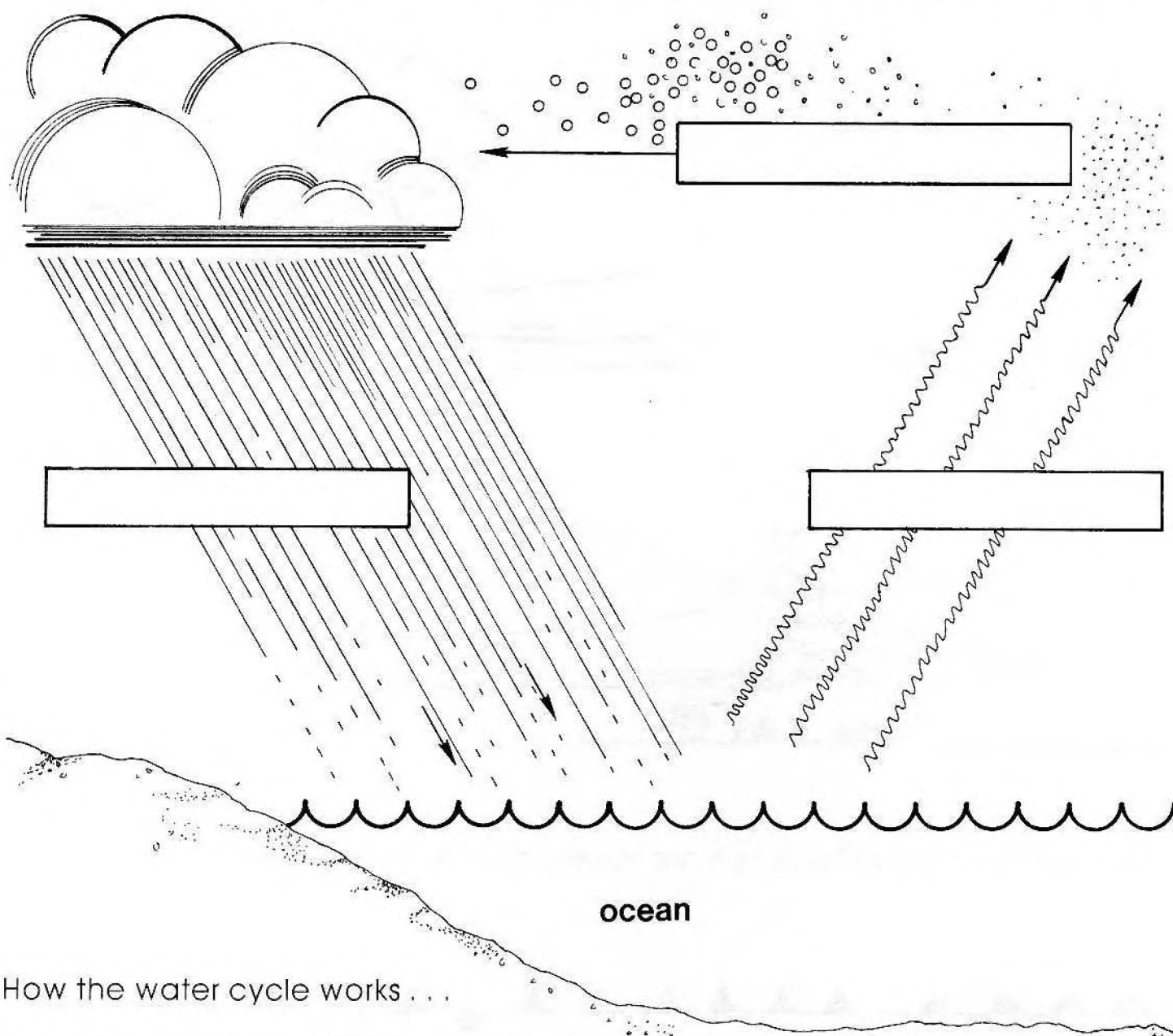


The Water Cycle

Name _____

The never-ending circulation of the waters of the earth from the oceans, to the air, and to the land is called the water cycle. Label the three major steps in the water cycle. Then explain how the water cycle works in your own words.



