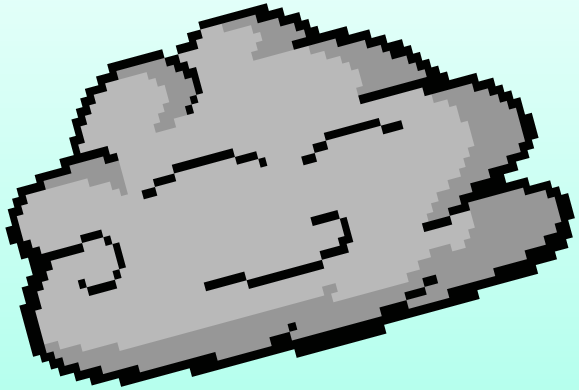
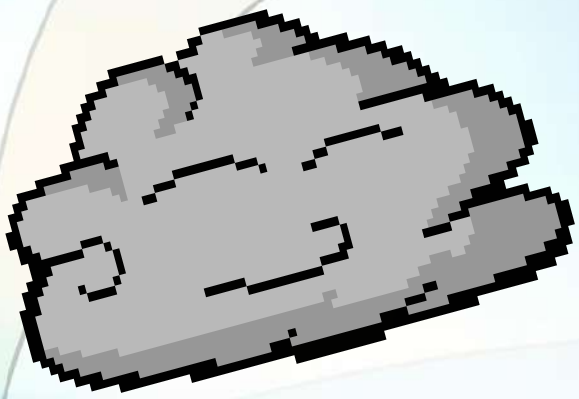
What is meant by atmospheric condition?

What are some possible examples of this?



Atmospheric condition refers to the state of the atmosphere in terms of temperature and wind and clouds and precipitation.

