CHAPTER 13 DRW

Lesson 1 Describing Weather

Name _____

Scan *Lesson 1. Read the lesson titles and bold words. Look at the pictures. Identify three facts that you discovered about weather. Write these facts in your Science Journal.*

Main Idea

What is weather?

I found this on page _____.

Weather Variables

I found this on page _____.

I found this on page _____.

I found this on page _____.

I found this on page _____.

I found this on page _____.

I found this on page _____.

Details

Define weather.

Weather: _____

_____

Describe *these variables of* weather.

Variable	Description	How It Is Measured
		thermometer; measured in °C or °F
		barometer; measured in millibars (mb)
		anemometer; measured in mph or km/h
		measured in g/m^3

Examine *which air temperature can hold the greater amount of water vapor. Indicate it by using < or >.*

warm air ◯ cool air

Explain *what a* relative humidity *of 75 percent indicates.*

_____

_____

Main Idea

I found this on page _____.

I found this on page _____.

I found this on page _____.

I found this on page _____.

I found this on page _____.

I found this on page _____.

Details

Identify *the events that must occur in order for the* dew point *to be reached.*

1. Air temperature _____.
2. The amount of moisture in the air _____.

Sequence *the steps in cloud formation.*

Warm air that contains water vapor _____ and _____.

When the cooling air reaches its _____, _____ condenses and forms _____.

The _____ are surrounded by thousands of other _____. They block and reflect _____, which makes them visible as _____.

Classify *clouds. Describe the appearance of each type of cloud, and identify the altitude at which it is found.*

Type of Cloud	Appearance	Altitude
Stratus		
Cumulus		
Cirrus		

Complete *the sentence frame to describe fog.*

Fog is a suspension of _____ close to Earth's surface.

Main Idea

I found this on page _____.

Details

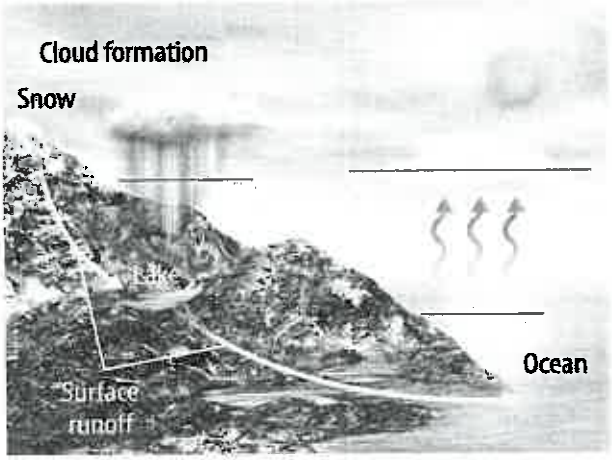
Identify *4 types of* precipitation. *Circle the types that reach Earth's surface as frozen water.*

1. _____ 3. _____

2. _____ 4. _____

I found this on page _____.

Label *the* water cycle *in the illustration below, and then explain how the* water cycle *relates to* weather.



_____

_____

_____

_____

_____

Connect It A greenhouse owner determines that the plants in the greenhouse need a higher humidity level. How could the owner address this problem?

_____

_____

_____

_____

_____

_____

_____

Lesson 2 Weather Patterns

Predict *three facts that will be discussed in Lesson 2 after reading the headings. Write these facts in your Science Journal.*

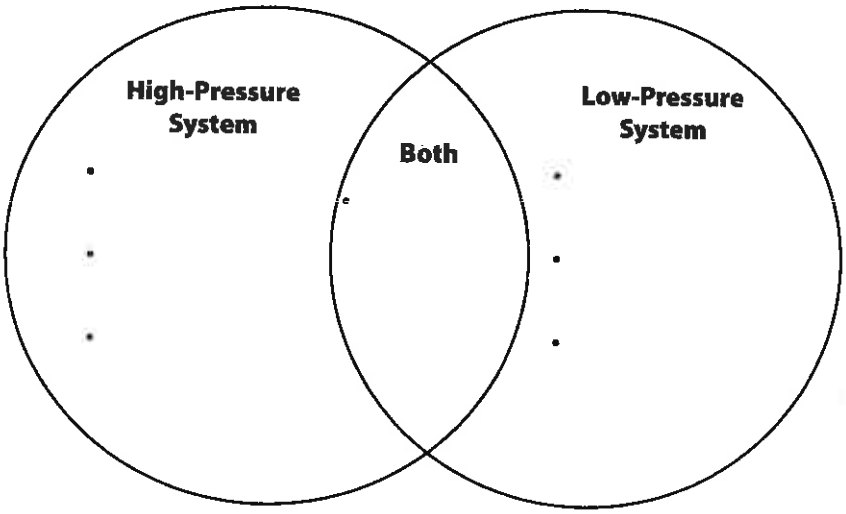
Main Idea

Pressure Systems

I found this on page _____.

