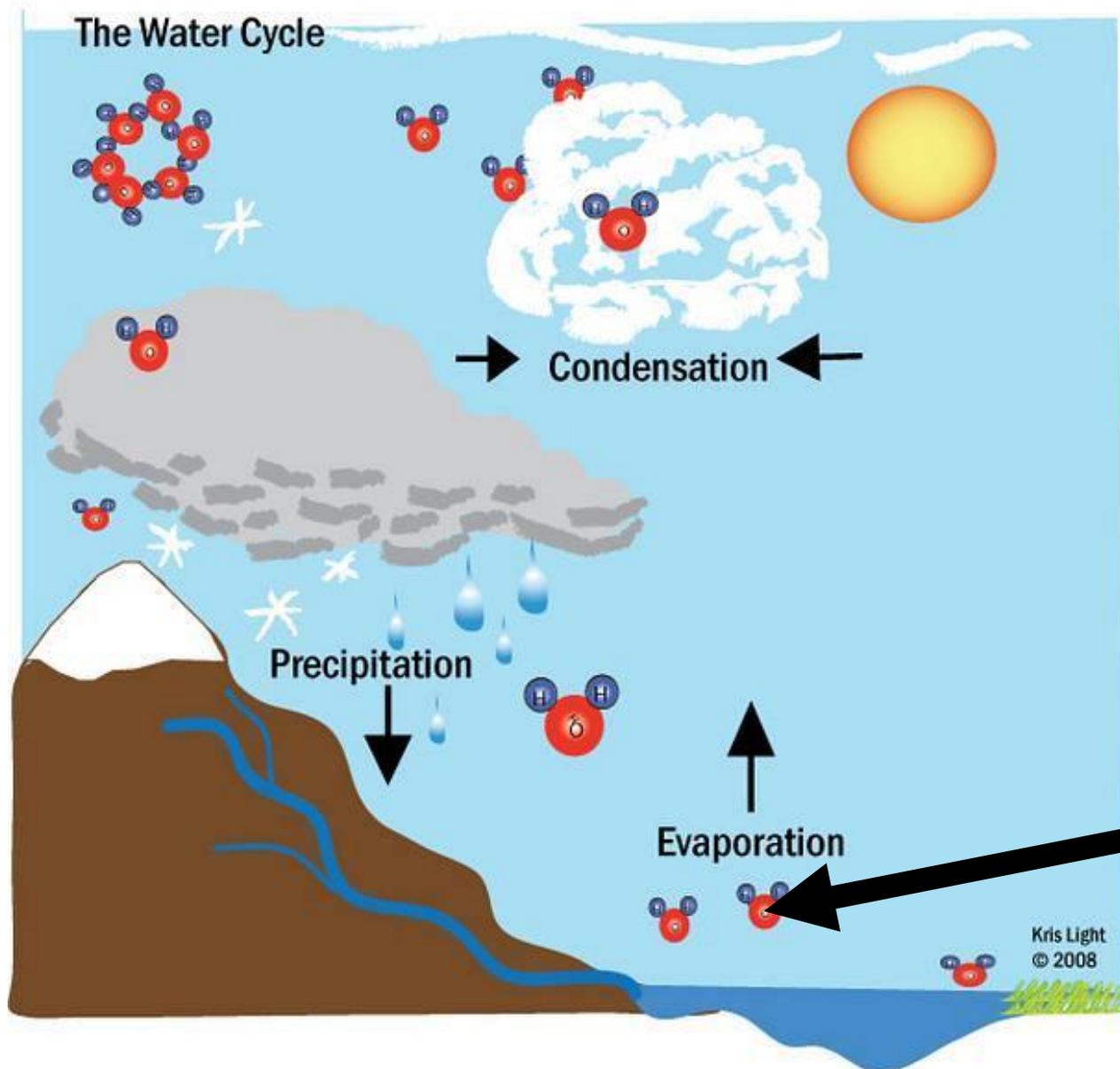


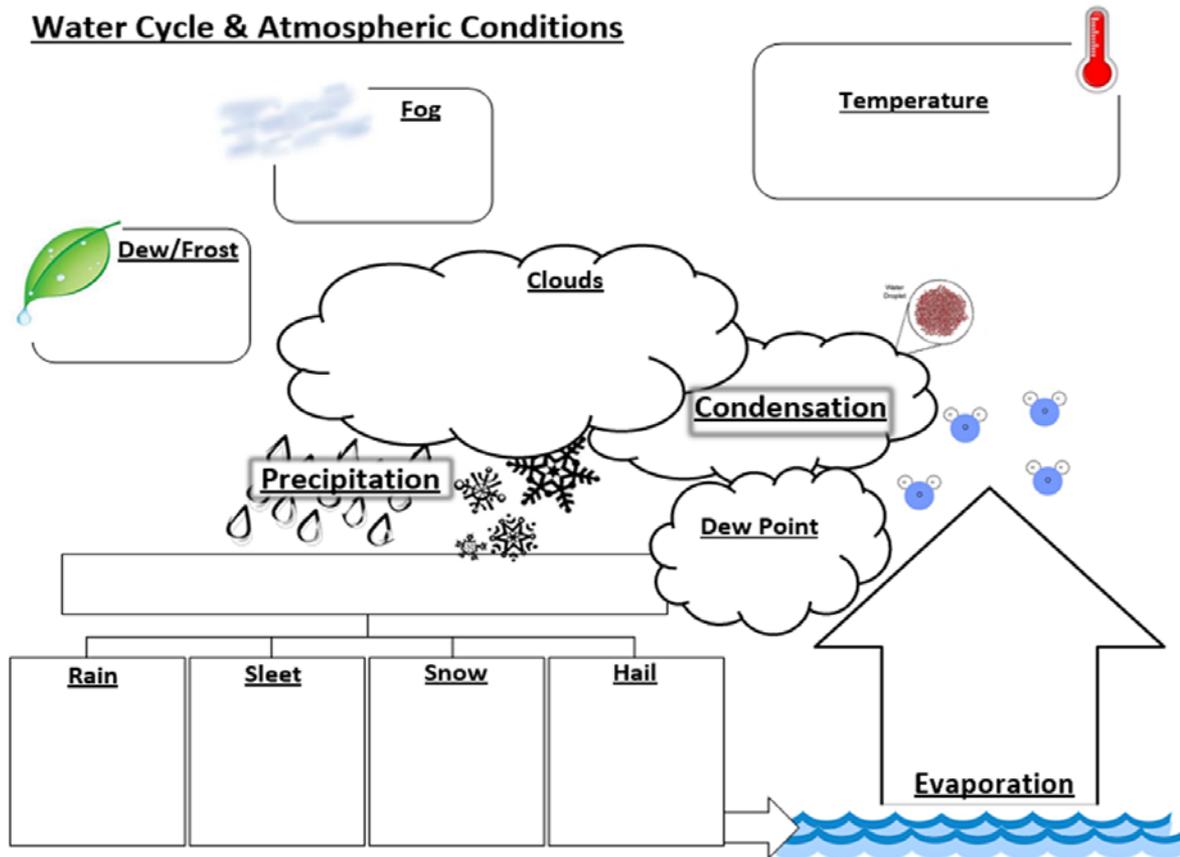
# Remembering the Water Cycle



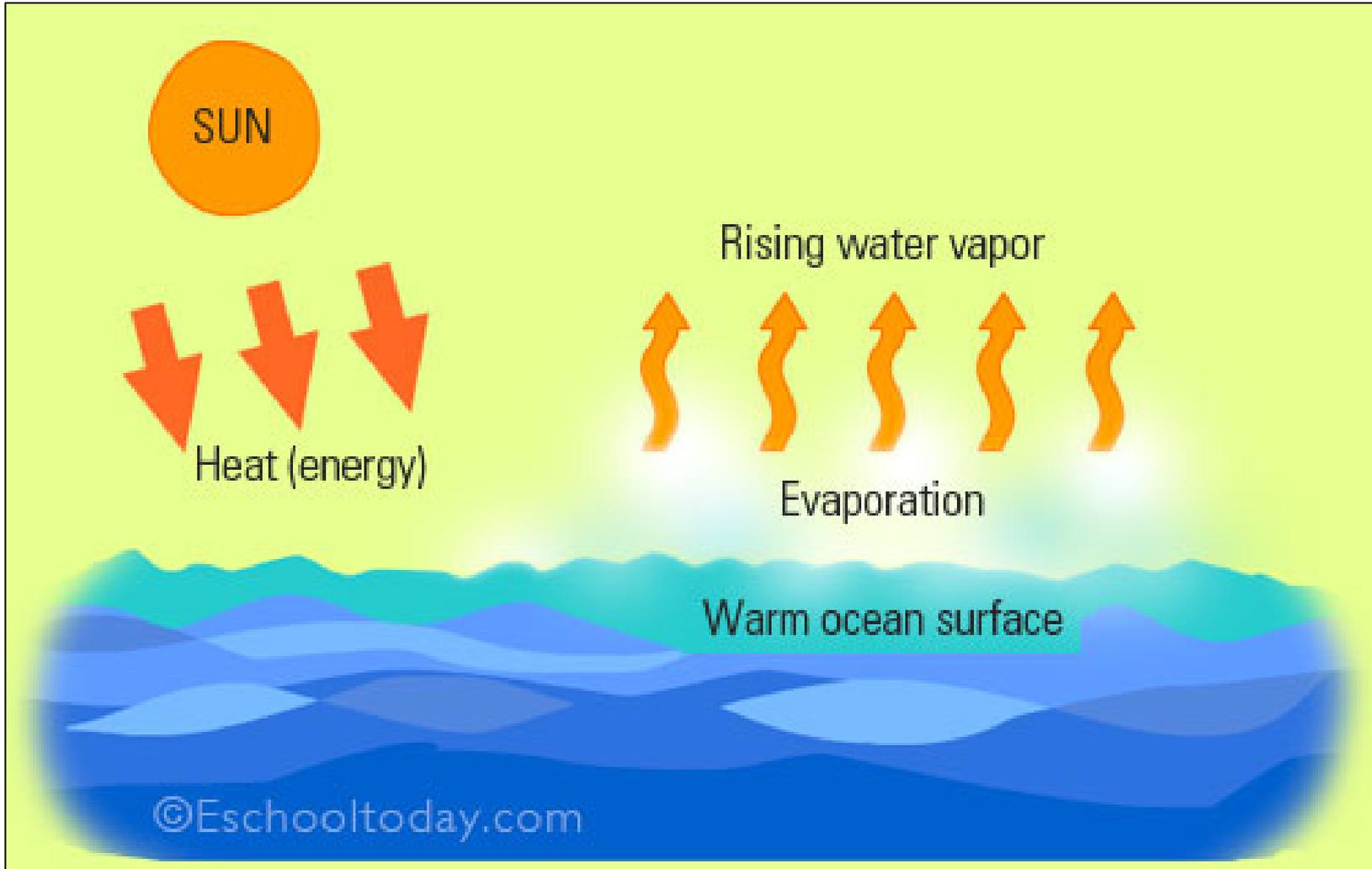
