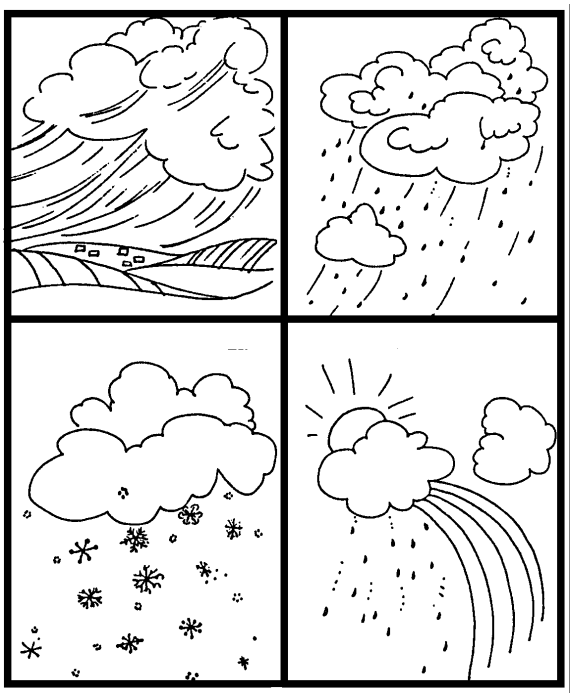
Water Cycle

The Earth's Gift

FIFTH GRADE

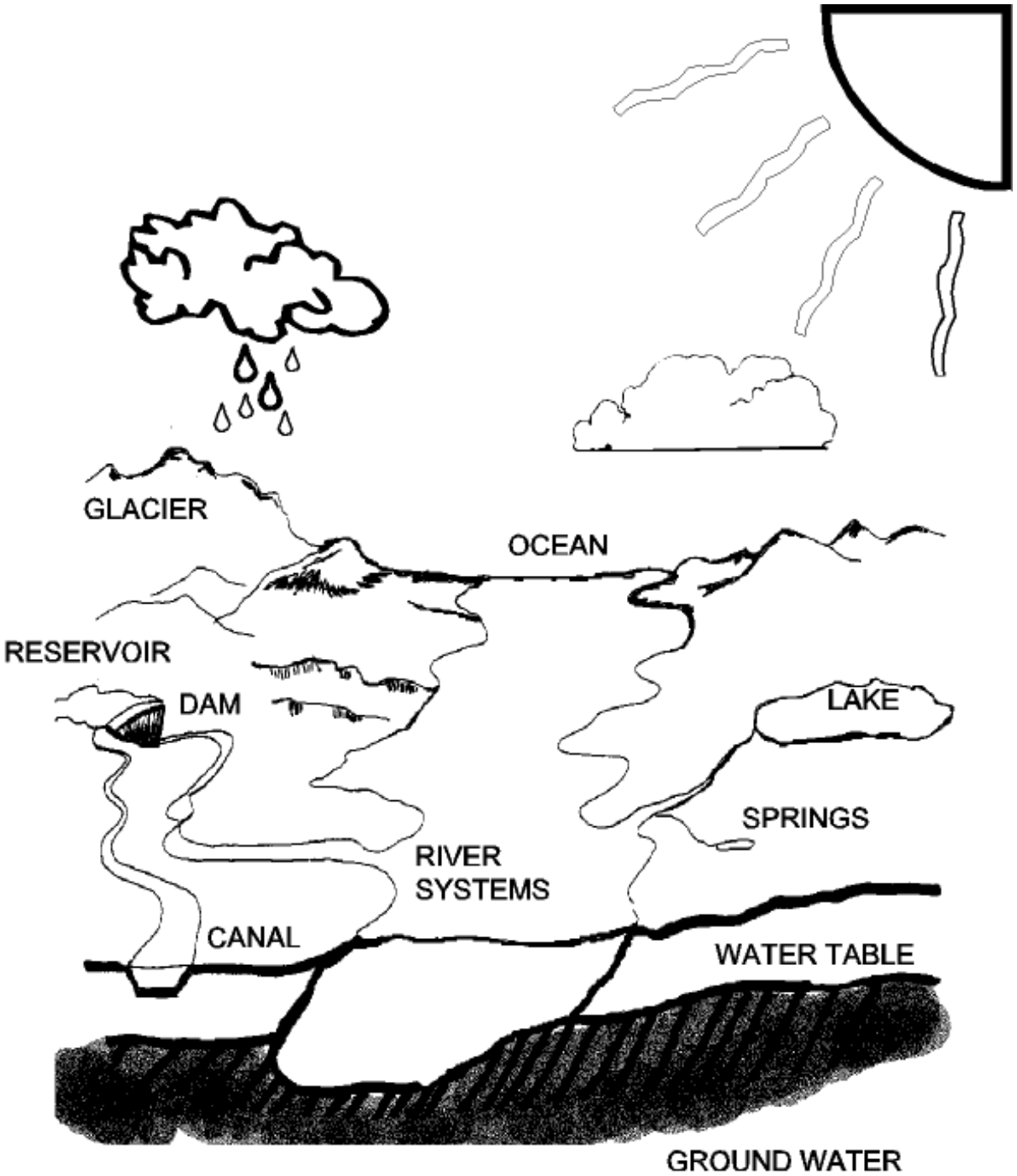
WORKBOOK



student _____

WATER CYCLE - WATER (5)
PRE

ILLUSTRATE THE WATER CYCLE BY USING AN ARROW TO SHOW THE DIRECTION OF THE MOVEMENT OF THE WATER. BE SURE TO LABEL BOTH EVAPORATION AND CONDENSATION.



WATER CYCLE - WATER (5)

PROBLEM: How can you remove oil from a spill that has occurred in water?

PREDICTION:_____

EXPERIMENT 1.

MATERIALS: plastic vials marked in fourths, ice water with yellow coloring, hot water with blue coloring, salt water with red coloring, oil

PROCEDURE:

1. Make a prediction of how you think the materials will layer. Draw a picture of your prediction in the space below.
2. Add each material to your vial in the order you predicted.
3. Add them slowly, one at a time.
4. Did it work? If not, try it again.
5. Make a drawing of the results and label the different layers, use colored pencils or crayons.

OBSERVATIONS:

PREDICTION	ACTUAL

EXPERIMENT 2.

MATERIALS AND PROCEDURE: Using a small dish of water, pour 1 tablespoon of oil onto it and try to figure out the best way to clean the oil spill. You have three items with which to clean it: soap, stick (non-absorptive), and paper, cotton swabs or some other absorptive material.

CONCLUSION: Which item cleaned the spill? (or could you clean it?)

_____

Describe how you were able to remove the oil.

_____

_____

WATER CYCLE - OCEANS (5)