Details

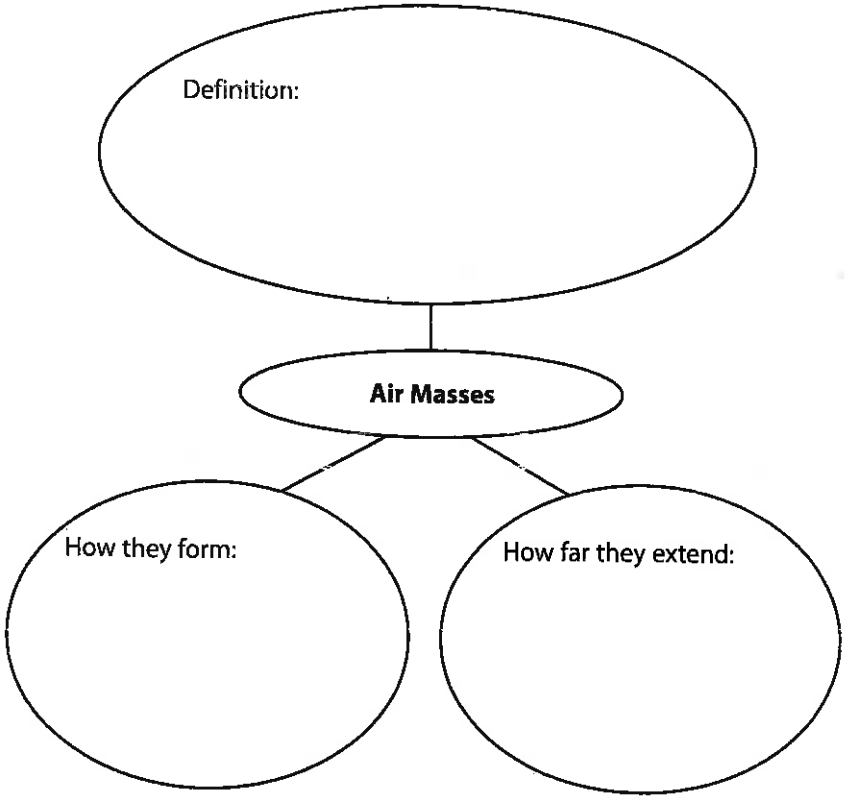
Compare and contrast *2 types of pressure systems by completing the Venn diagram. Include a description of the weather that results from each.*



Air Masses

I found this on page _____.

Organize *information about* air masses.



Main Idea

I found this on page _____.

I found this on page _____.

I found this on page _____.

I found this on page _____.

I found this on page _____.

Fronts

I found this on page _____.

Details

Classify air masses.

Type	Description
Arctic	Where they form: Characteristics:
Polar (two types)	**1.** Name: Where they form: Characteristics: **2.** Name: Where they form: Characteristics:
Tropical (two types)	**1.** Name: Where they form: Characteristics: **2.** Name: Where they form: Characteristics:

Draw and label *a cold* front *and a warm* front. *Use blue arrows to indicate the direction of cold air movement and red arrows to indicate the direction of warm air movement.*

Cold Front

Warm Front

Main Idea

I found this on page _____.

Details

Define *stationary and occluded* fronts, *and describe the weather associated with each type.*

Stationary front: _____

_____

Occluded front: _____

_____

I found this on page _____.

Summarize *why it is useful to understand weather patterns associated with* fronts.