**Water  
Vapor  
Molecules**

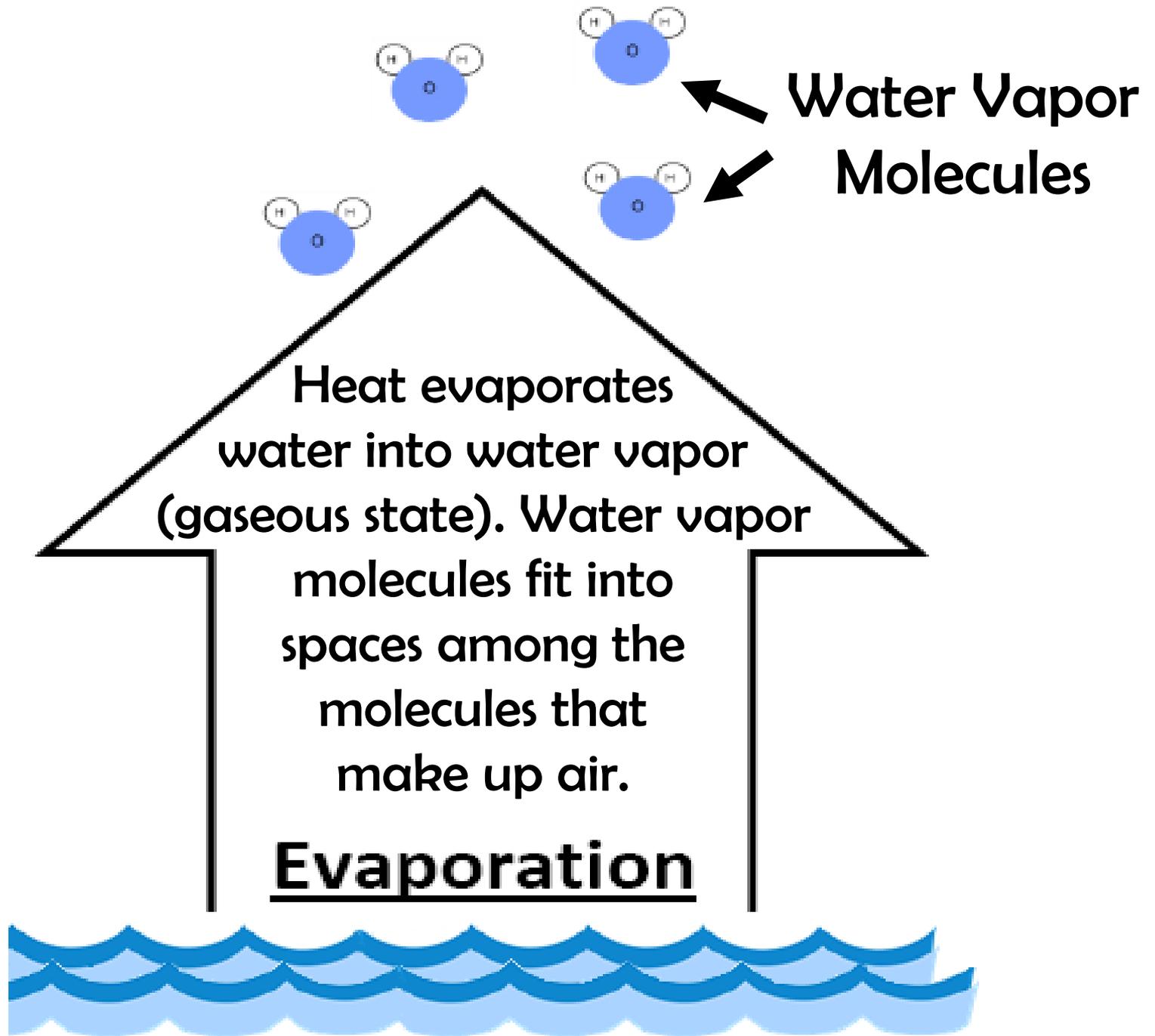
# Use your graphic organizer to record important information during the lesson.

