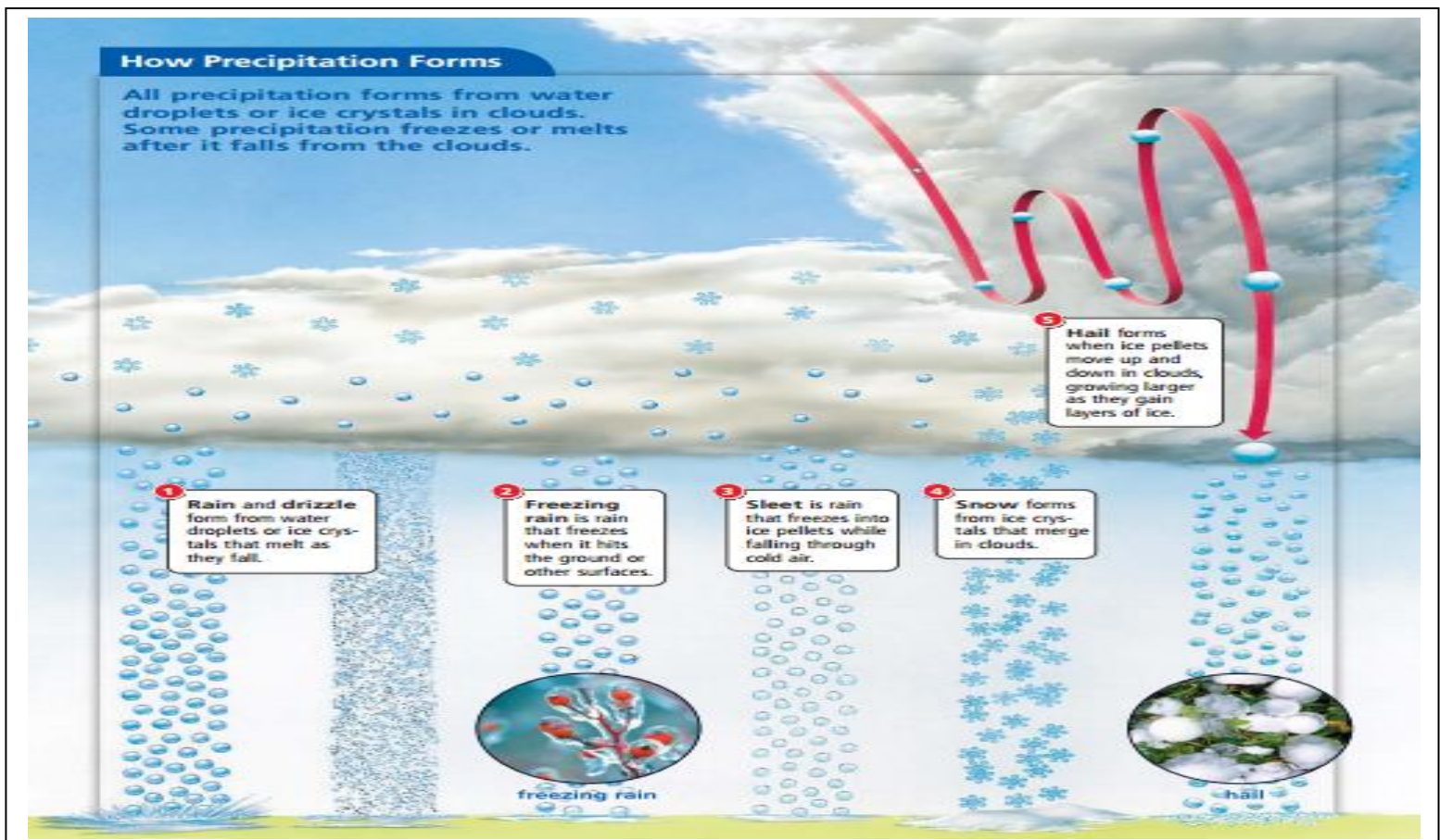
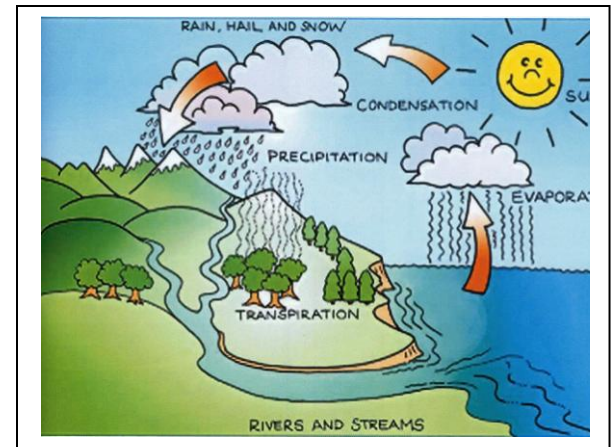


