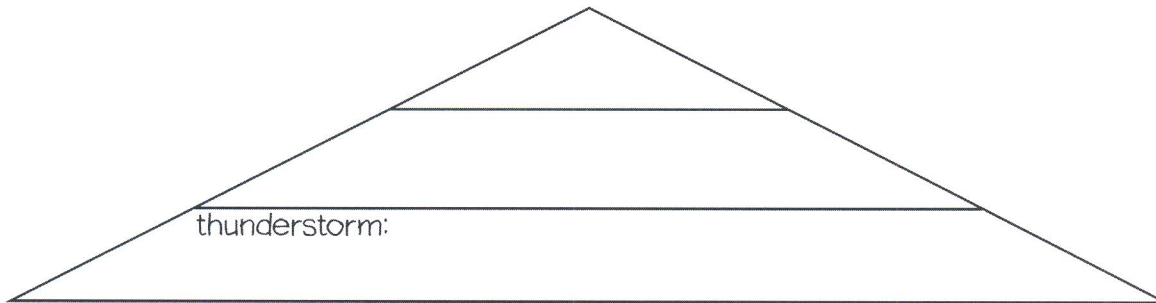
Review

Rising moist air can produce clouds and precipitation.

Take Notes

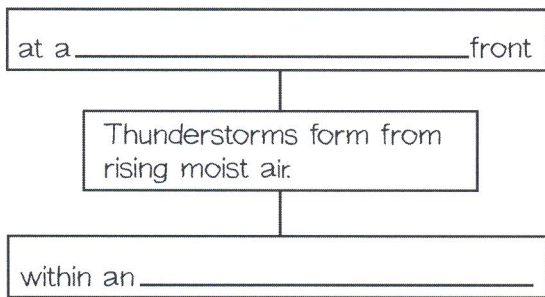
I. Thunderstorms form from rising moist air. (p. 92)

- 1. Fill in the word triangle for *thunderstorm*.



A. Formation of Thunderstorms (p. 93)

- 2. Fill in the main-idea web with two ways that thunderstorms form.



- 3. Why do thunderstorms form so often in Florida?

CHAPTER 3
Weather Fronts and Storms

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Name _____

Period _____

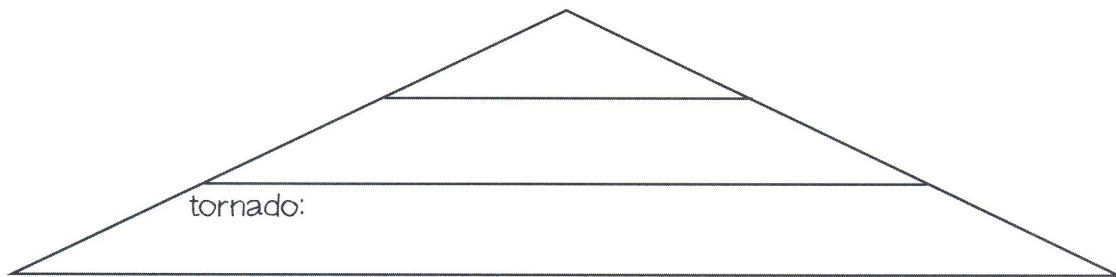
Date _____

B. Effects of Thunderstorms (p. 94)

4. Describe four effects of thunderstorms.

II. Tornadoes form in severe thunderstorms. (p. 95)

5. Fill in the word triangle for *tornado*.



6. How does a tornado become visible?

A. Effects of Tornadoes (p. 96)

7. Fill in the content frame for the different types of tornadoes and how they can affect buildings.

	Characteristics
Most common tornadoes	
About 20 percent of tornadoes	
About 1 percent of tornadoes	

8. If tornadoes are not always visible, how can the National Weather Service issue tornado watches?

SECTION

WEATHER FORECASTERS USE ADVANCED TECHNOLOGIES.