## Water Cycle & Atmospheric Conditions

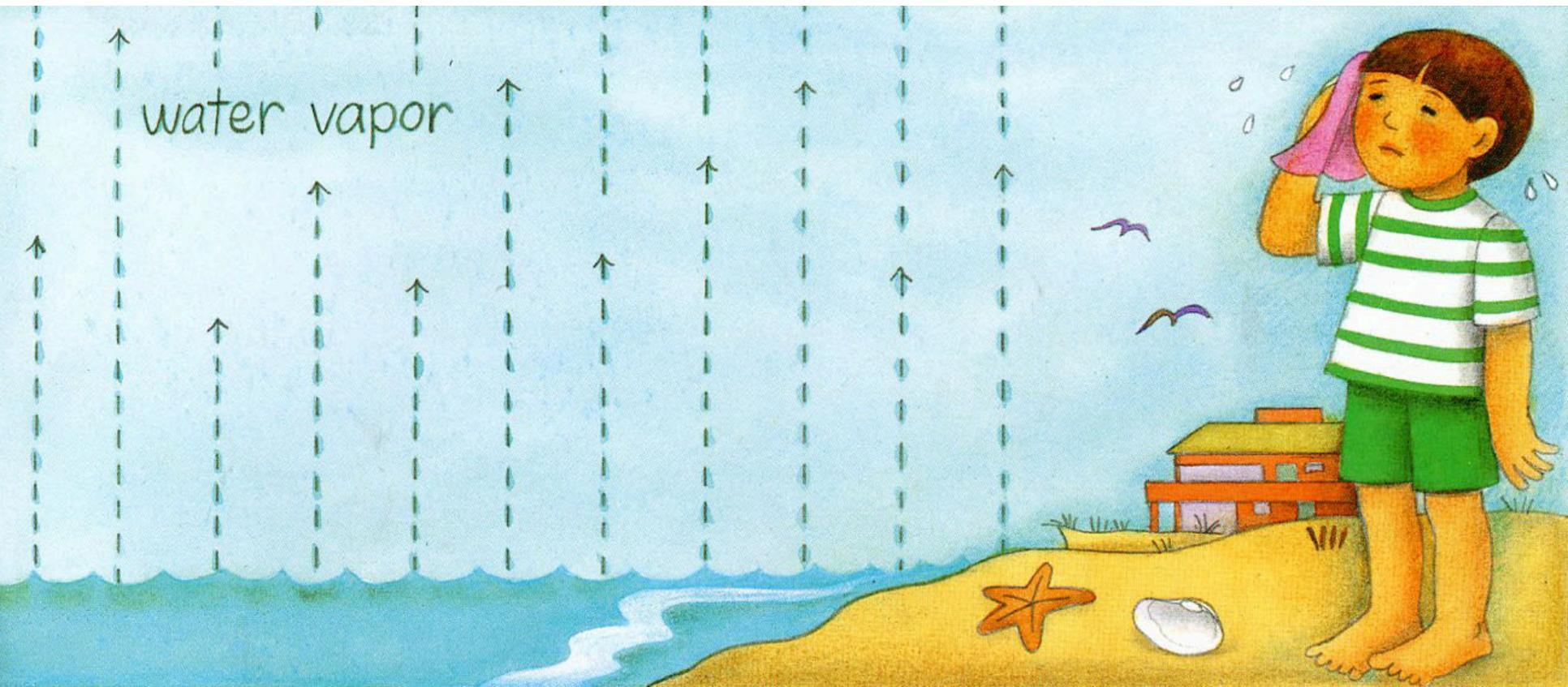


# Evaporation

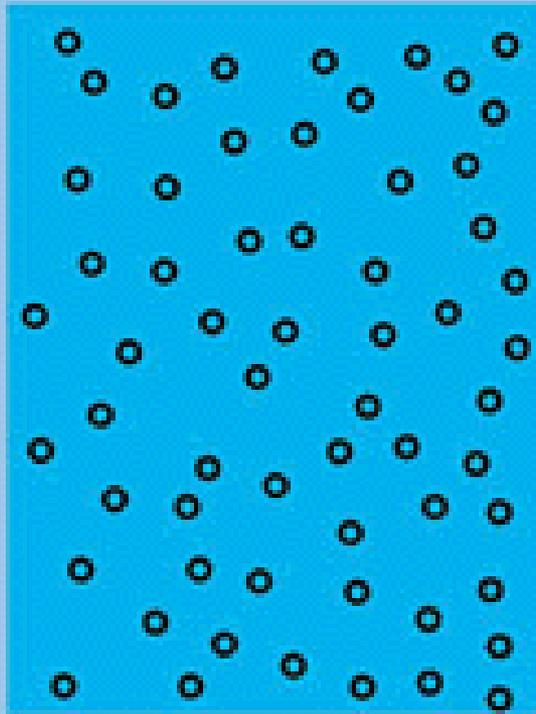




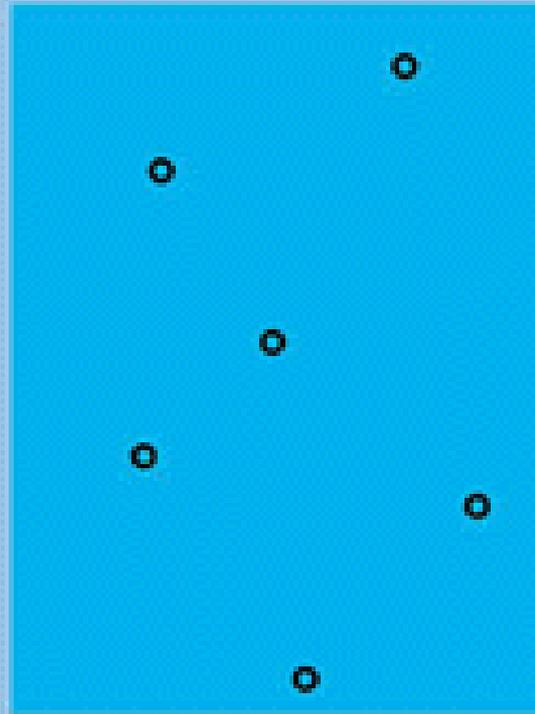
**Humidity is the amount of water vapor present in the air.**



**95% Relative Humidity**

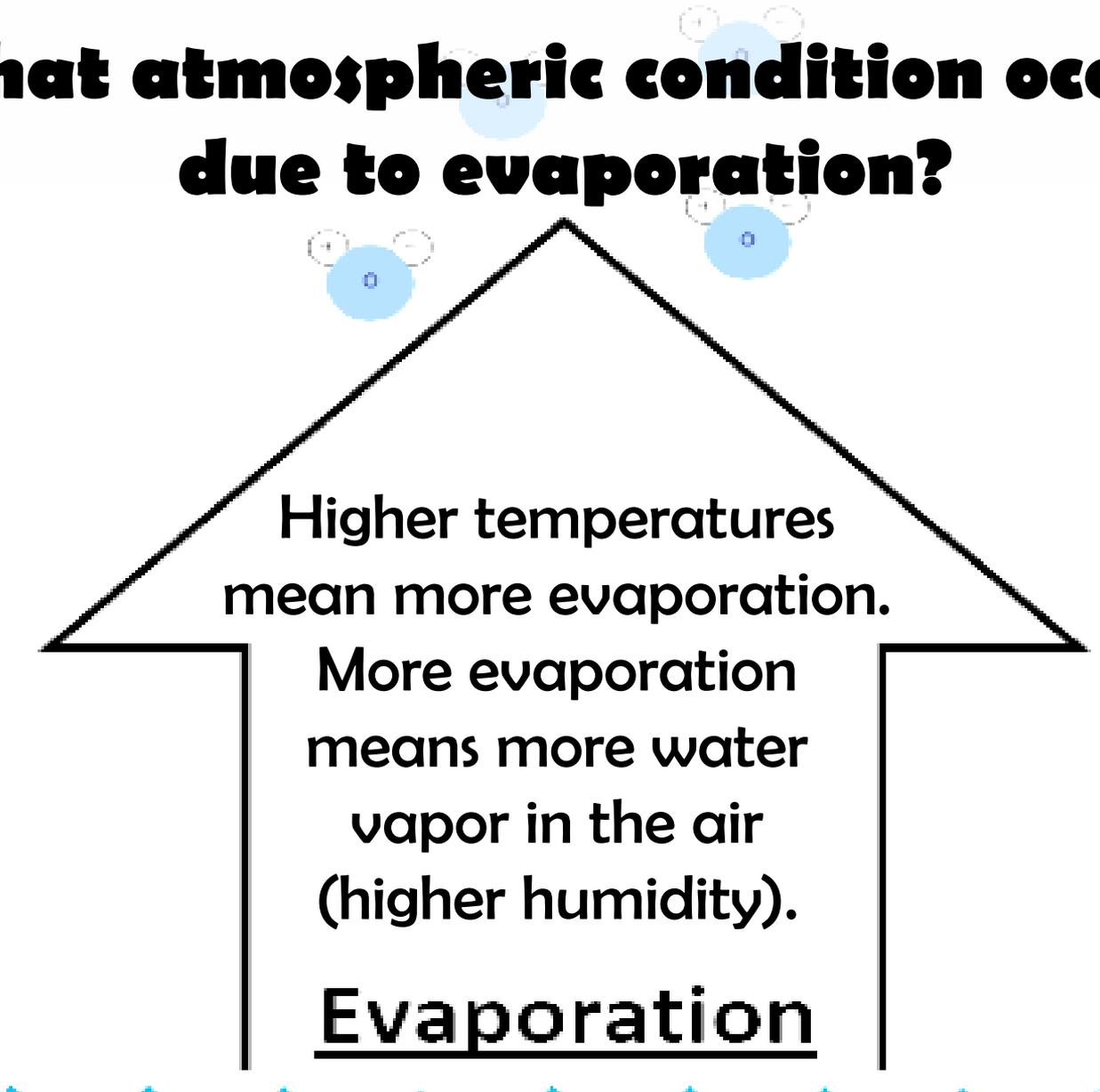


**10% Relative Humidity**



# How does temperature affect evaporation?

## What atmospheric condition occurs due to evaporation?

A diagram illustrating the process of evaporation. At the bottom, there is a blue wavy line representing water. Above it, a large black outline of an upward-pointing arrow is centered. Inside the arrow, text explains the relationship between temperature and evaporation. At the top of the arrow, several water molecules are shown as small blue circles with two white circles attached, representing H2O. The text inside the arrow reads: "Higher temperatures mean more evaporation." followed by "More evaporation means more water vapor in the air (higher humidity)." and finally "Evaporation".