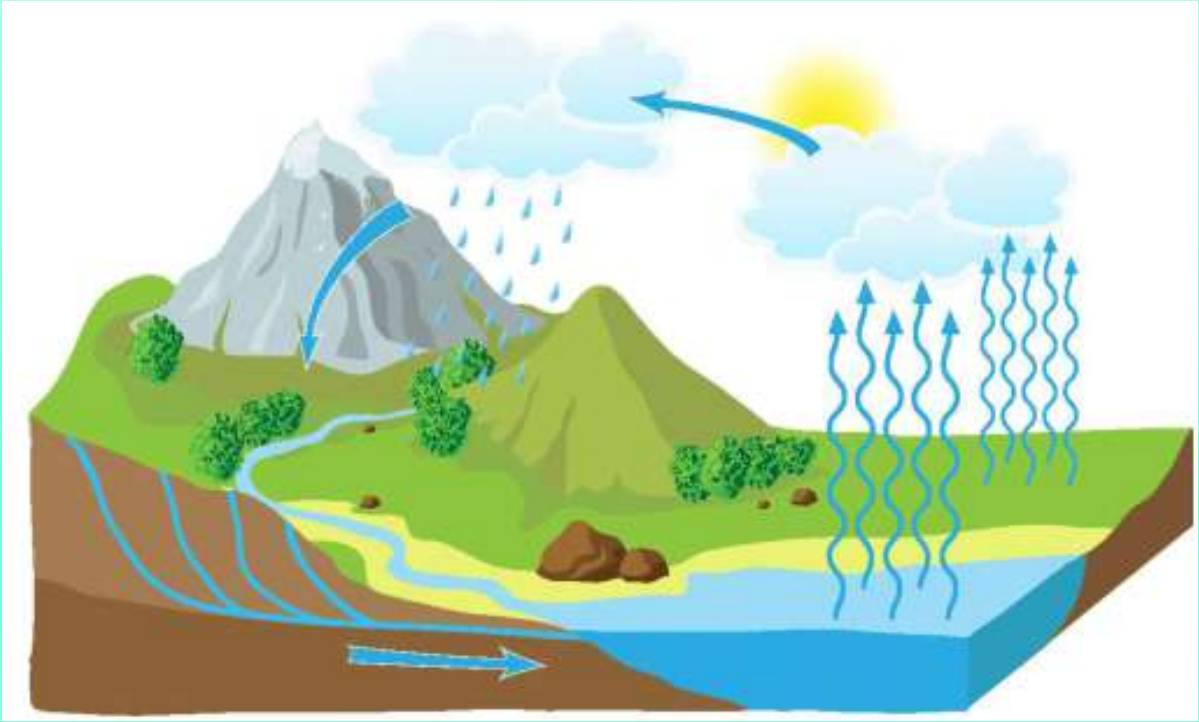


Atmospheric conditions = Daily weather

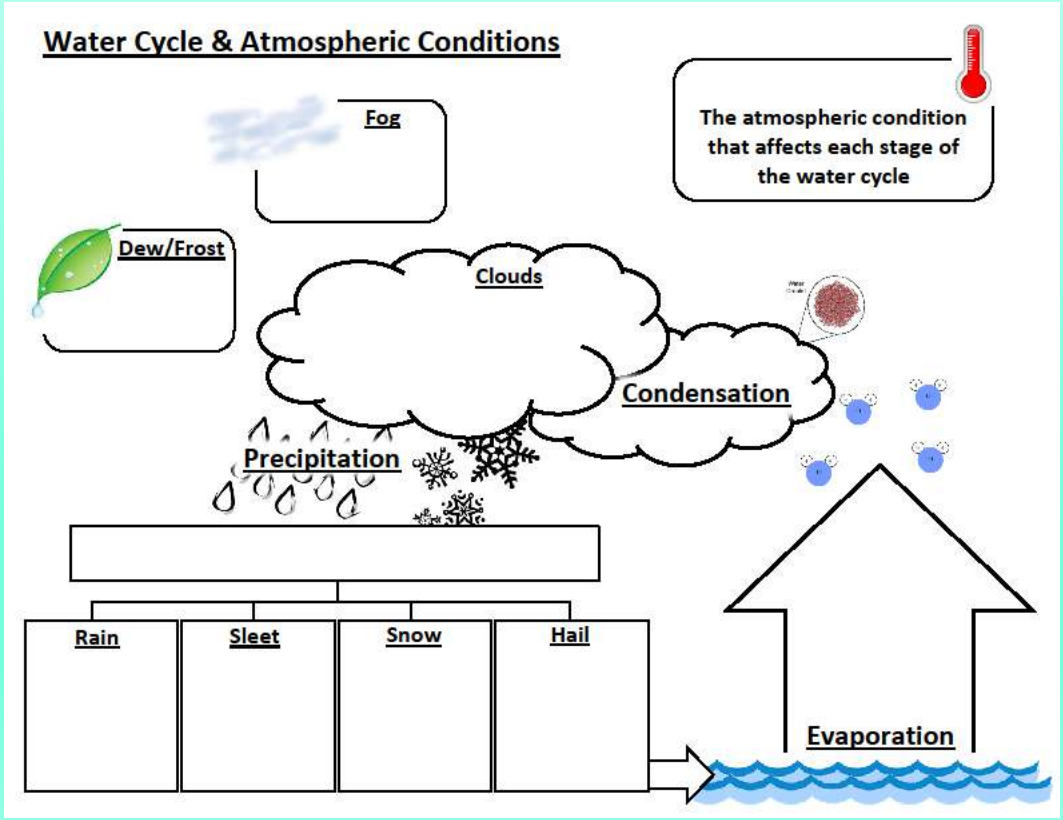
Examples: fog, wind, rain, dew, frost, humidity etc.