WORD BANK

condensation

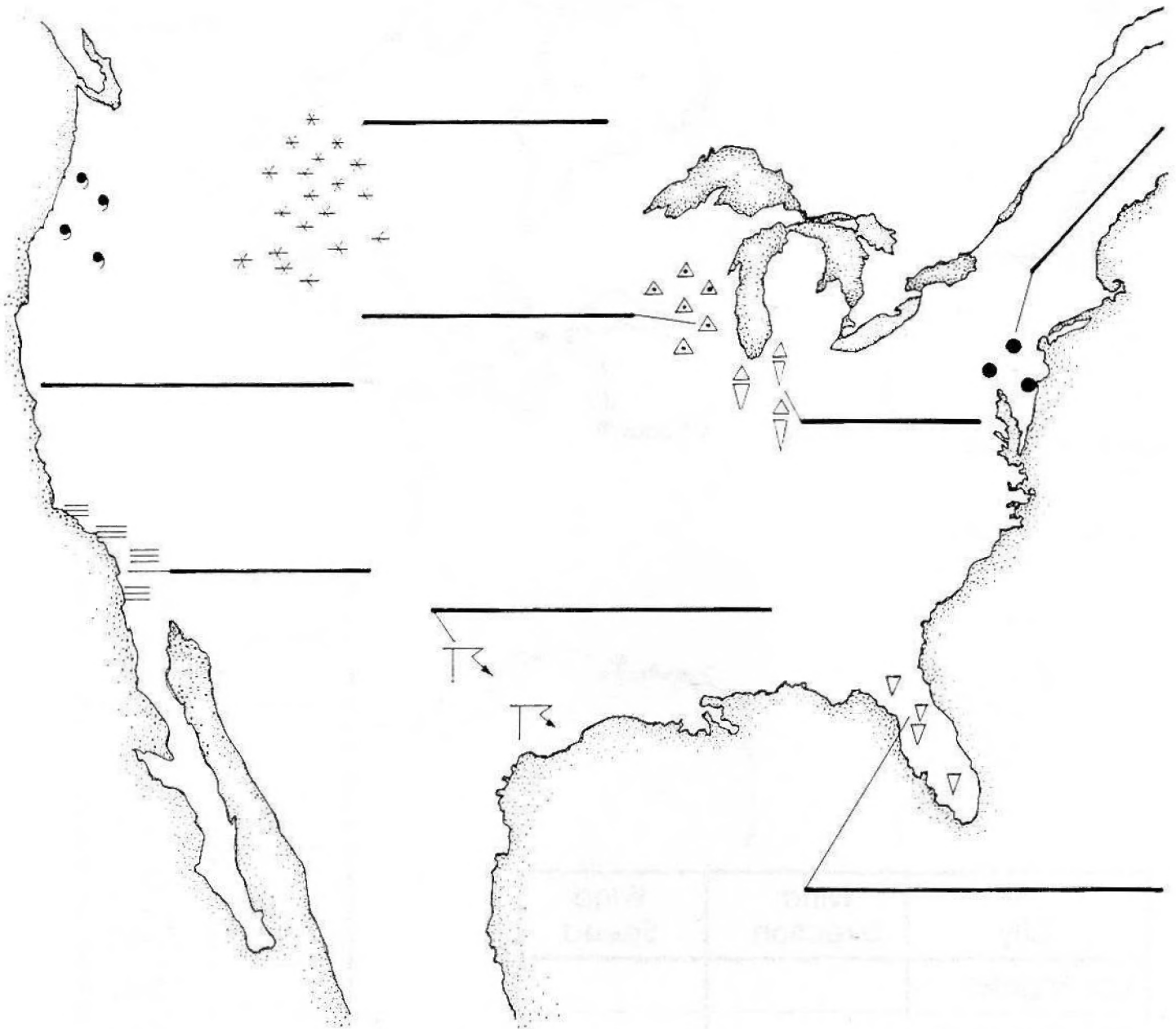
precipitation

evaporation

You're All Wet!!!

Name _____

It's a wet day. The symbols on the weather map show eight different forms of precipitation occurring around the country. Label each form of precipitation.



WORD BANK

drizzle
shower

rain
fog

sleet
hail

snow
thunderstorm

Relative Humidity

Name _____

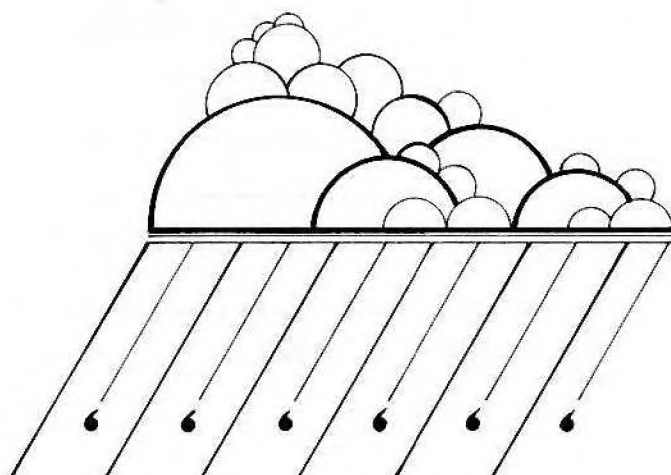
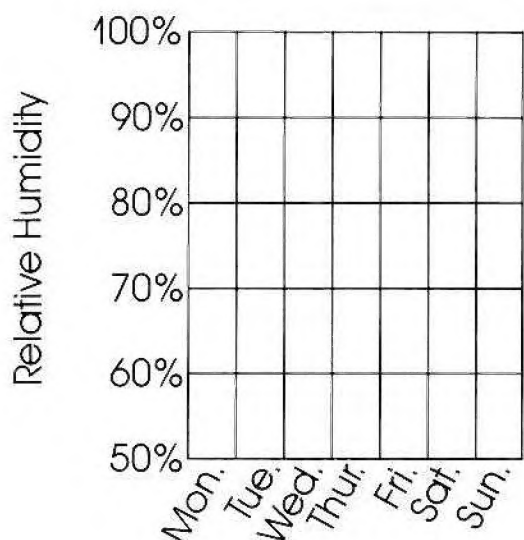
Relative humidity is the amount of water vapor that the air can hold at a certain temperature. Relative humidity is measured with a hygrometer.

Use the table to find the relative humidity for the data recorded on the chart below.