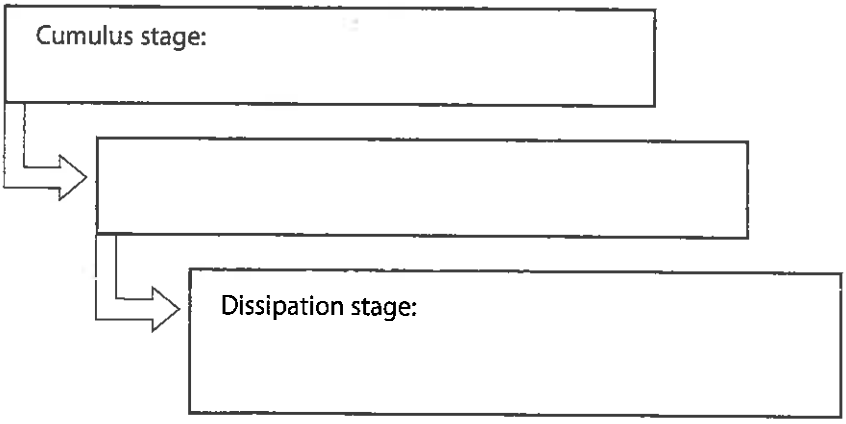
_____

_____

Severe Weather

I found this on page _____.

Sequence *the three-stage life cycle of a thunderstorm.*



I found this on page _____.

Diagram *the structure of a* tornado. *Label these parts in your diagram.*

- funnel
- air inflow
- rotating updrafts
- air outflow

Main Idea

I found this on page _____.

Details

Sequence *the steps in the formation of a* hurricane.

Warm, moist air _____ and _____. Water vapor _____, and clouds form. As more air rises, an area of _____ forms over the ocean.

As air _____, a _____ forms. Air begins to turn _____ because of the _____. Winds are between _____.

As air continues to rise and _____, the storm builds to a _____. Winds are greater than _____ but less than _____.

When winds reach _____, the storm becomes a _____.

I found this on page _____.

Identify *five examples of severe weather.*

1. _____
2. _____
3. _____
4. _____
5. _____

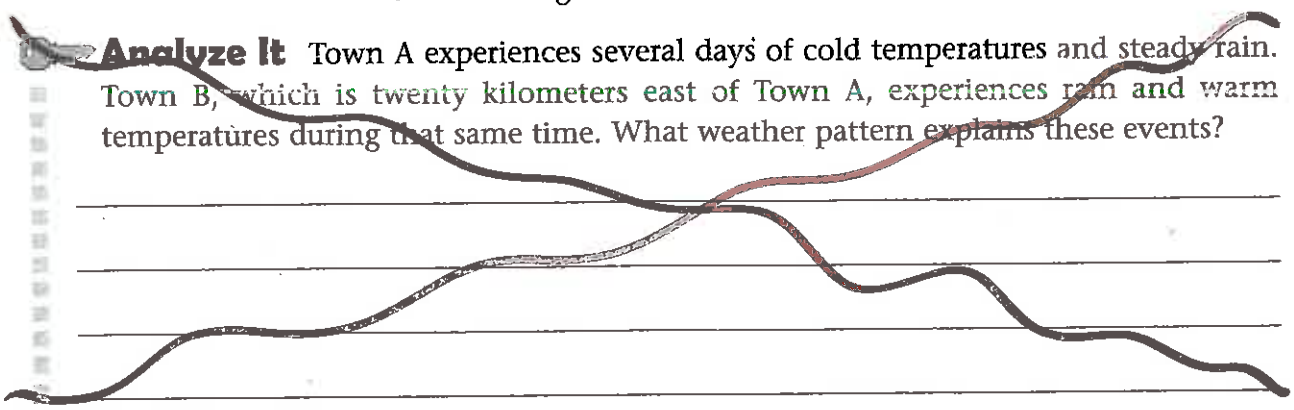
I found this on page _____.

Distinguish *weather watches and warnings.*

A _____ means that severe weather is possible.

A _____ means that severe weather is already occurring.

Analyze It Town A experiences several days of cold temperatures and steady rain. Town B, which is twenty kilometers east of Town A, experiences rain and warm temperatures during that same time. What weather pattern explains these events?



Lesson 3 Weather Forecasts

Skim *Lesson 3 in your book. Read the headings and look at the photos and illustrations. Identify three things you want to learn more about as you read the lesson. Record your ideas in your Science Journal.*

Main Idea

Measuring the Weather

I found this on page _____.

I found this on page _____.

I found this on page _____.

I found this on page _____.