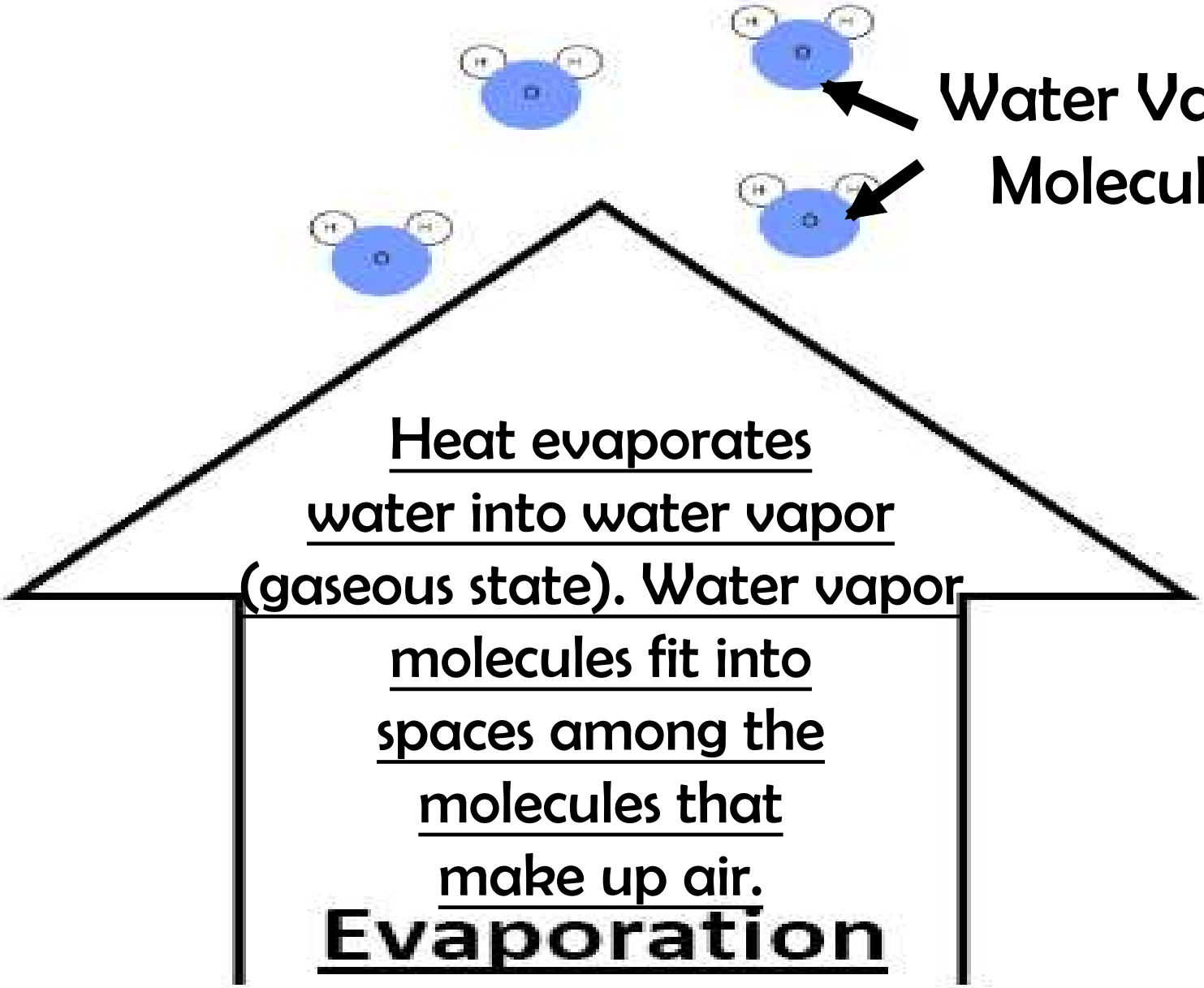
Essential Question:

How does the water cycle explain various atmospheric conditions on the Earth?