1. List the elements that are a major constituent of seawater.

2. List the elements that are a minor constituent of seawater.

3. List the elements that are dissolved gases in seawater.

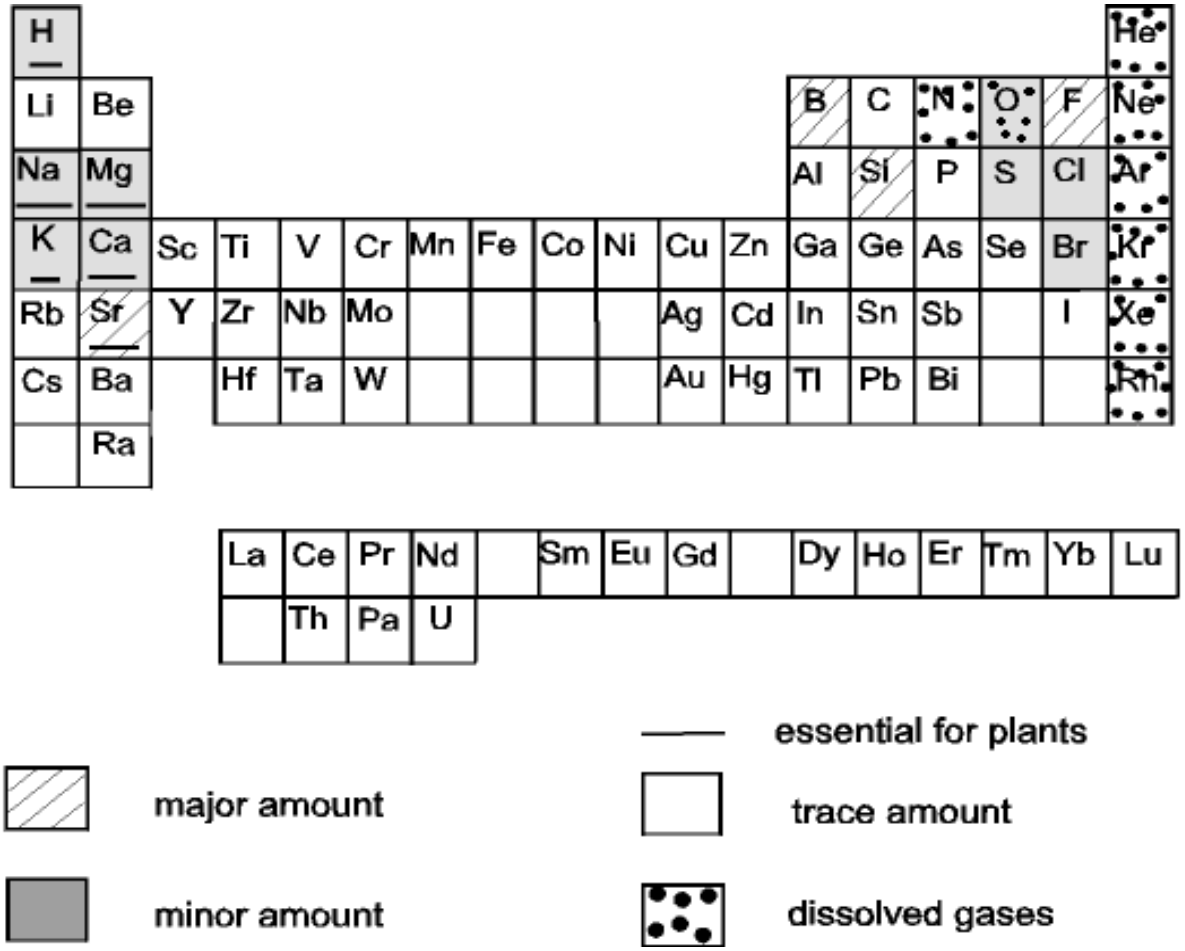