Higher temperatures mean more evaporation.

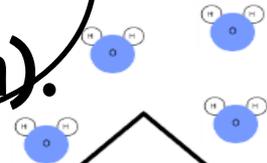
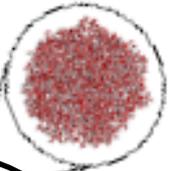
More evaporation means more water vapor in the air (higher humidity).

Evaporation

# CONDENSATION

At cooler temperatures water vapor molecules slow down and form droplets of liquid water. The air is saturated (holding as much water vapor as it can).

Water Droplet



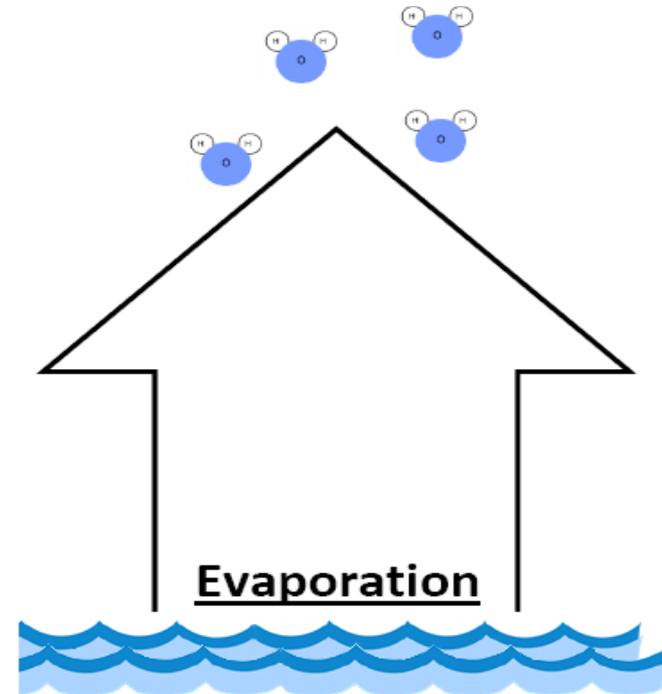
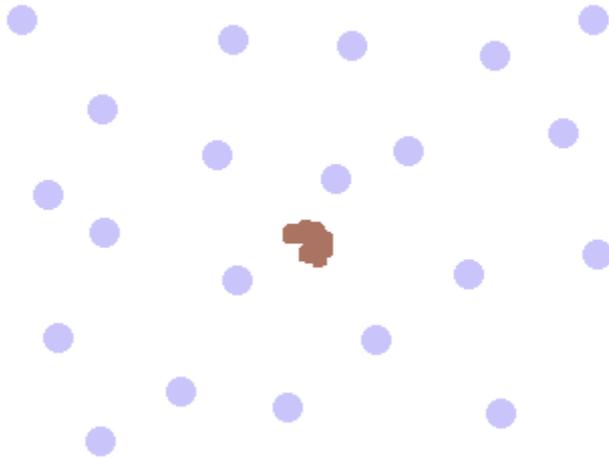
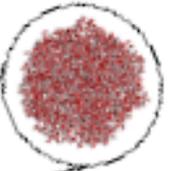
Evaporation



Clouds form when water vapor condenses in tiny droplets around small particles such as dust and salt.