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




Water Vapor Molecules
Heat evaporates water into water vapor (gaseous state). Water vapor molecules fit into spaces among the molecules that make up air.
Evaporation

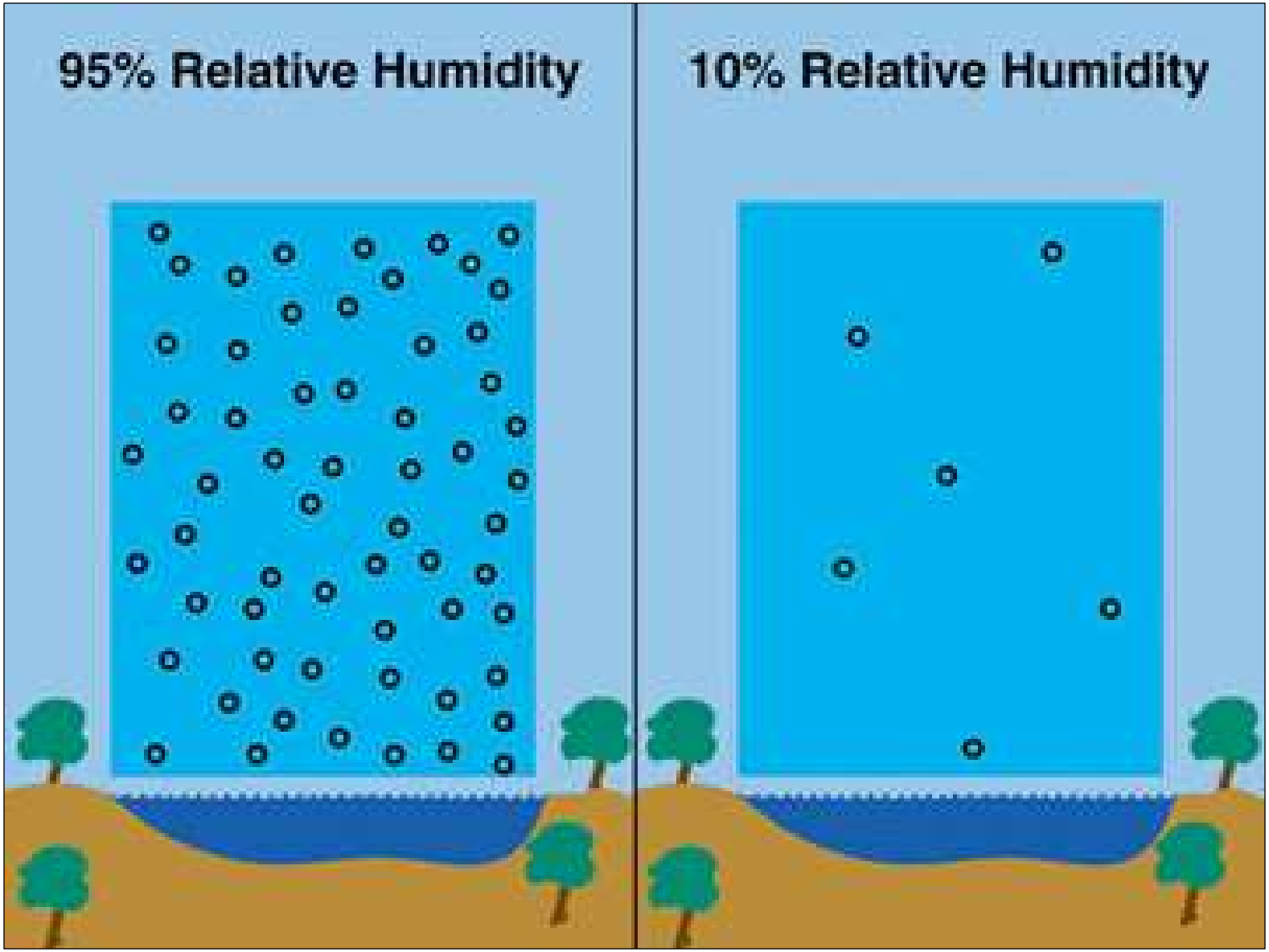
How does temperature affect evaporation?

Heat warms up the liquid water causing it to change physically to a vapor. The vapor rises.