4. Which element is both a gases and a major constituent?

5 List the major basins.

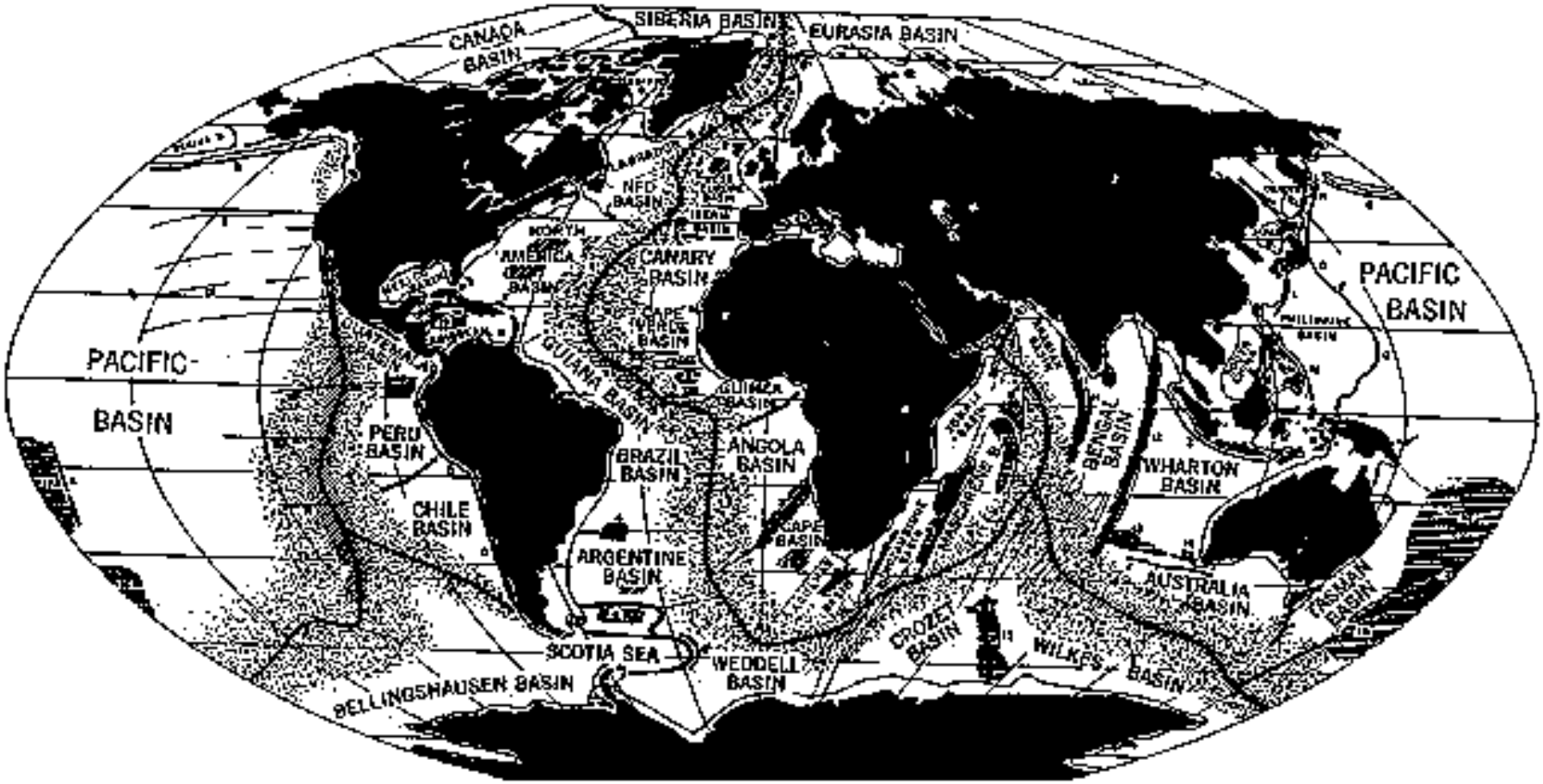
6. Which ocean has the longest chain of underwater mountains.