Condensation

Water Droplet

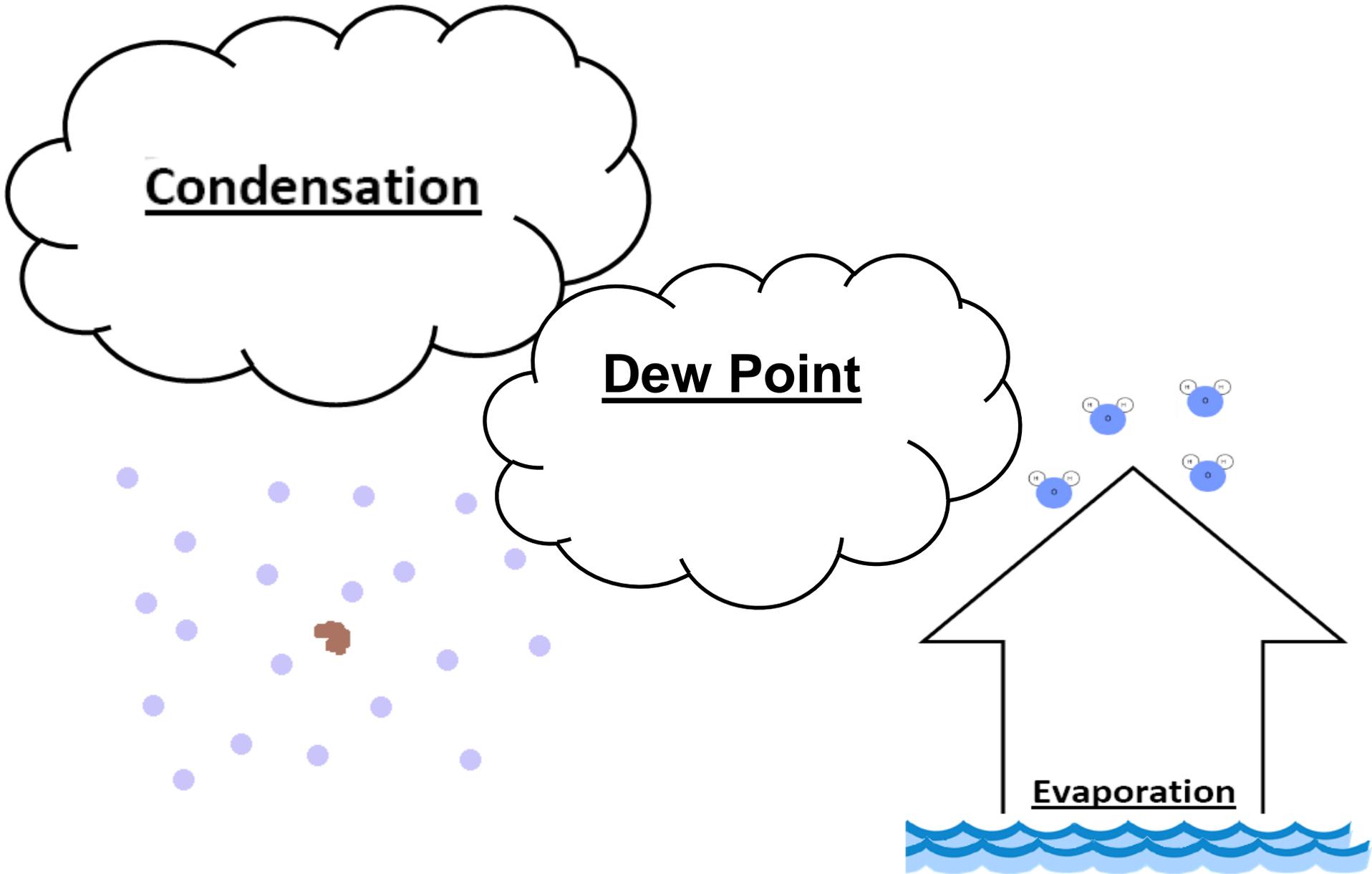


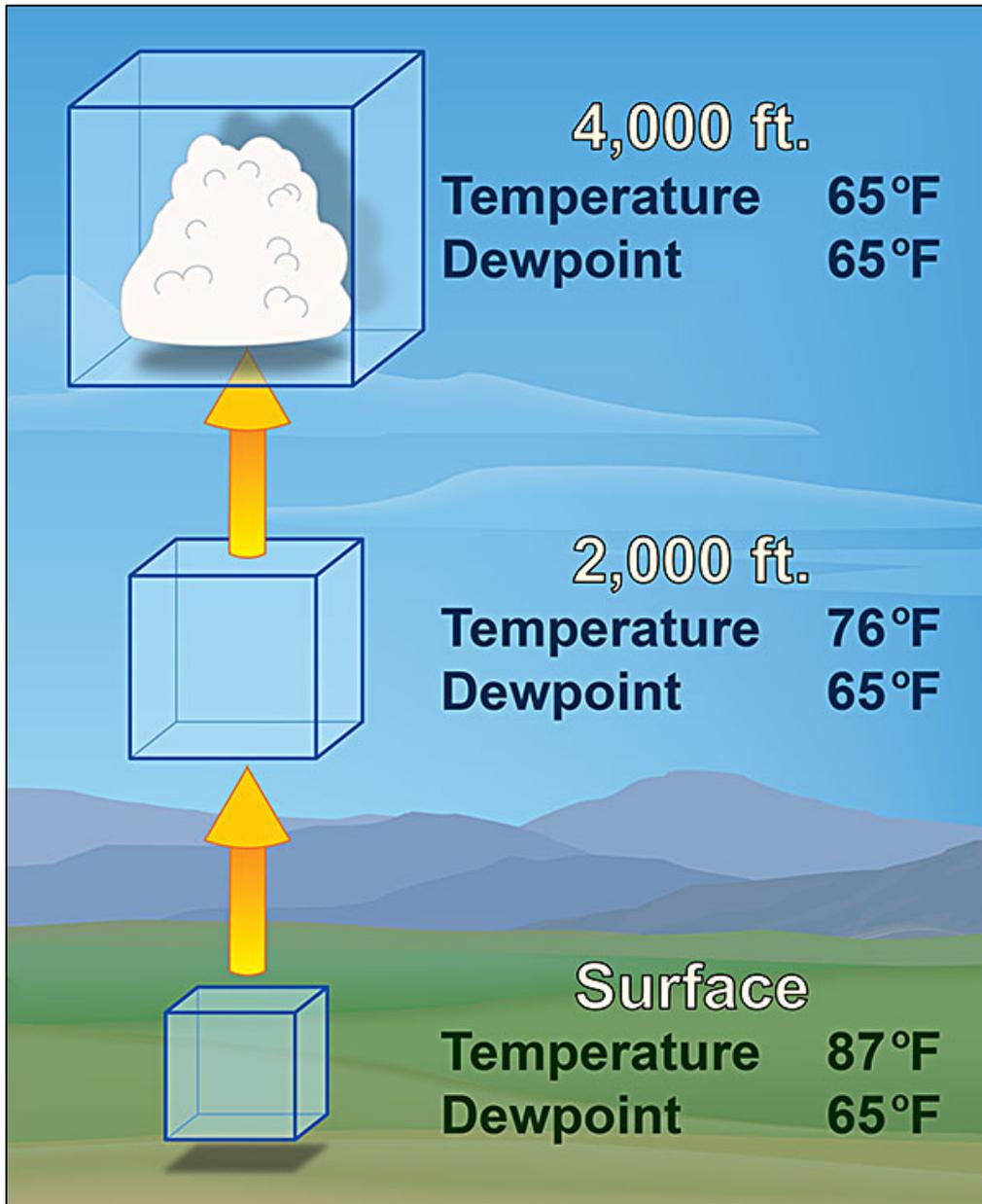
Evaporation

Condensation

Dew Point

Evaporation



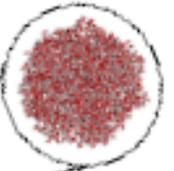


**Dew Point is the temperature at which air is saturated and condensation forms.**

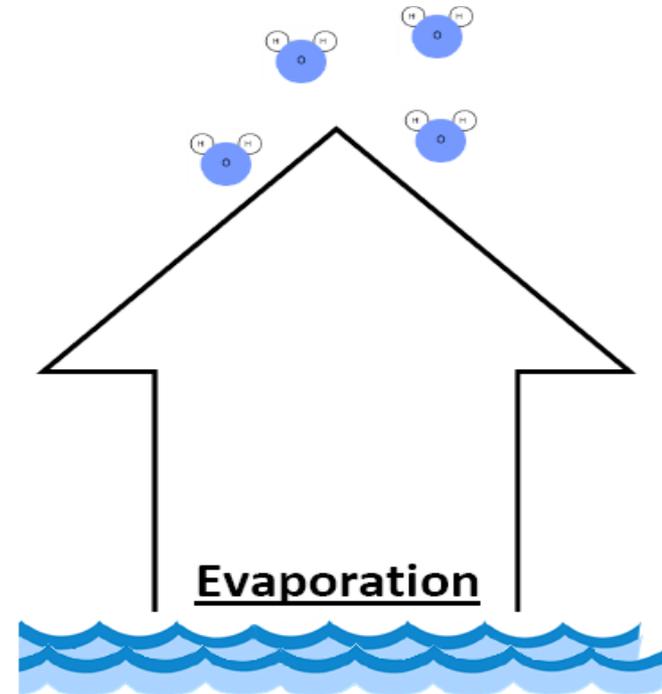
# Other Forms of Condensation

Condensation

Water Droplet

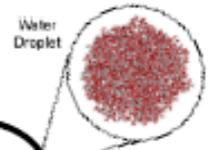


Condensation can occur whenever air becomes saturated (holding as much water vapor as it can).



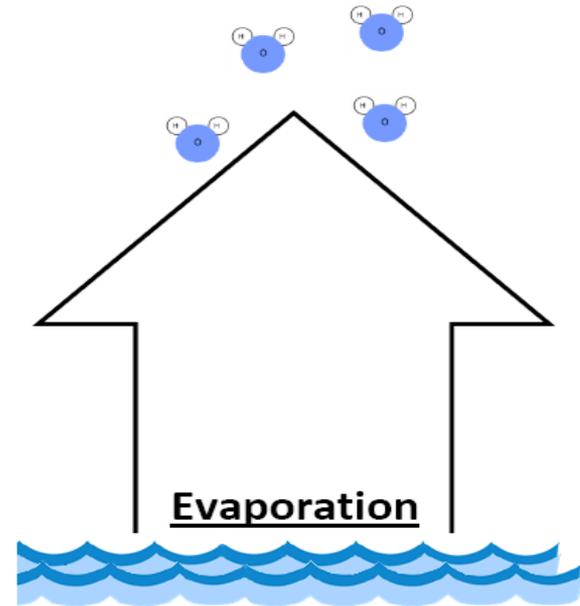