6-4.2 WEATHER STUDENT PACKET

- WEATHER WARM UPS
- WEATHER VOCABULARY
- WATER CYCLE
- GROUNDWATER
- RAIN GAUGE



WARM UPS- Week of

Day 1 Warm Up-MATCHING THE WATER CYCLE

1. Precipitation: _____
2. Run-Off: _____
3. Ground Water: _____
4. Transpiration: _____
5. Evaporation: _____
6. Condensation: _____
7. Dew: _____
8. Frost: _____

- A: Happens in the atmosphere as water vapor changes to water droplets
 B: When water vapor condenses directly onto a surface
 C: After condensation occurs (forming clouds), water droplets fall in various forms
 D: Water will sink into the ground when the surface is porous and there is lots of space in the soil to hold the water.
 E: Water enters the atmosphere as water vapor
 F: If precipitation falls on land surfaces, it always attempts to move back toward sea level
 G: When water vapor changes from gas directly to ice crystals on a surface
 H: Plants releasing water vapor

Day 2 Warm Up-Matching The Water Cycle

1. Any type of solid or liquid water that falls to Earth's surface is called
 A. precipitation B. dew C. monsoon D. humidity
2. Which of the following can be described as a liquid changing into a gas?
 A. insulation B. condensation C. respiration D. evaporation

3. Which of the following can be described as a gas changing into a liquid?
 A. insulation B. condensation C. respiration D. evaporation
4. Which of the following freezes into ice pellets while falling through cold air?
 A. rain B. freezing rain C. sleet D. hail

Day 3-Warm Up-Review Your Water Cycle Vocabulary

Precipitation:

Run-Off:

Ground Water:

Transpiration:

Evaporation:

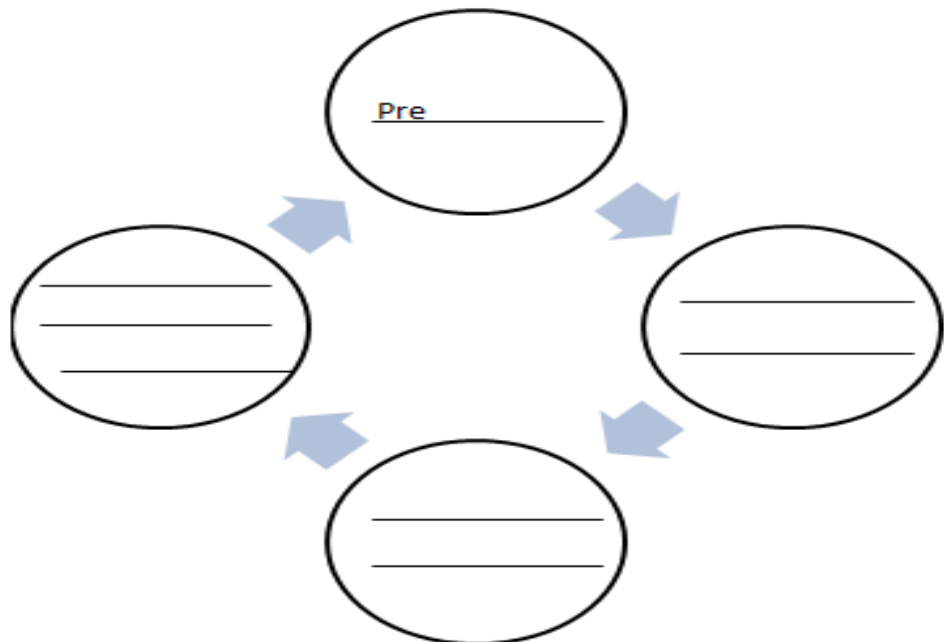
Condensation:

Dew:

Frost:

Day 4 Warm Up- Use the following words to show the correct order of the water cycle:

Precipitation, Frost, Run-Off, Condensation, Ground Water, Dew, Transpiration, Evaporation



Day 5 Warm Up-Prepare for Quiz

Weather Vocabulary Standard 6-4.2

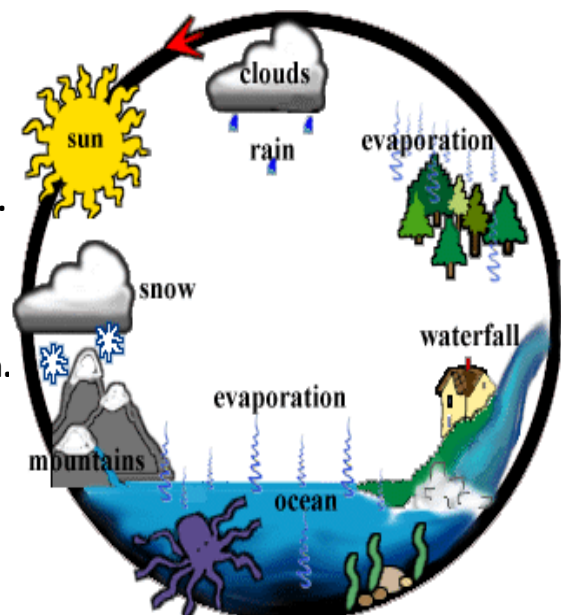
6-4.2 Summarize the interrelationships among the dynamic processes of the water cycle (including precipitation, evaporation, transpiration, condensation, surface-water flow, and groundwater flow).

1. Water cycle	Water that is always moving between the atmosphere (troposphere) and the surface of Earth.
2. Precipitation	Water that falls in various forms – rain, snow, freezing rain, sleet, or hail.
3. Evaporation	Water enters the atmosphere as water vapor through evaporation.
4. Transpiration	Water enters the atmosphere as water vapor through transpiration (plants releasing water vapor).
5. Condensation	Happens in the atmosphere as water vapor changes to water droplets. <i>Clouds form as a result of condensation!</i>
6. Dew	Forms when water vapor condenses directly onto a surface (grass, pavement, etc.)
7. Frost	Forms when water vapor changes from gas directly to ice crystals on a surface when the temperature at which condensing would take place is at the freezing point or below.
8. Run-off	The flow of water that occurs when excess storm water, melt water, or other sources flows over the earth's surface.
9. Surface-water Flow or Groundwater Flow	if precipitation falls on land surfaces, it always attempts to move back toward sea level as <i>surface-water flow</i> or <i>groundwater flow</i> . The surface that receives the precipitation determines its flow back towards sea level. Examples are: Water will remain on the surface when the surface is not porous or the precipitation is falling too fast for the water to sink into the ground. Water will sink into the ground when the surface is porous and there is lots of space in the soil to hold the water.
10. Porous	A lot of space and holes in the soil to hold water.

The Water Cycle, Oh Yeah! Chant

by Mrs. Massey☺

Water travels in a cycle, oh yeah.
 Water travels in a cycle, oh yeah.
 It goes up as **EVAPORATION**.
 It forms clouds and **CONDENSATION**.
 It falls down as **PRECIPITATION**, oh yeah.
 So when you are lookin' up into the sky.
 And a rain drop is fallin' in your eye.
 Just remember where it's been.
 Maybe last week when you took a swim.
 It's the water cycle my-oh-my!
 Water travels in a cycle, oh yeah.
 Water travels in a cycle, oh yeah.
 It goes up as **EVAPORATION**.
 It forms clouds and **CONDENSATION**.
 It falls down as **PRECIPITATION**, oh yeah.





Exploration

STUDENT worksheet

Name _____

Date _____

Energy Transfer and the Water Cycle

Overview

In this Exploration you will label the states and movement of water as it journeys through the water cycle. Then you will watch an animated model of the cycle.