7. What are the lines going east to west in the eastern part of the Pacific Ocean? What causes these?

PERIODIC TABLE
ELEMENTS FOUND IN SEAWATER



WATER CYCLE - OCEANS (5)



WATER CYCLE - OCEANS (5)

PROBLEM: How can you find out if there are any important materials on the ocean floor?
PREDICTION:_____

EXERCISE 1. **MATERIALS:** echo soundings

1. What is the location of your map? _____

2. What features can you see on the ocean floor? _____

3. How did you recognize and know what those features were?
_____

EXERCISE 2. **MATERIALS:** dredge samples, magnifying glass or microscope

PROCEDURE: Using your magnifying glass or microscope, describe and identify as many items as you can in each sample. Be sure to include size, color, and shape. Be specific!

SAMPLE LOCATION	DESCRIPTION	PREDICT IMPORTANCE
1.		
2.		
3.		
4.		

CONCLUSION: Is there anything of value under the oceans? Explain.
_____

WATER CYCLE - OCEANS (5) POST

1. Can you locate seven bridges? If you live in the San Francisco Bay can you name them?

_____
_____
_____

2. How many bays can you find? Name them. Which is the largest?

_____
_____

3. What is a peninsula? Is there on this map?

_____

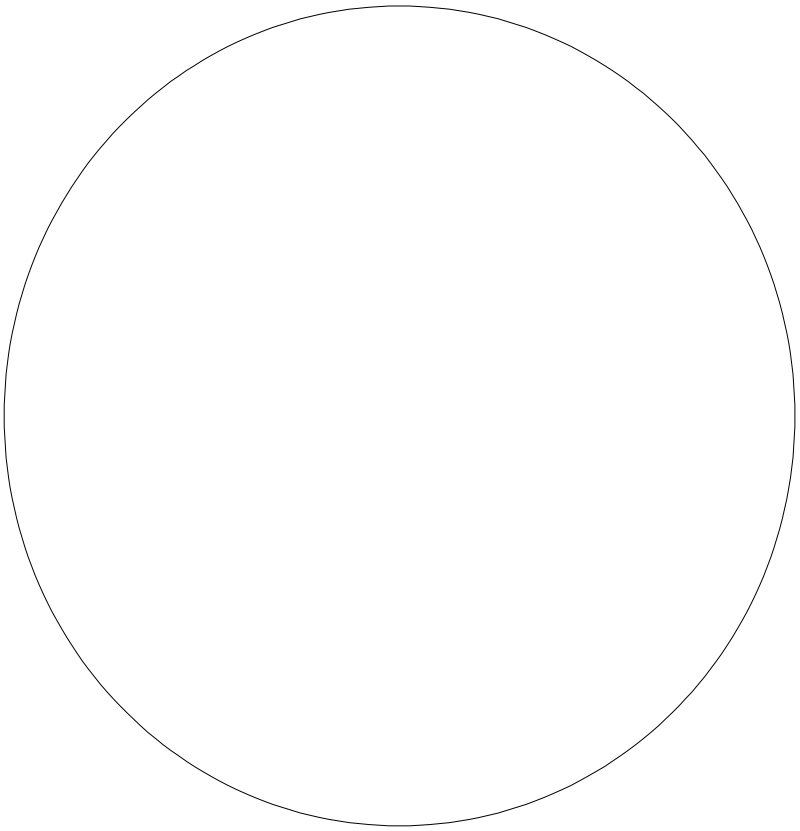
4. Where is there brackish water? _____
5. Where is there true ocean water? _____
6. Where is there fresh water? _____
7. Where are there salt marshes? _____

San Francisco Estuary System

COMPONENTS OF AIR