# Other Forms of Condensation

Condensation



## Fog

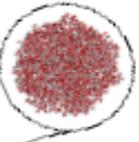
When water vapor molecules suspended in the atmosphere at or near the earth's surface cool and condense, fog can occur (a cloud next to the surface)



# Other Forms of Condensation

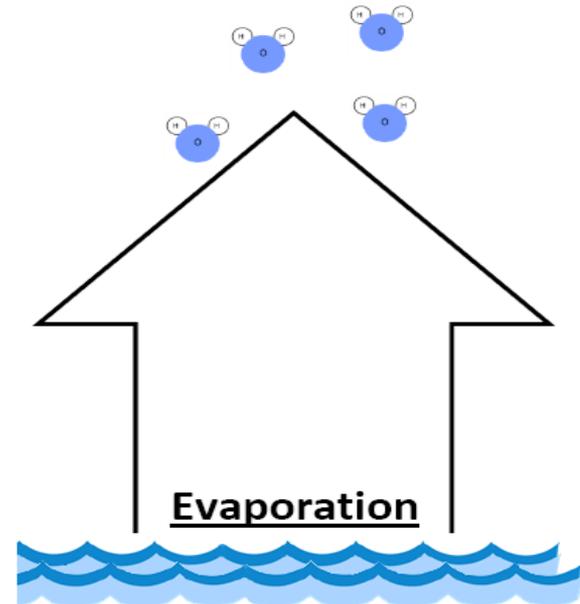
Condensation

Water Droplet



## Dew/Frost

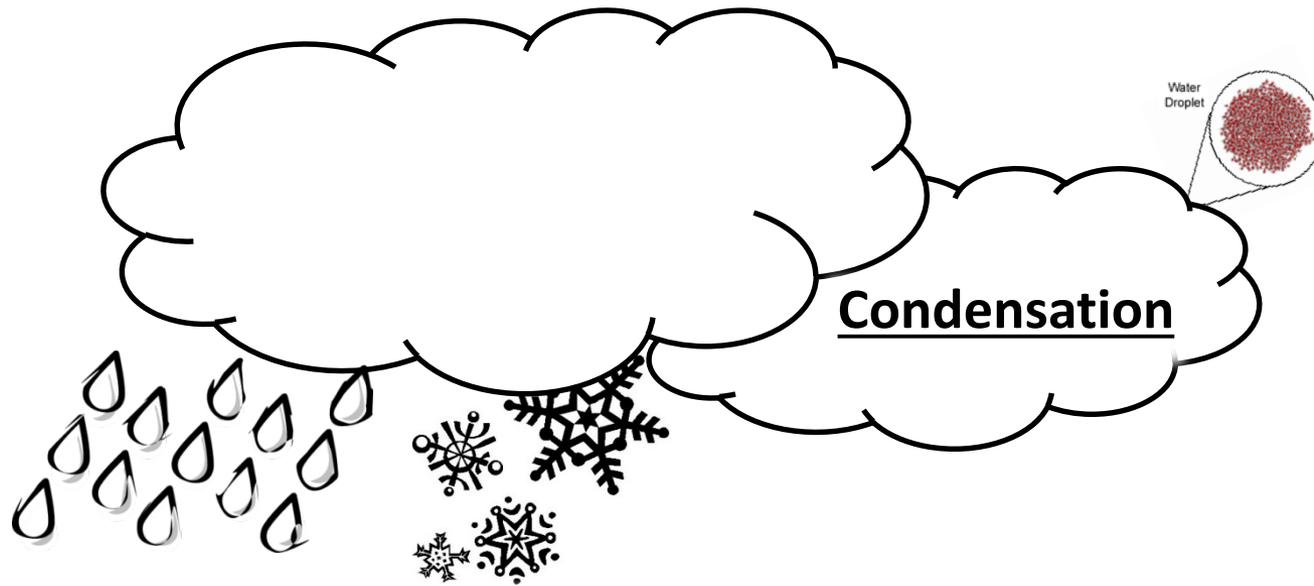
Dew forms when water droplets condense from the air, usually at night, onto cool surfaces near the ground. Frost may form when temperatures are near  $0^{\circ}\text{C}$ .