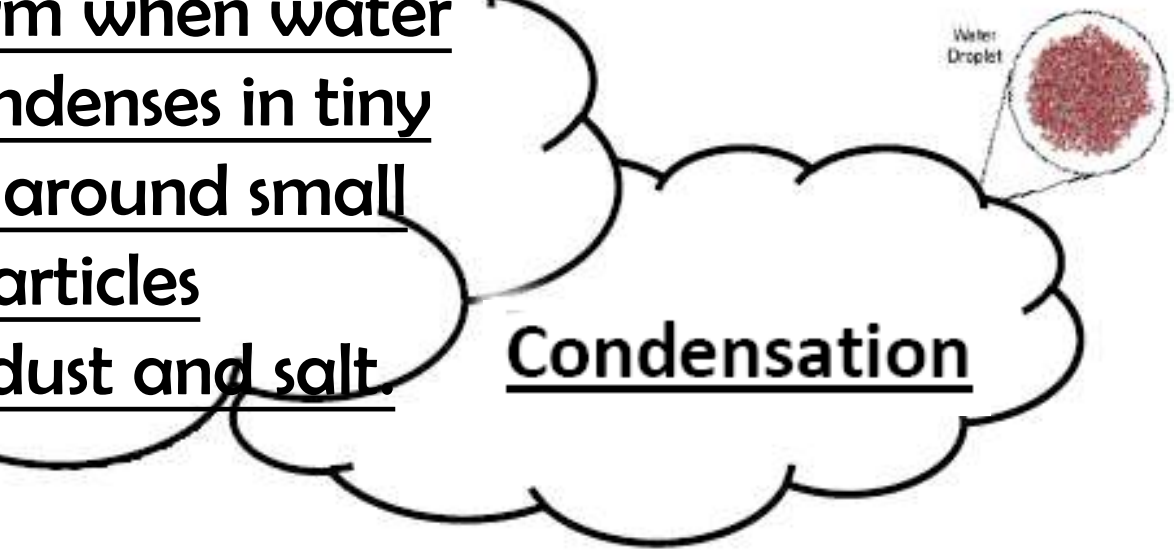
What atmospheric condition occurs due to evaporation?

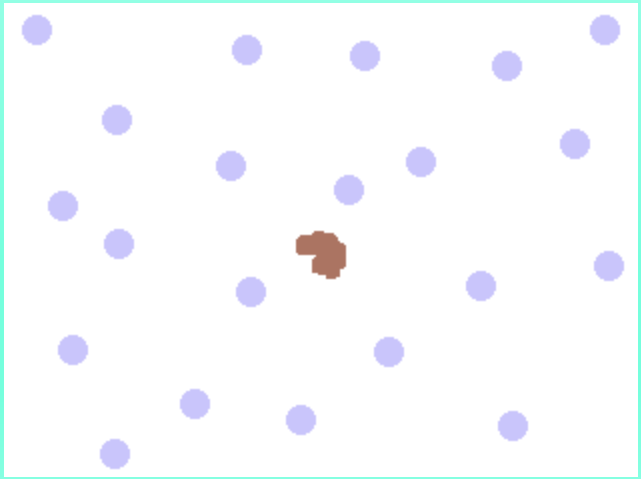
HUMIDITY!