Details

Describe *the first step in making a weather forecast, and identify three instruments used to measure weather variables.*

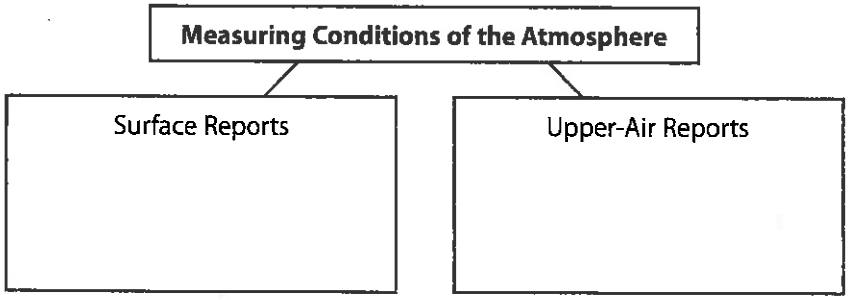
Step 1: Measure the condition of the _____ using weather instruments, such as

a. a _____, which measures air temperature,

b. a barometer, which measures _____, and

c. an _____, which measures wind speed.

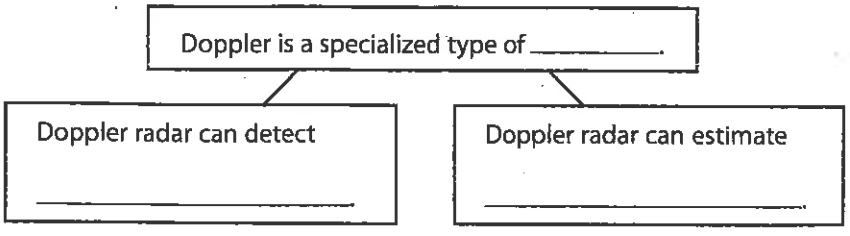
Identify *how scientists measure weather conditions in different parts of the atmosphere.*



Compare *2 types of satellite images.*

Visible Light Image	Infrared Image

Organize *information about* Doppler radar.



Main Idea

Weather Maps

I found this on page _____.

I found this on page _____.

I found this on page _____.

Details

Identify *the types of information displayed on a station model.*

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____ and _____

Contrast isobars *and isotherms.*

Isobars	Isotherms

Identify *each symbol found on weather maps.*

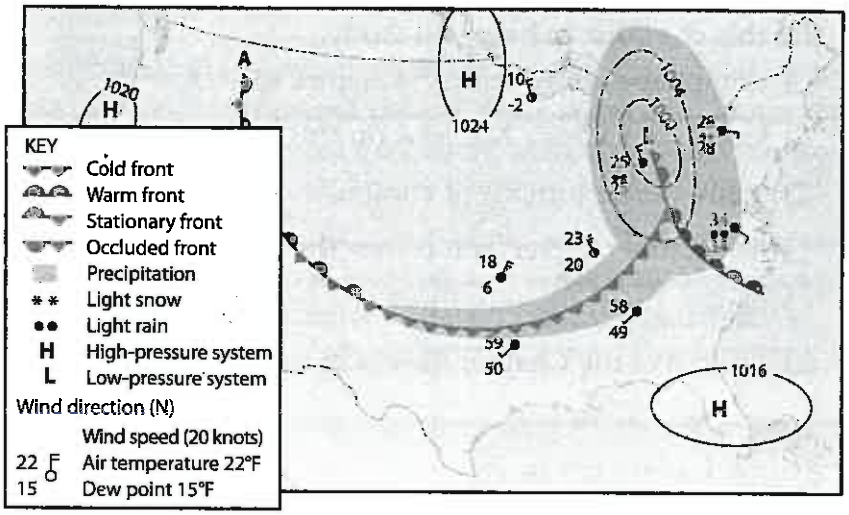
Symbol	Meaning
	
	
	
	
	
* *	
● ●	
	
	

Main Idea

I found this on page _____.

Details

Analyze *the weather map. Color a high-pressure area red. Color a warm front yellow. Color an occluded front blue.*



Predicting the Weather

I found this on page _____.

Sequence *how weather* computer models *are generated and distributed.*

Government offices exchange information _____

Computer model programs solve

The formulas predict

Weather maps and forecasts are made available through

Synthesize It Which type of map would better help you plan next weekend's activities, a station map or a weather map? Explain why.