# Think, Pair, Share:

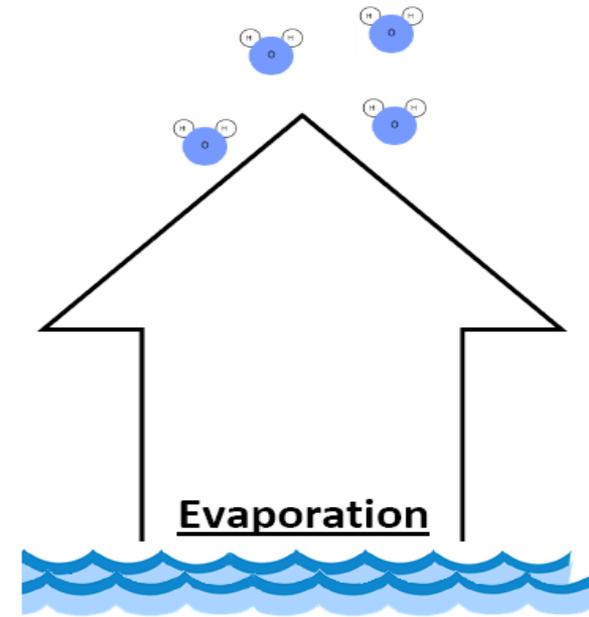
Using your knowledge, explain why condensation occurs on the glass shown below.



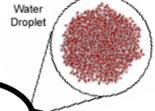


# Precipitation

When liquid water droplets combine and grow too large for the atmosphere to support their weight, the droplets fall.



# Condensation



# Precipitation

Air temperature determines which form of Precipitation occurs

## Rain

Water falling in temperatures above freezing

## Sleet

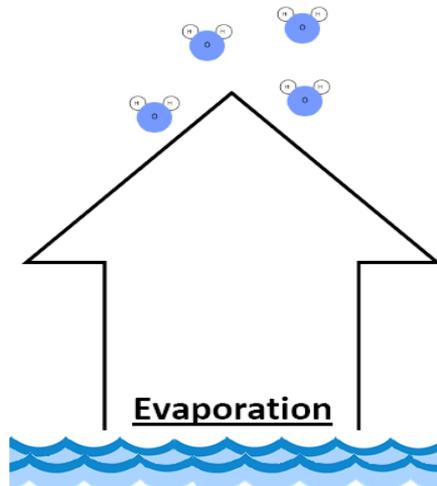
Falling water passes through a layer of freezing air near earth's surface

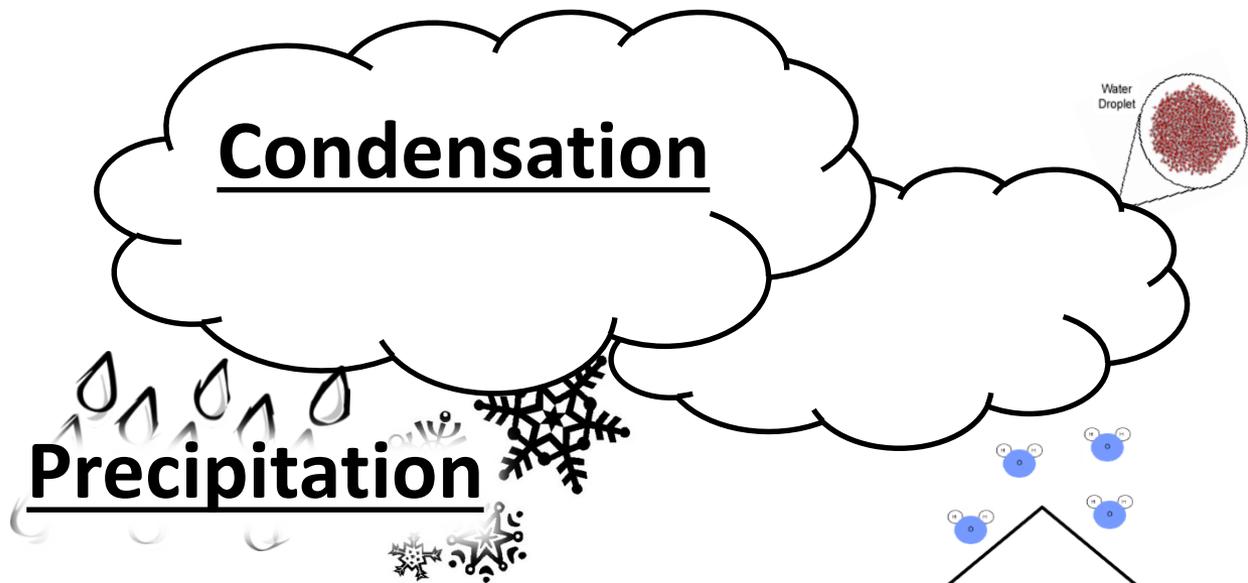
## Snow

Water falling in air temperature so cold that water vapor changes to a solid

## Hail

Water freezes inside a cloud before it falls





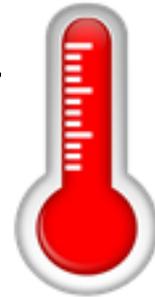
# **Temperature**



The atmospheric condition that affects each stage of the water cycle

**Turn to an elbow partner and discuss how temperature affects each stage of the water cycle.**

## **Temperature**



**The atmospheric condition that affects each stage of the water cycle**

# Summarizer

## Water Cycle and Atmospheric Conditions

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

1. Draw and label the stages of the water cycle on the diagram to the right.

2. Identify an atmospheric condition(s) that occurs for each of the following stages of the water cycle.

Evaporation: \_\_\_\_\_

\_\_\_\_\_

Condensation: \_\_\_\_\_

\_\_\_\_\_

Precipitation: \_\_\_\_\_

\_\_\_\_\_

3. Describe how temperature affects each of the three water cycle stages listed above.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