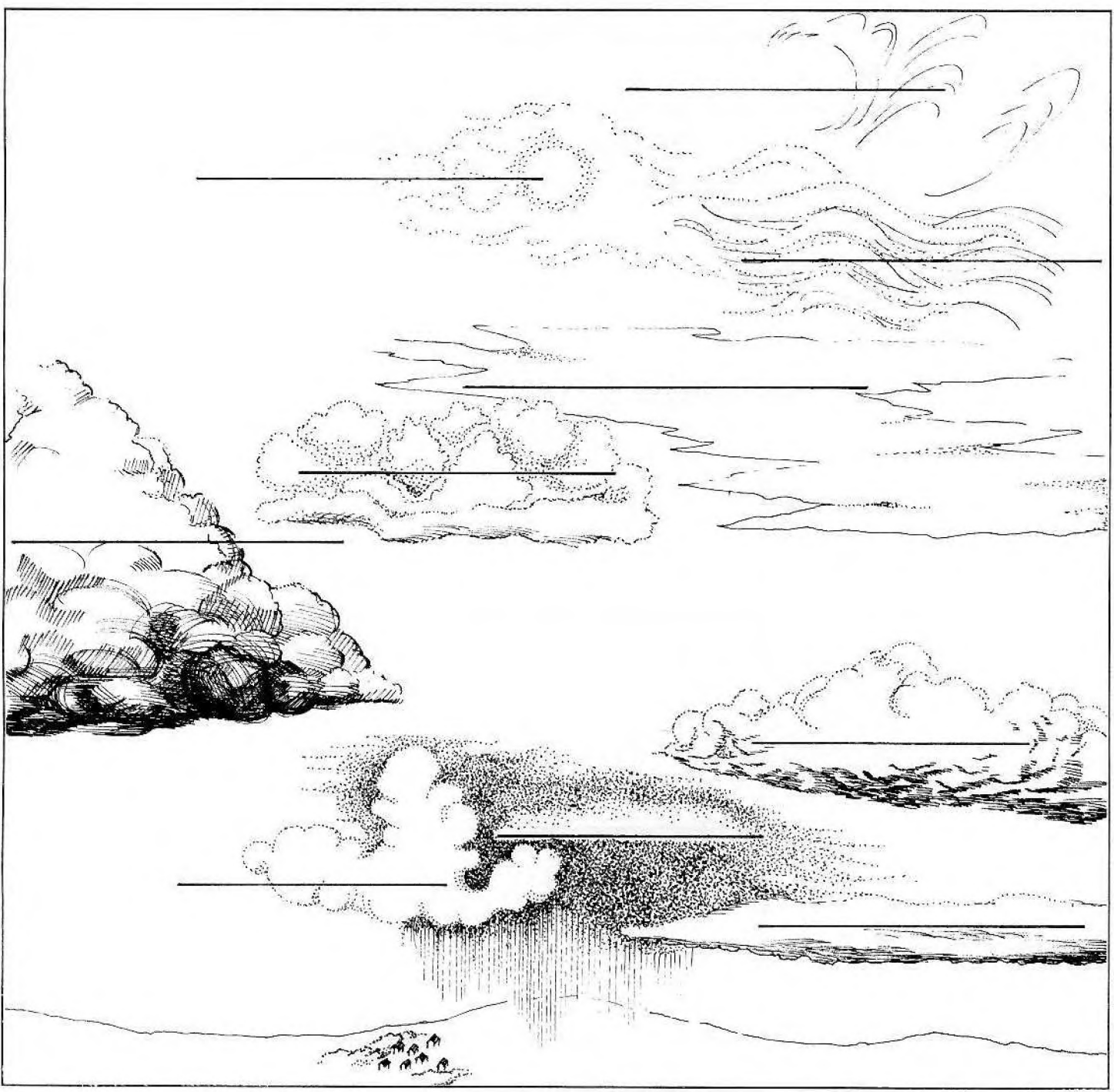
Day	Dry Temp.	Wet Temp.	Relative Humidity
Mon.	22°	21°	
Tue.	23°	21°	
Wed.	21°	19°	
Thur.	19°	18°	
Fri.	18°	15°	
Sat.	19°	15°	
Sun.	17°	13°	

Dry bulb temp. °C	Difference between wet and dry temperatures							
	1°	2°	3°	4°	5°	6°	7°	8°
15°	90	80	71	61	53	44	36	27
16°	90	81	71	63	54	46	38	30
17°	90	81	72	64	55	47	40	32
18°	91	82	73	65	57	49	41	34
19°	91	82	74	65	58	50	43	36
20°	91	83	74	66	59	51	44	37
21°	91	83	75	67	60	53	46	39
22°	92	83	76	68	61	54	47	40
23°	92	84	76	69	62	55	48	42
24°	92	84	77	69	62	56	49	43
25°	92	84	77	70	63	57	50	44
26°	92	85	78	71	64	58	51	46
27°	92	85	78	71	65	58	52	47

Use your data to make a graph of the relative humidity.



Label the cloud types pictured below.