The following is a table of the percentage of the different compounds and elements found in air at the surface of the Earth. Make a pie chart of the percentage. Make a legend. Think about how you can represent the gases that are a very small percentage of the total.

Nitrogen (N)	78.03%
Oxygen (O)	20.99%
Argon (Ar)	.94%
Carbon dioxide (CO_2)	.035 -.04%
Hydrogen (H)	.01%
Neon (Ne)	.012%
Helium (He)	.0005%
Krypton (Kr)	.0001%
Ozone (O_3)	.00006%
Xenon (Xe)	.000009%



WATER CYCLE - ATMOSPHERE (5)

PROBLEM: How is air polluted?

PREDICTION:_____
_

CAREFULLY DO THESE EXPERIMENTS: LISTEN TO YOUR INSTRUCTOR

EXPERIMENT 1.

MATERIALS: beaker or glass jar, candle, matches, tray, water

1. Place the candle in the middle of the tray.
2. Pour water to cover about 1 cm of the tray.
3. Light the candle and cover it with the jar.
4. Watch the water level as the flame goes out.

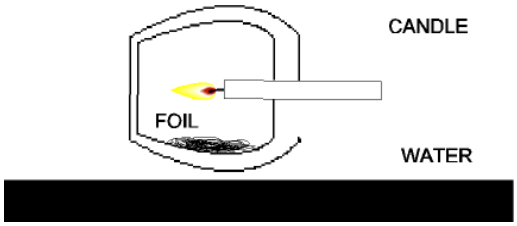
Describe what happens. _____
_____

DO THE FOLLOWING EXPERIMENTS OVER THE TRAY WITH WATER.

EXPERIMENT II.

MATERIALS: candle, jar, foil, tray, water

1. Place a candle inside a horizontally held jar with aluminum foil below the candle.
2. Hold the candle horizontally in the jar.
3. Let it burn for 1 minute.
4. Cool the bottle, then see if you have residue in the bottle.



What did you find?

_____
_____

EXPERIMENT III.

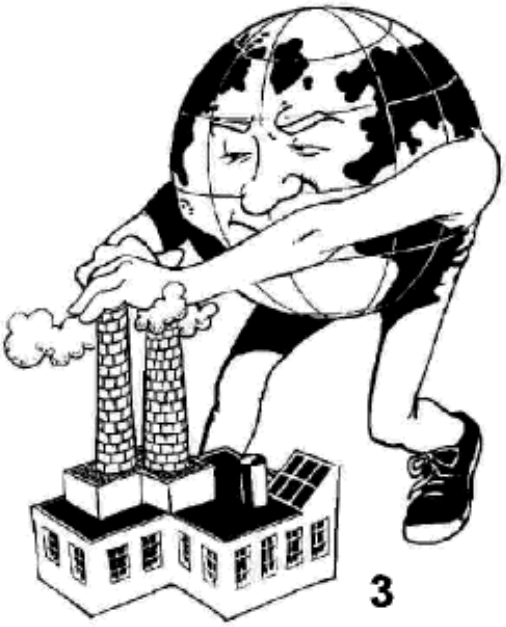
With the same jar, put a few pieces of leaves on the bottom of the jar. After your instructor approves, place a match or candle to the leaves. What happens?