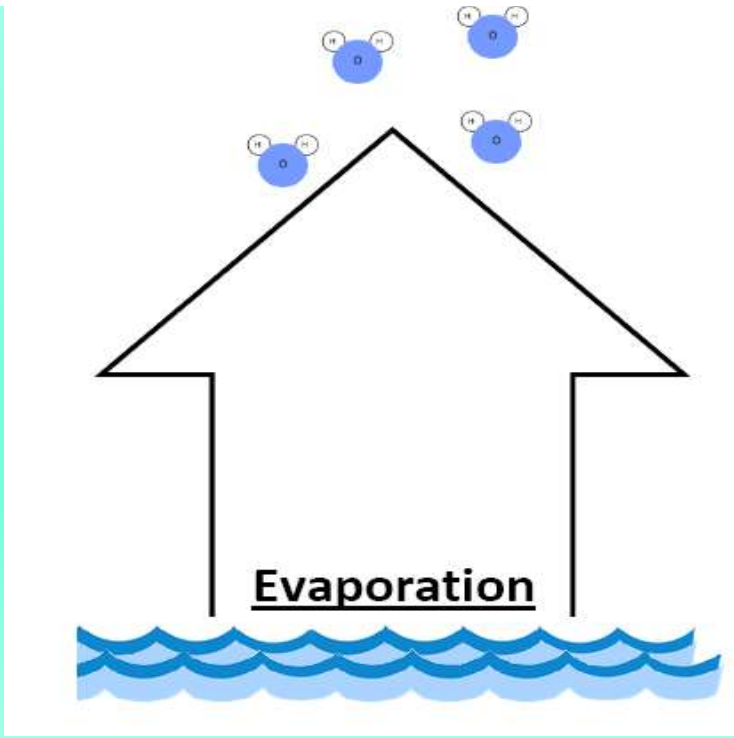
Humidity is the amount of water vapor present in the air.