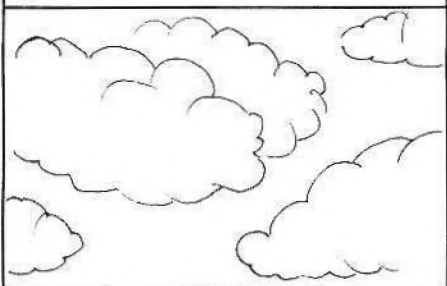
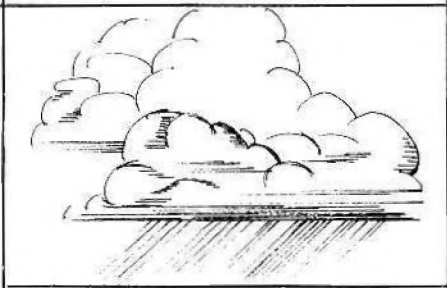
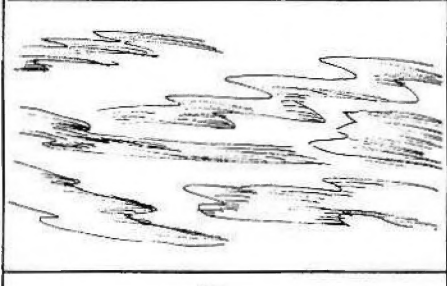
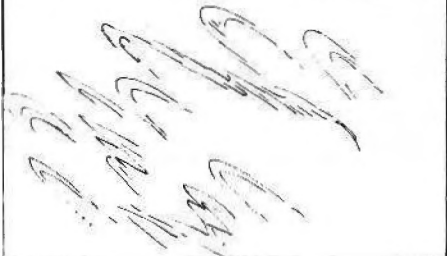
WORD BANK

stratus
altostratus
cirrostratus
stratocumulus

cumulus
altocumulus
cumulonimbus

cirrus
cirrocumulus
nimbostratus

Different types of clouds are often associated with a specific kind of weather. Four different kinds of clouds are pictured below. Write the name of the cloud type, a description of the cloud, and the kind of weather associated with each one.

Cloud Type	Name	Description	Associated Weather
			
			
			
			

WORD BANK

thunderstorms
fair, sometimes showers
steady drizzle
smooth sheets, or layers

cumulonimbus
thin, wispy clouds
tall, dark and billowing
piles of "puffy" clouds

cumulus
stratus
fair
cirrus

Precipitation

Name _____

Precipitation is water vapor that condenses and falls to the earth. Depending on the conditions in the atmosphere, precipitation can fall in a number of forms. The symbol for each form is pictured below.

Identify each form of precipitation by drawing its symbol next to its description.

Symbols

rain



drizzle



rain showers



sleet



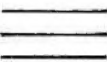
snow



hail



fog



Symbol	Definition
	Clouds that form close to the ground.
	Droplets that freeze as they get closer to the ground.
	Light mist of droplets falling to the earth.
	Droplets of water freeze around ice crystals as they bounce up and down within a storm cloud. Fall to earth when they get heavy.
	Vapor that changes directly into crystalline flakes because of freezing temperatures.
	Water vapor that forms droplets and falls to the earth.
	Large amount of droplets falling to the earth.

Use another source to help you complete this chart.

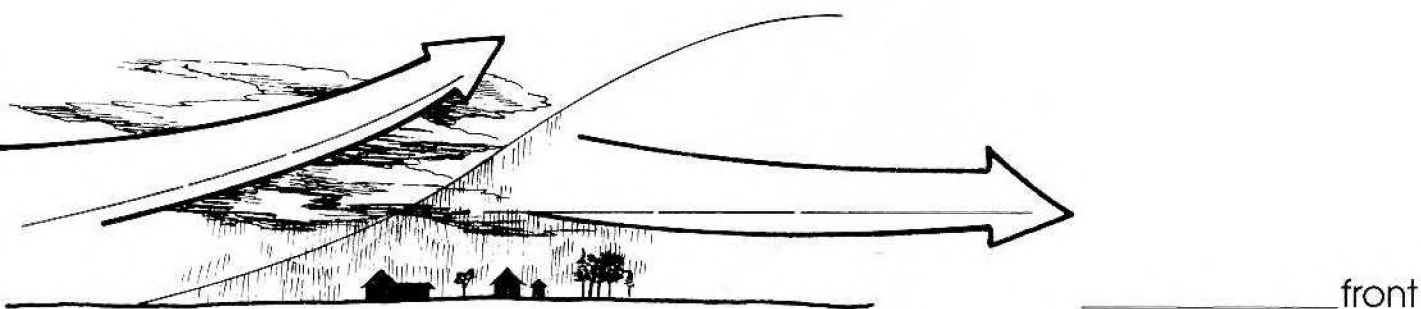
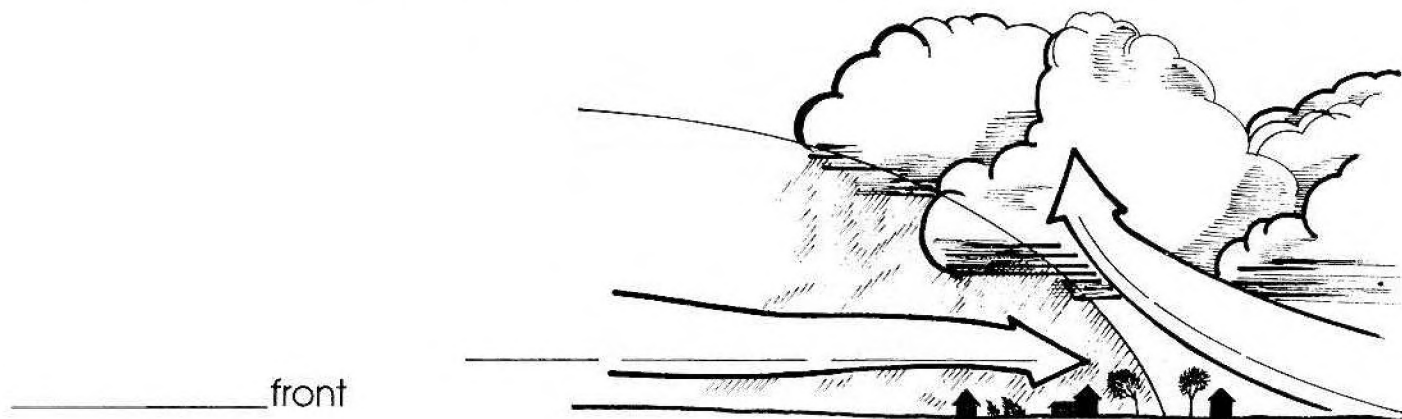
Weather	Symbol	Definition
thunderstorm		
lightning		
squall		