_____

CONCLUSION: Does all burning create pollution?_____
_____

WATER CYCLE - ATMOSPHERE (5)

1



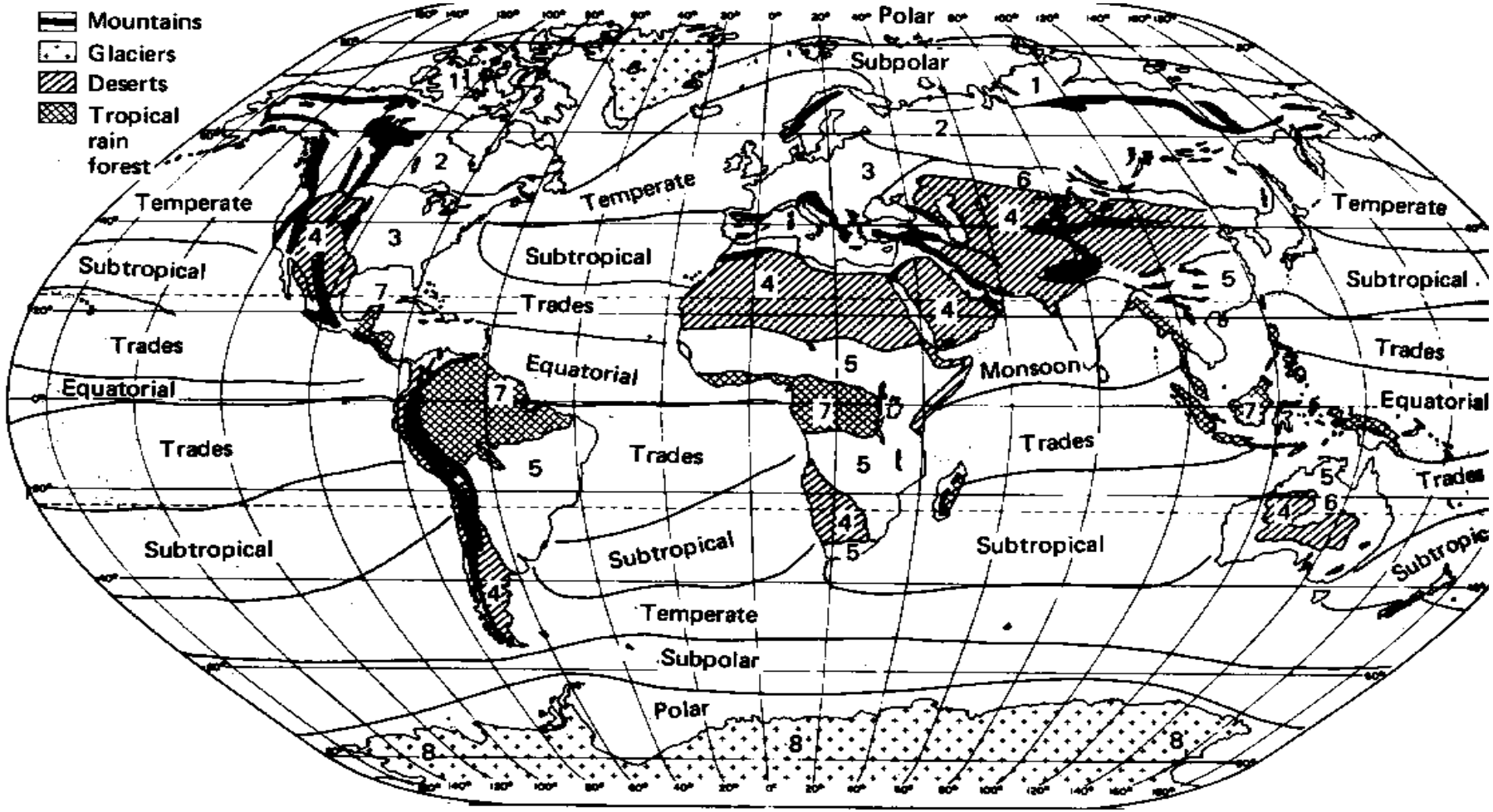
3

2

4

5

CLIMATIC ZONES OF WORLD OCEANS AND CONTINENTS



WATER CYCLE - WEATHER (5)

PROBLEM: Do cloud types determine weather patterns?