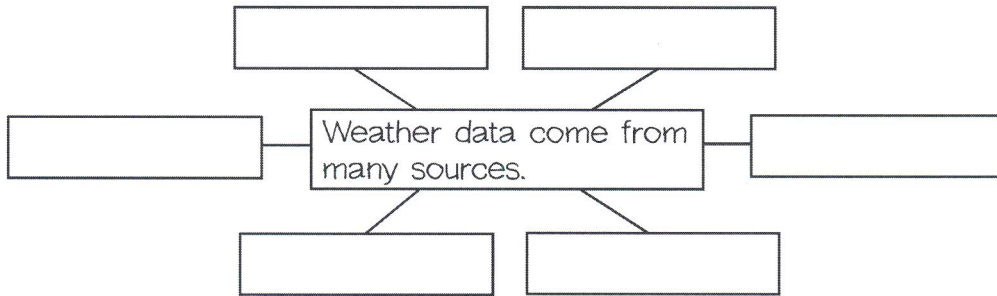
3.4 Reading Study Guide B**BIG IDEA** The interaction of air masses causes changes in weather.**KEY CONCEPT** Weather forecasters use advanced technologies.**Review**

Weather changes when air masses collide.

Take Notes**I. Weather data comes from many sources. (p. 98)**

1. What is the definition of *meteorologist*? What do meteorologists do?

2. Fill in the main-idea web with examples of how weather data is gathered.



3. Which of the technologies listed in question 2 provide weather data for only one place?

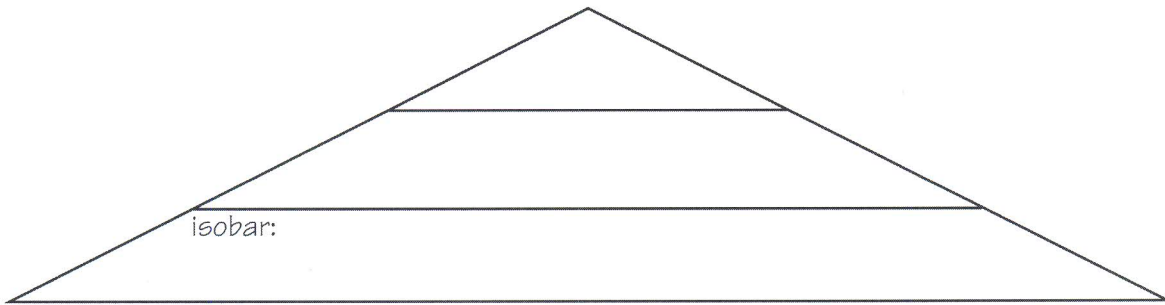
II. Weather data can be displayed on maps. (p. 100)

4. What types of weather information are shown on the map on page 100?

5. What types of information do ground stations give?

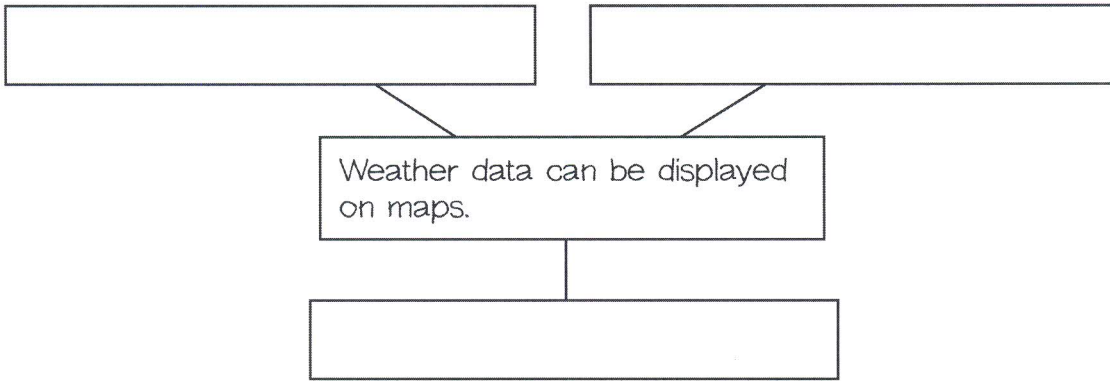
A. Air Pressure on Weather Maps. (p. 101)

6. Fill in the word triangle for *isobar*.



B. Satellite Images and Special Maps (p. 102)

7. Complete the main-idea web with brief descriptions of the maps on pages 100 and 102.



8. What type of satellite image is more useful at night? Why?

III. Forecasters use computer models to predict weather. (p. 103)

9. Why are short-range forecasts more accurate than long-range forecasts?

10. How do meteorologists use computers to help them predict the weather?