What's Up Front?

Name _____

A front is where two air masses meet. Changes in the weather take place along a front.

Label the two fronts and the kinds of air masses in the illustrations below.



Label the four kinds of fronts that are represented by the symbols below.



WORD BANK

warm air mass
warm front

cold air mass
stationary front

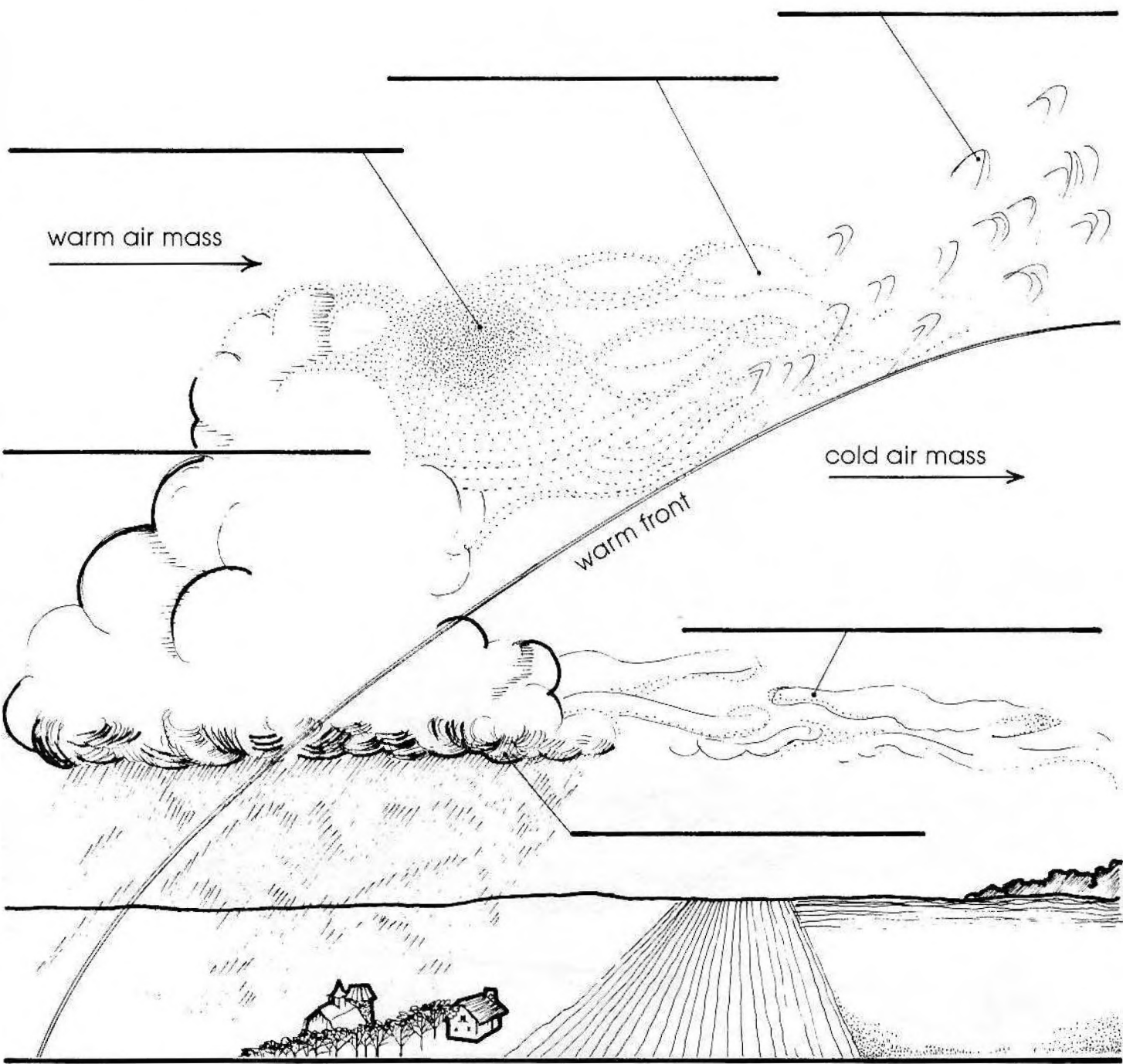
cold front
occluded front

A Warm Front

Name _____

The illustration below is a front between two air masses. A warm air mass is pushing a cold air mass.