Questions

1. What happens to water on the Earth's surface as it is heated by the sun? What is this process called? _____
2. What is the relationship between convection and condensation? _____

3. What happens as precipitation sinks into the earth? _____
4. How does water return to the ocean? _____

How to Use This Exploration

1. Read the Introduction and click the Continue button.
2. Identify the Exploration components.
3. Drag each label on the left to its appropriate place in the water cycle.
4. When you have labeled all the water states and movements in the water cycle, click the Play button to watch an animated model of the cycle.
5. Read the text as you watch the animation.

Data

This Just In! News Report Activity!

After completing the ENERGY TRANSFER AND WATER CYCLE ACTIVITY (from Discovery Ed Tech Book), you and your team of reporters are going to put together a short video news report about the information that you just learned. Each member of your group should write down at least **four** facts that you learned from the activity. Share your ideas with your group and then use the SHOWME or SCREENCHOMP app on your iPad to create your breaking news report. We will then play “musical chairs” to walk around and see each table’s best presentation!



Name of Team Reporters

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

Four Facts about the Energy Transfer and the Water Cycle

1. _____

2. _____

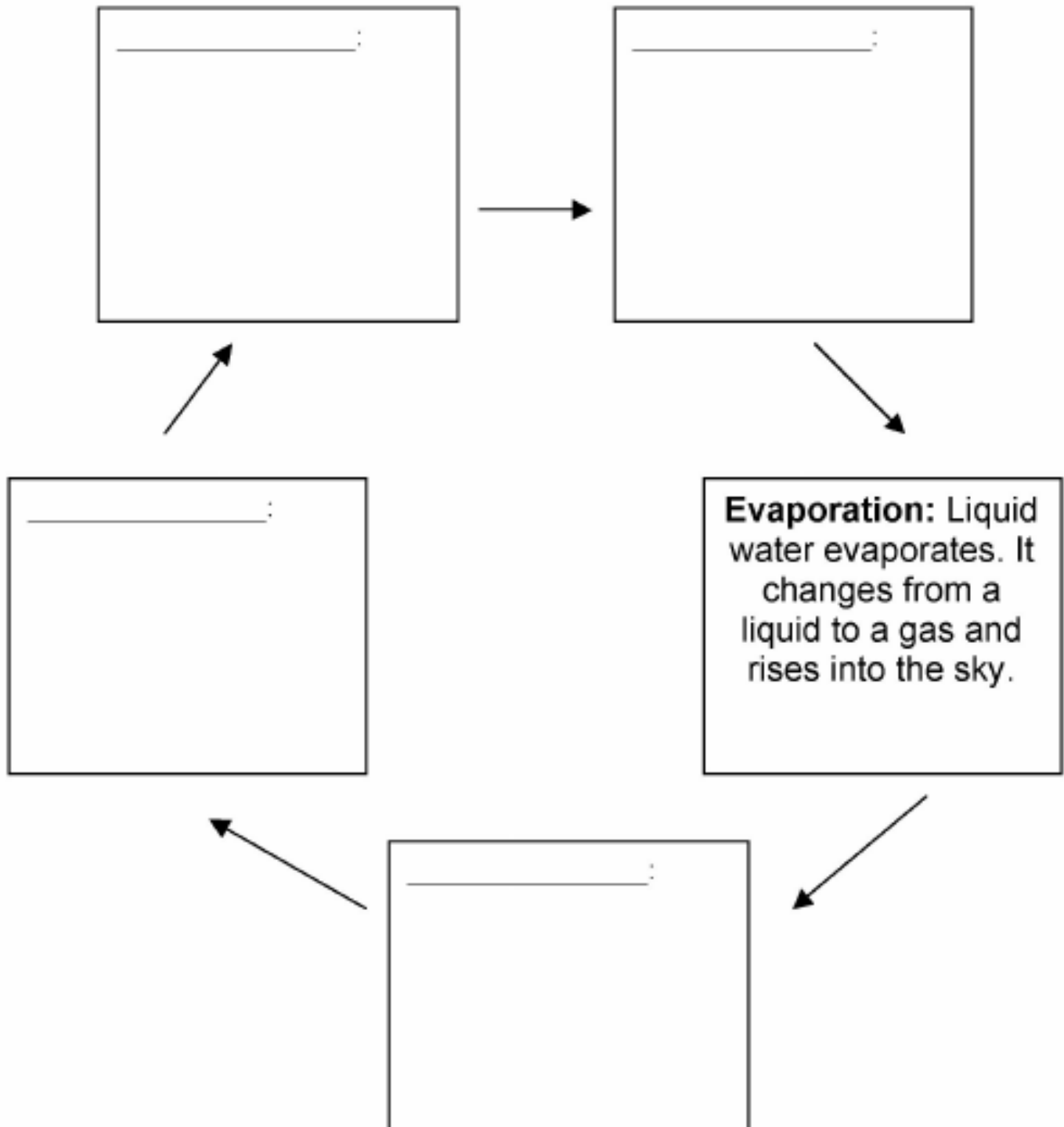
3. _____

4. . _____

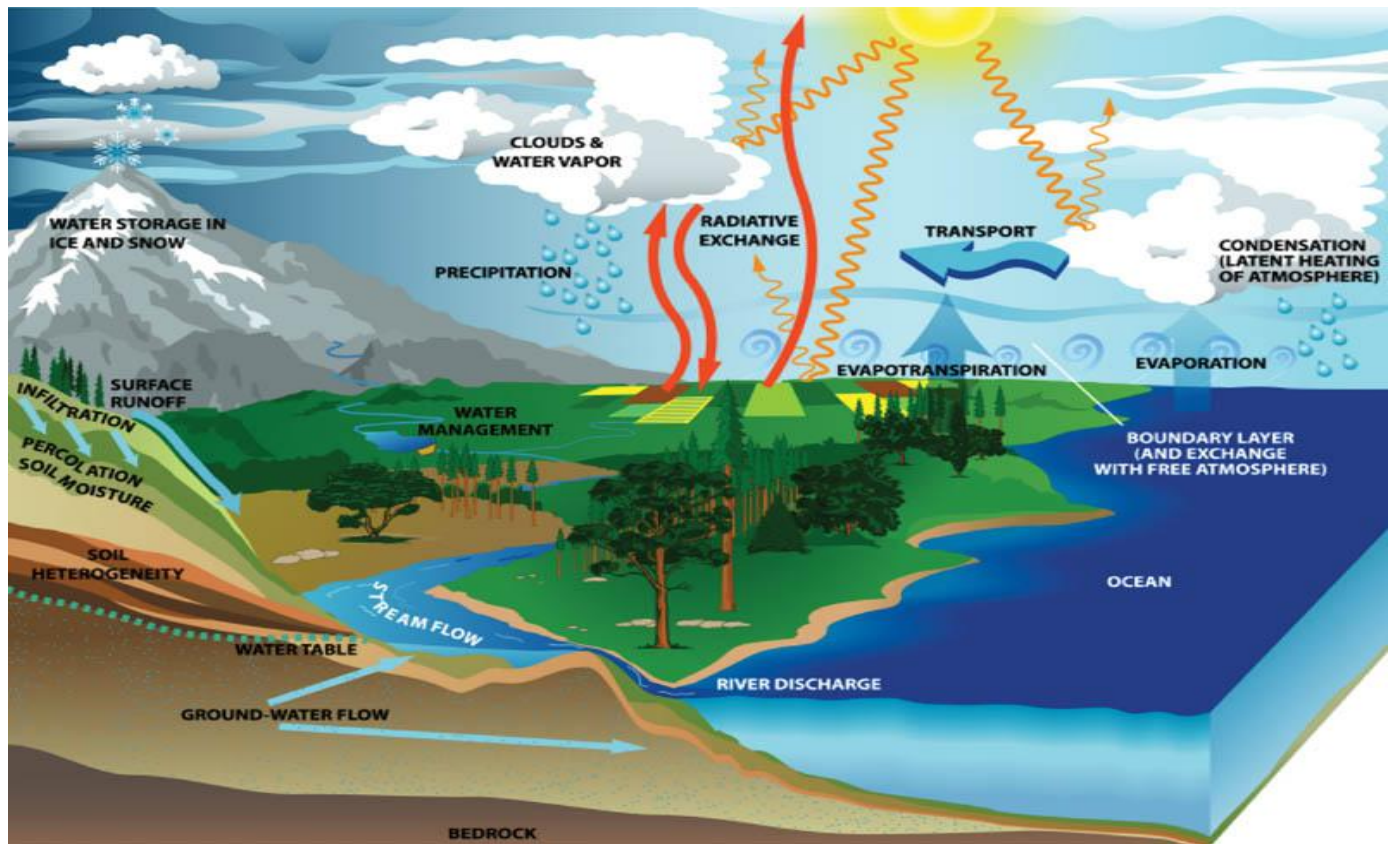
Putting the Water Cycle in Perspective

Fill in the missing steps in the water cycle. On the blank lines, give each step a title and describe the step in the space.