PREDICTION: _____

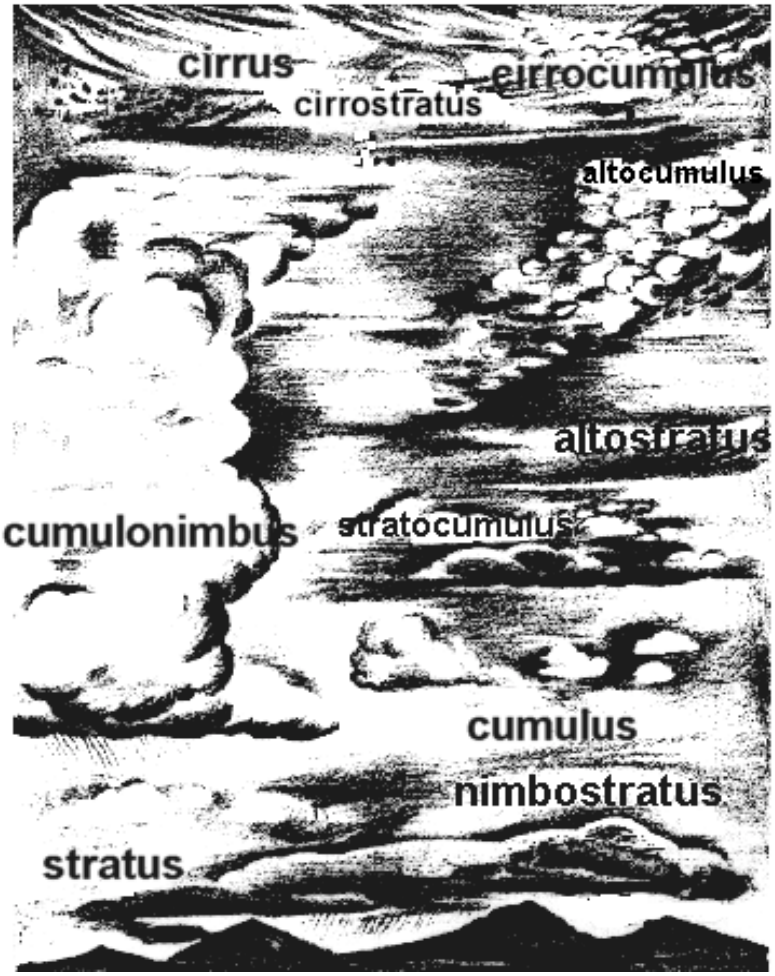
PROCEDURE:

MATERIALS: cloud type sheets (2) glue

Using the cloud type sheets, try to classify the pictures into the major types of clouds. Your instructor will go over the meaning of each of the clouds. Use the diagram to help you. Glue the cloud pictures on another sheet of paper with the correct name under each group.

Glue them in the order that they may be seen in the troposphere.

Describe the clouds that are outside today.



CONCLUSIONS: How many cloud types were your able to find? Name them.

_____

Which clouds are more likely to cause a weather change?

_____

WATER CYCLE - WEATHER (5)

1

2

3

4

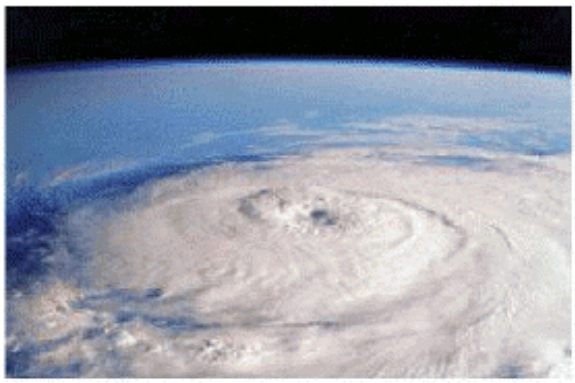
5

6

7

8

9



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11

12

13