Label the cloud types associated with the warm front pictured below.



WORD BANK

cumulus
cirrus

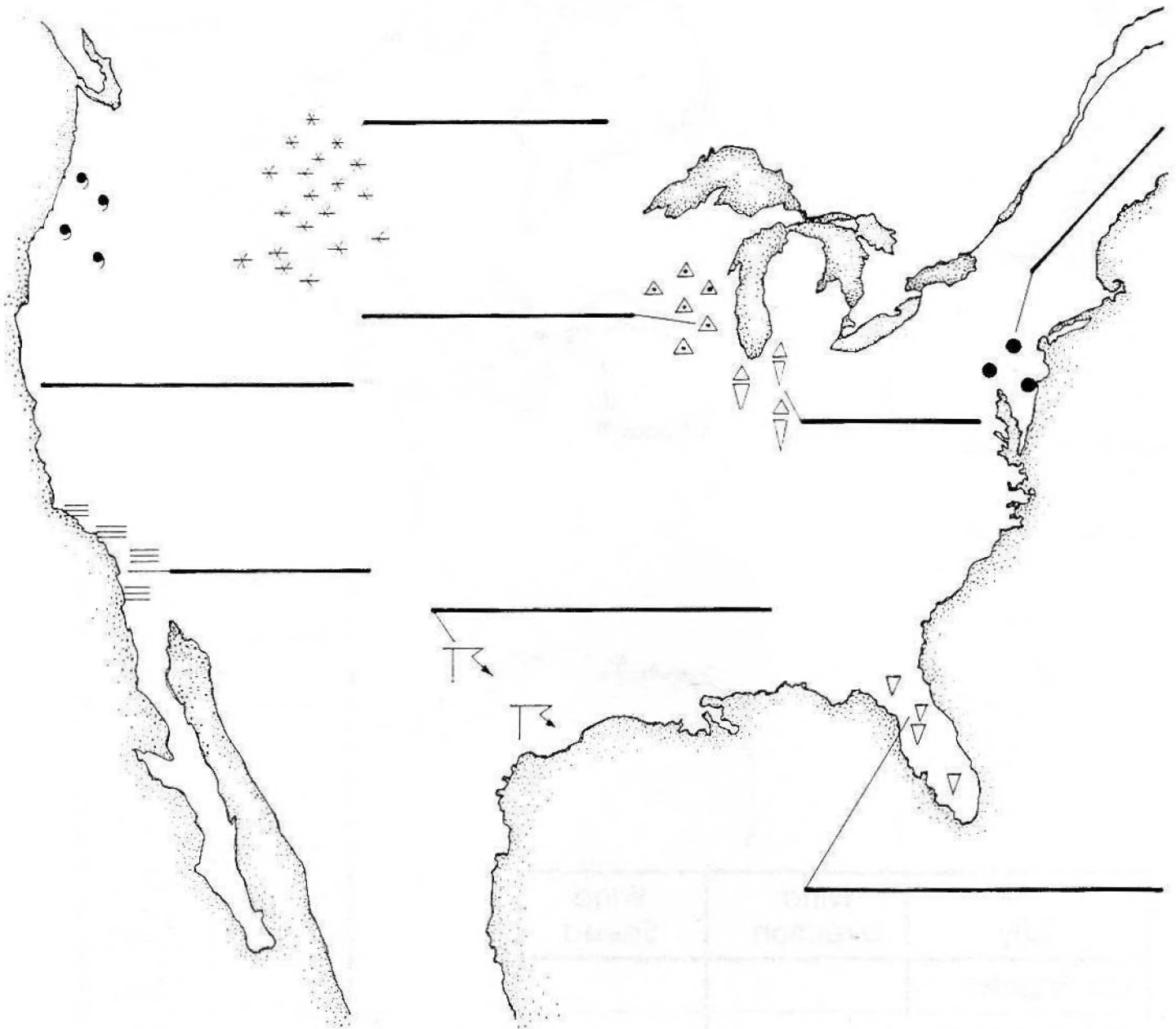
altostratus
stratus

cirrostratus
nimbostratus

You're All Wet!!!

Name _____

It's a wet day. The symbols on the weather map show eight different forms of precipitation occurring around the country. Label each form of precipitation.