Titles to use: Precipitation, Heating, Cloud Formation, Water Collection.

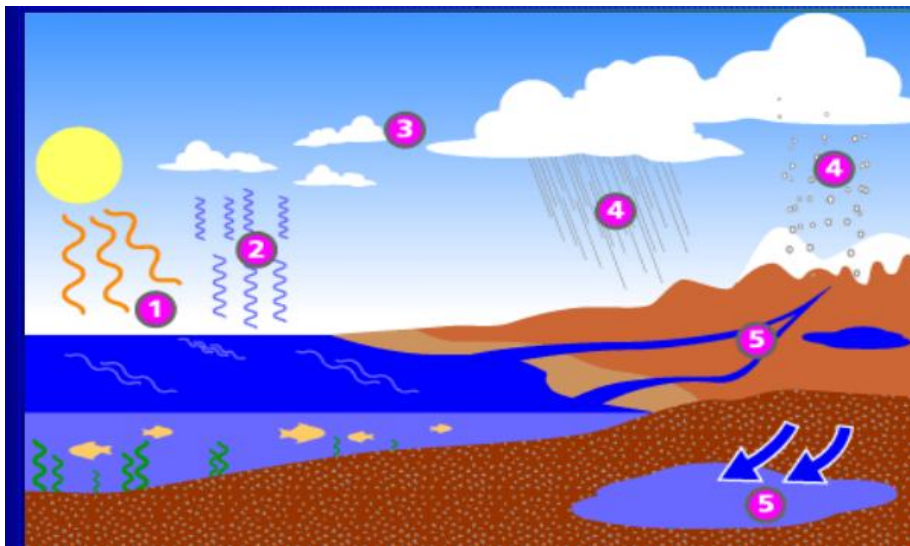


The Water Cycle



Label the following picture using these words:

Precipitation, Run-Off, Ground Water, Transpiration, Evaporation, Condensation, Solar Energy



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

Water in the Air

Vast amounts of Earth's water are recycled. The oceans hold most of the water. Water is also stored in lakes, rivers, and ice sheets; in plants; and underground. Energy from sunlight causes molecules to evaporate from the surface of a body of water. These molecules become part of the air in the form of water vapor.

As air rises in the atmosphere, it cools. The loss of heat causes water vapor to condense into tiny water droplets or ice crystals. If the droplets or crystals grow and become heavy enough, they fall as rain, snow, sleet, or hail. Any type of liquid or solid water that falls to Earth's surface is called **precipitation**. Earth's water goes through a never-ending cycle of evaporation, condensation, and precipitation.

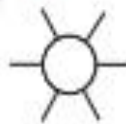
Water vapor can also condense on solid surfaces. Have you ever gotten your shoes wet while walking on grass in the early morning? The grass was covered with dew, which is water that has condensed on cool surfaces at night. If the temperature is cold enough, water vapor can change directly into a covering of ice, called frost.