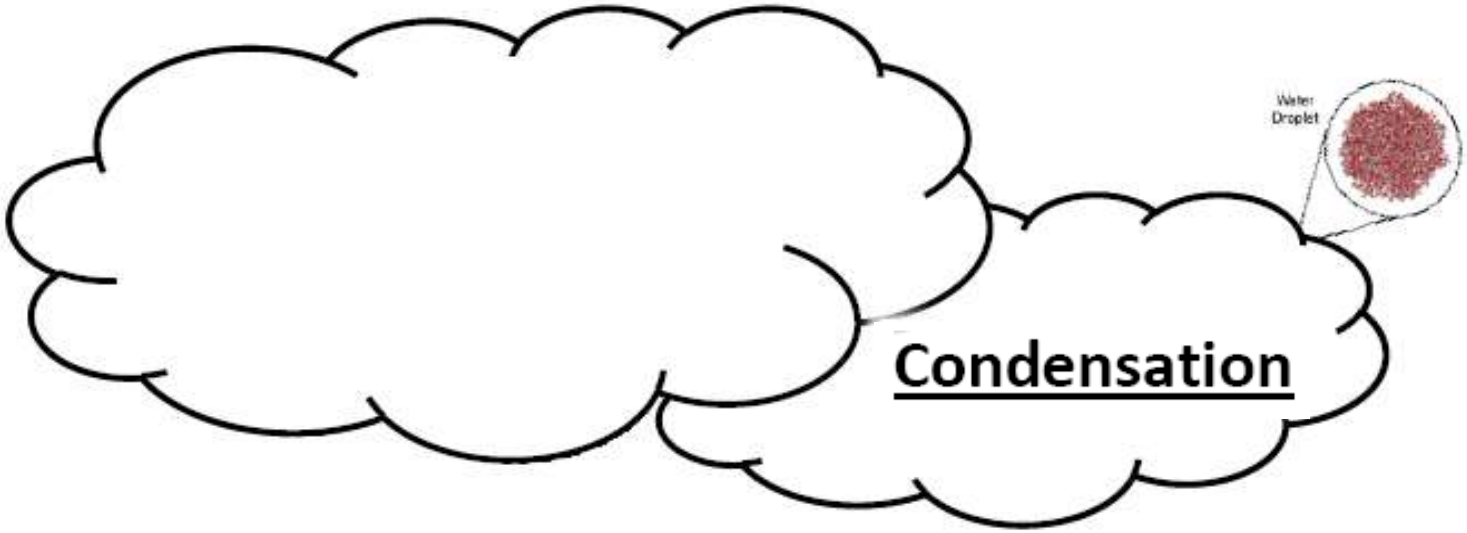

95% Relative Humidity
10% Relative Humidity

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



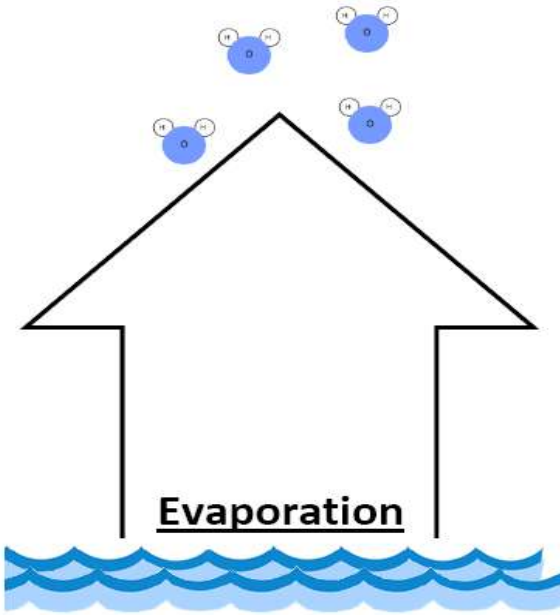




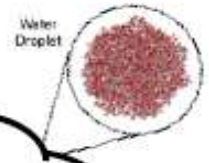


Fog

Water vapor molecules suspended in the atmosphere near the earth's surface condense, fog can occur (a cloud next to the surface)