WORD BANK

drizzle
shower

rain
fog

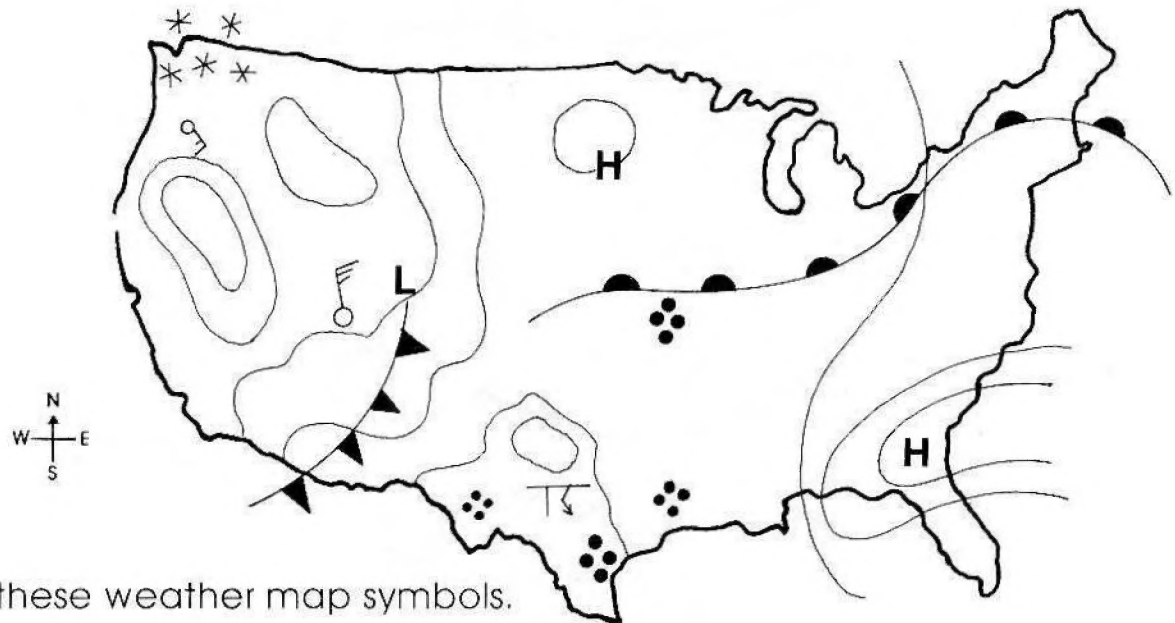
sleet
hail

snow
thunderstorm

Weather Map Symbols

Name _____

Weather maps, like the one on this page, provide data from which meteorologists prepare weather forecasts. To accurately read a weather map you must be able to understand the weather map symbols.



Label each of these weather map symbols.

	_____		_____
	_____		_____
	_____	H	_____
	_____	L	_____
	_____		_____
	_____		_____

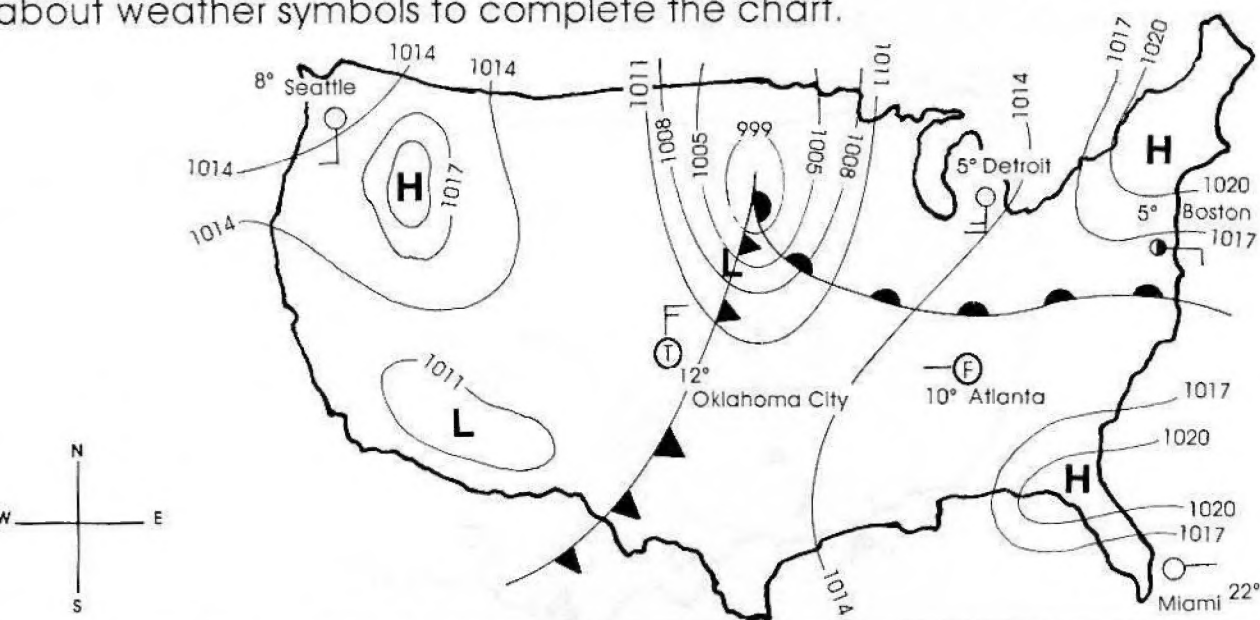
WORD BANK

- | | | | |
|--------------------------|---------------|------------------|----------------|
| rain | clear skies | thunderstorm | cloudy |
| snow | partly cloudy | cold front | occluded front |
| high pressure | warm front | stationary front | low pressure |
| wind speed and direction | | | |

Using a Weather Map

Name _____

Weather maps show the recorded weather conditions over a large geographic area. Use the map shown on this page along with what you have learned about weather symbols to complete the chart.