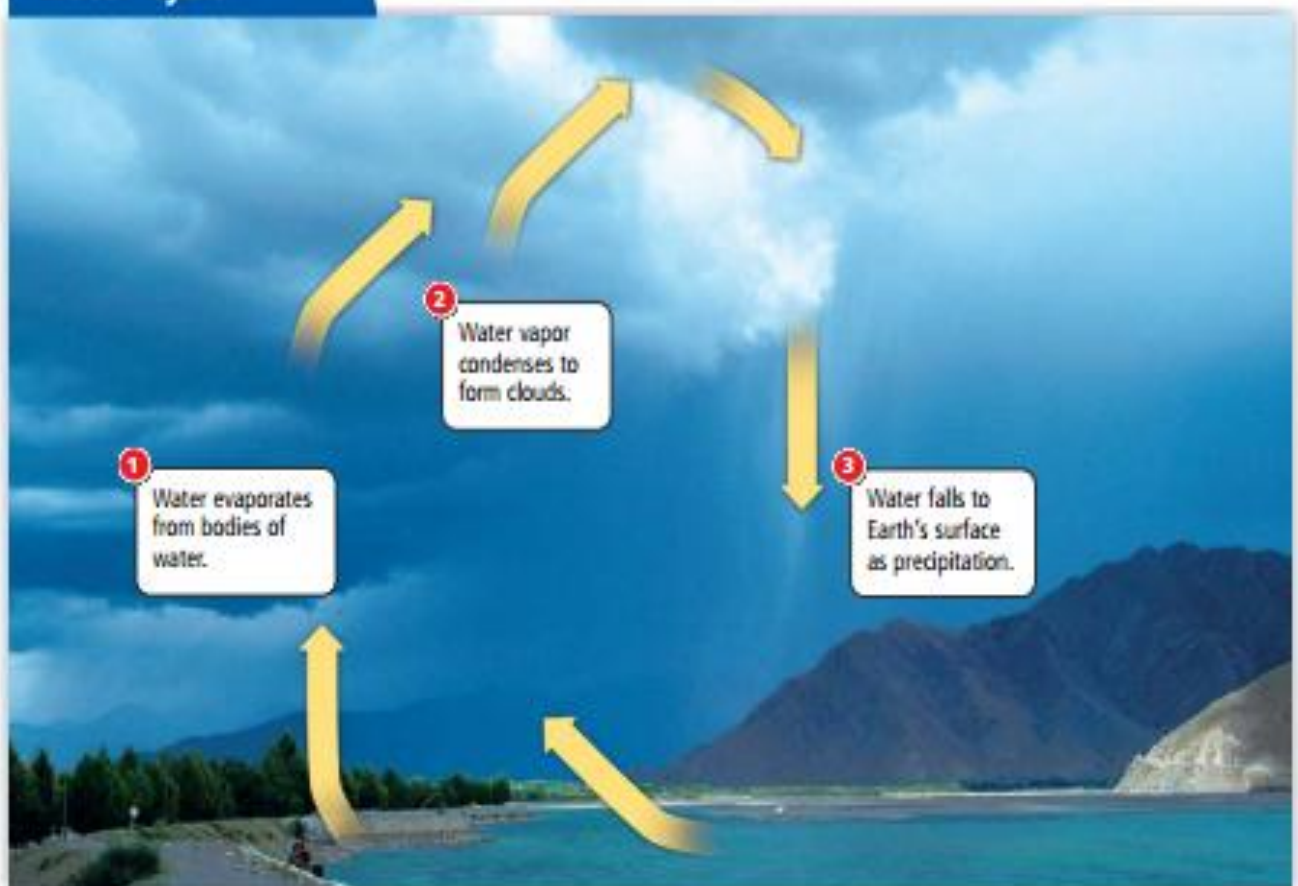
CHECK YOUR READING Summarize the way water moves in the water cycle. For each part of the cycle, specify whether water exists as a gas, liquid, or solid.

VOCABULARY

Add a description wheel for *precipitation* to your notebook.



Water Cycle



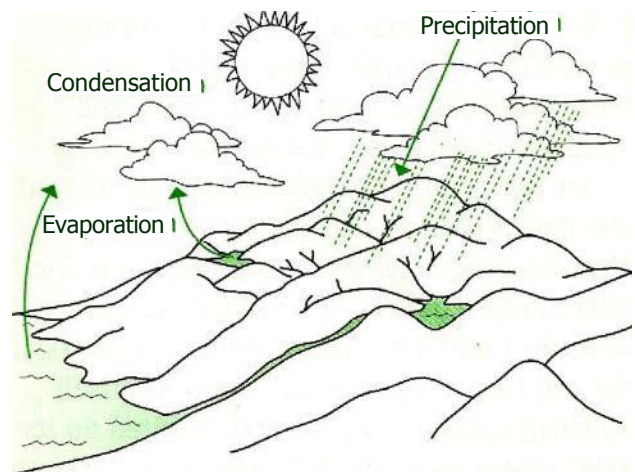
The Water Cycle

What processes make up the water cycle?

Driven by the sun's energy, water constantly circulates between Earth's surface and the atmosphere. This movement is called the **water cycle**. It has three main processes that drive all **weather** on Earth: evaporation, condensation, and precipitation.

Evaporation When energy from the sun heats water at Earth's surface, the water can change from a liquid to a gas. This gas is called **water vapor**. The process of changing matter from a liquid to a gas is called **evaporation**. Water vapor rises into the atmosphere.

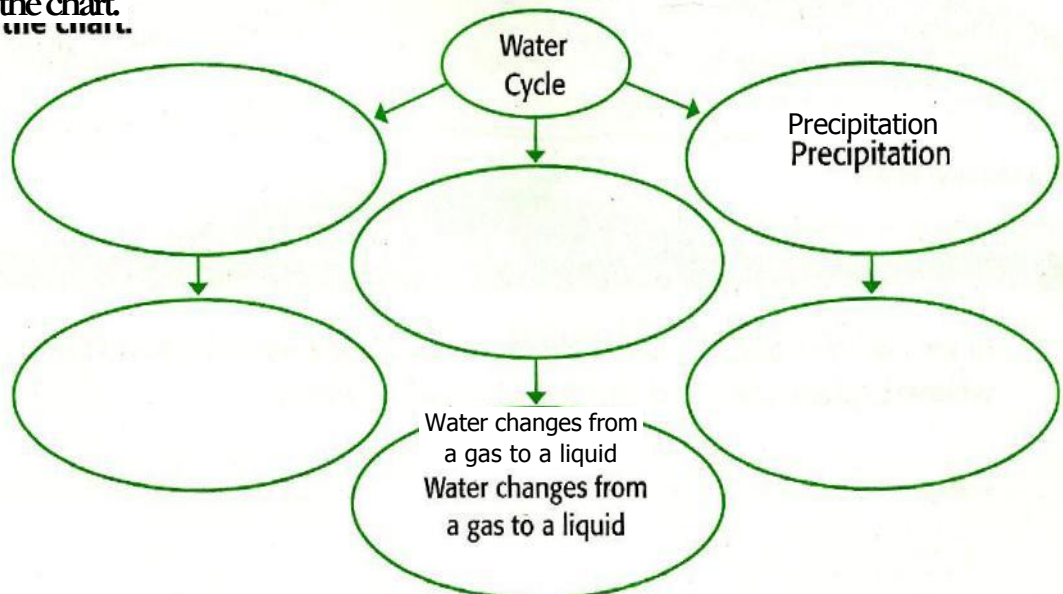
Condensation When a gas cools, it condenses and becomes a liquid. This change is called **condensation**. Recall that temperatures in the troposphere decrease with altitude. As water vapor rises in the air, it cools and condenses to form tiny droplets of water. Large masses of these droplets form **clouds**.



Precipitation Water droplets in clouds tend to collide with one another, forming larger droplets. When droplets become too heavy to be held up by air, they fall to the ground as precipitation. **Precipitation** is any form of water that falls from clouds to Earth's surface. Rain, snow, sleet, and hail are all forms of precipitation. Air temperature close to Earth's surface determines which type of precipitation

Show What You Know

Complete the chart.
Complete the chart.



Water Cycle & Ground Water Study Guide

Temperature variations within clouds and/or within the region between the cloud and Earth allows for the various forms of _____.

List the (5) forms of precipitation:

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

Name the parts of the water cycle and one thing you remember about it:

1. Evaporation/Transpiration: _____
2. Condensation: _____
3. Precipitation: _____
4. Run-off: _____

If precipitation falls on land surfaces, it always attempts to move back towards where? _____

What are the forms that it takes to move there?

1. _____
2. _____

What does it mean when the ground is porous? _____

What does it mean when the ground is non-porous? _____

What is water that sinks underground that will be filtered and cleaned called? _____

What is frost? _____

What is dew? _____

What is it called when plants release water vapor? _____

What state of matter is water vapor? (Circle one) solid liquid gas plasma

What does condensation form? _____

Water is always moving between the atmosphere in what layer? _____

What is a hydrologist? _____

What is a meteorologist? _____

What is a climatologist? _____