Cold front Warm front Occluded front Clear Rain Thunderstorm		Partly cloudy Snow Fog Hurricane Cloudy Freezing rain		Temperature (°C) West Wind Direction of Wind East Wind	
				Wind velocity (Km/h)	
0-1 2-5 6-12		13-18 19-28 29-38		39-50 51-61 62-74 75-87 88-101	

City	Temp.	Cloud Cover/ Weather Condition	Wind Velocity	Wind Direction
Seattle				
Atlanta				
Detroit				
Miami				
Oklahoma City				
Boston				

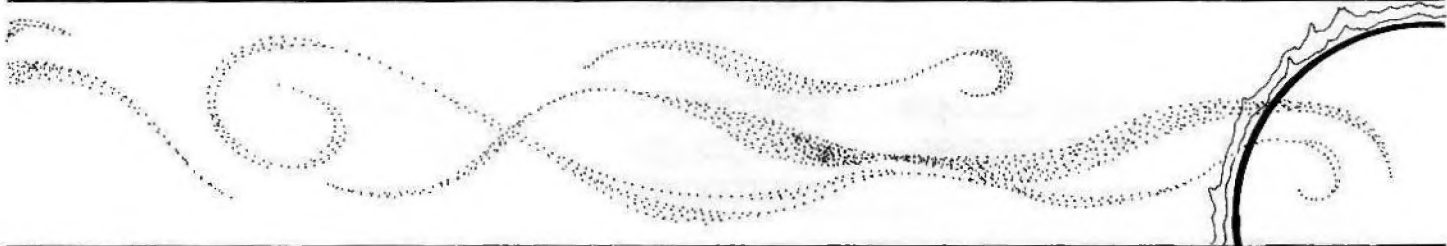
Tomorrow's Weather Forecast

Name _____

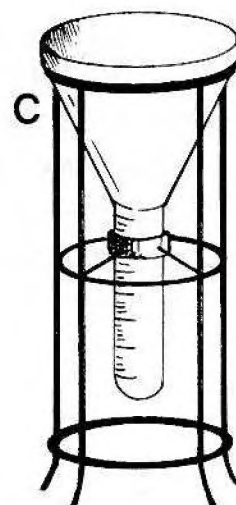
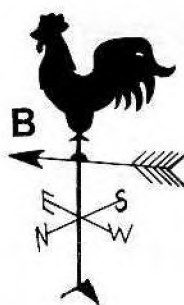
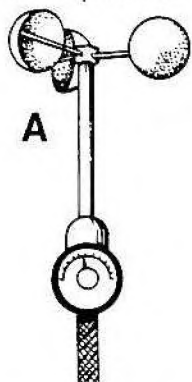


Check the accuracy of the weather forecasts in your area for the next week. Complete the chart by writing the forecast for "tomorrow's" weather and then recording the actual weather for that day. Indicate whether or not the forecast was accurate by circling yes or no.

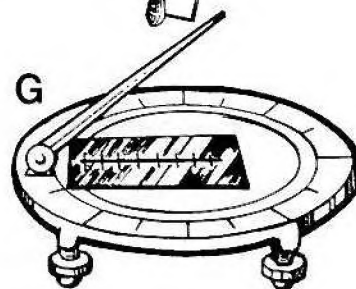
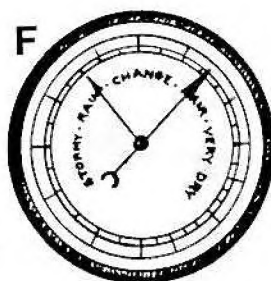
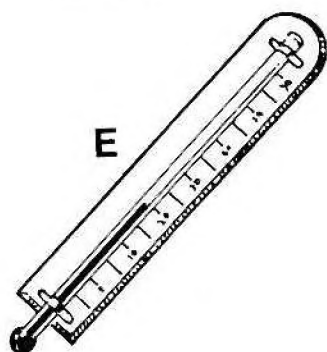
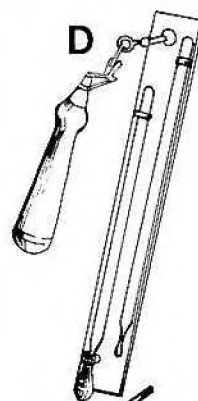
	Date	Temp. Range	Precipitation	Wind Speed	Wind Direction	Sky Condition	Accurate Forecast? (Circle.)
Forecast							Yes
Actual							No
Forecast							Yes
Actual							No
Forecast							Yes
Actual							No
Forecast							Yes
Actual							No
Forecast							Yes
Actual							No
Forecast							Yes
Actual							No
Forecast							Yes
Actual							No



Meteorologists use a variety of instruments to gather data. Many of these instruments are pictured below. Identify each instrument and tell what it measures.



	Weather Instrument	It Measures . . .
A		
B		
C		
D		
E		
F		
G		



WORD BANK

temperature
anemometer
weathervane
rain gauge
wind direction

relative humidity
thermometer
hygrometer
precipitation
cloud altitude and direction

atmospheric (air) pressure
barometer
nephoscope
wind speed

Sometimes even the weatherperson is puzzled by the weather, but don't let these weather terms puzzle you.

Across

3. Place where two air masses meet
5. Twisting funnel cloud
6. Rain that freezes as it falls
8. Scale used to measure wind speed
11. Measures air pressure
12. Measures wind direction and speed
13. Sound made by rapidly heating and expanding air caused by lightning
14. Layer clouds

Down

1. Cloudy weather occurs in _____-pressure areas.
2. Soft, white crystalline flakes
3. A thick, ground-level mist
4. Measures temperature
7. Precipitation is measured with a rain _____
9. Prediction of weather in the future
10. Calculates distance of clouds by echoing radio waves

WORD BANK

barometer	sleet	thermometer	stratus	fog
front	thunder	forecast	snow	Beaufort
anemometer	low	radar	tornado	gauge