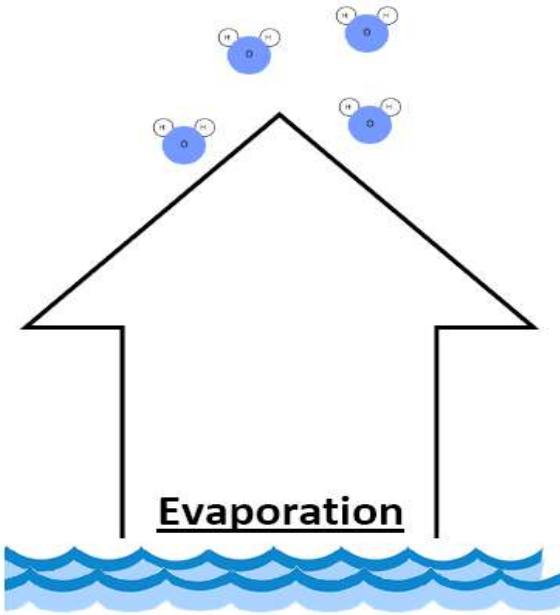
Other Forms of Condensation

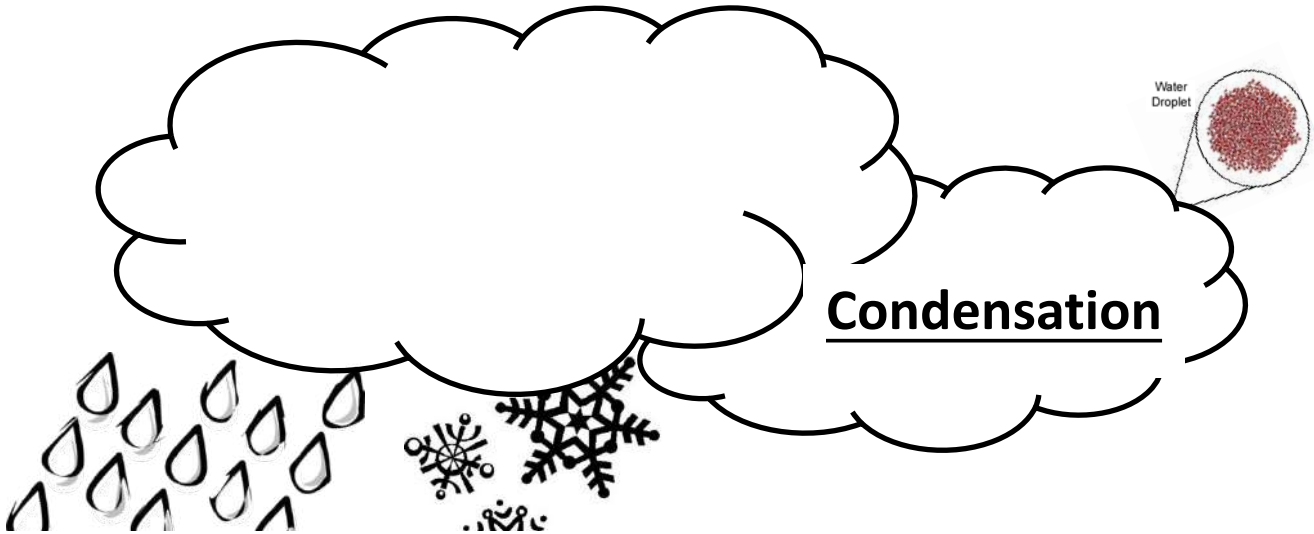


Condensation

Dew/Frost

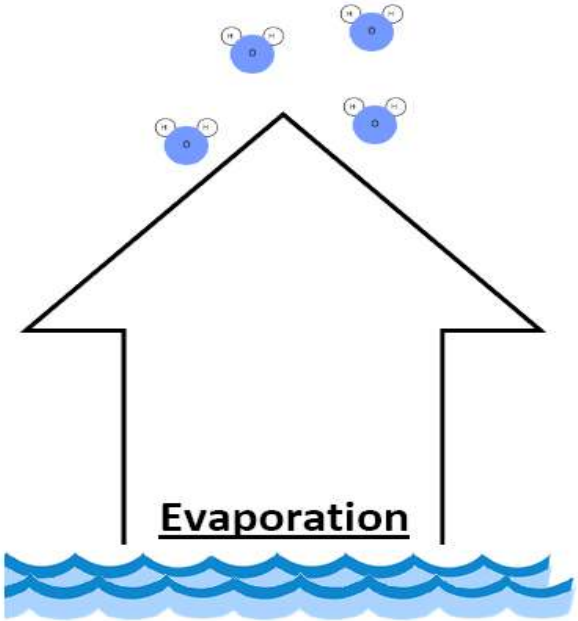
Forms when water droplets condense from the air onto cool surfaces near the ground. Frost may form when temperatures are near 0°C.

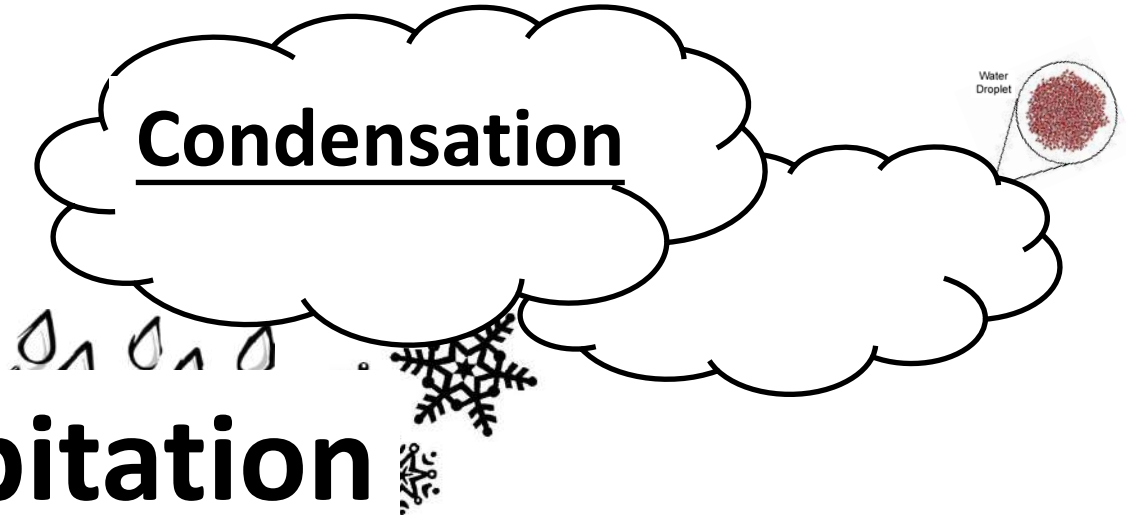




Precipitation

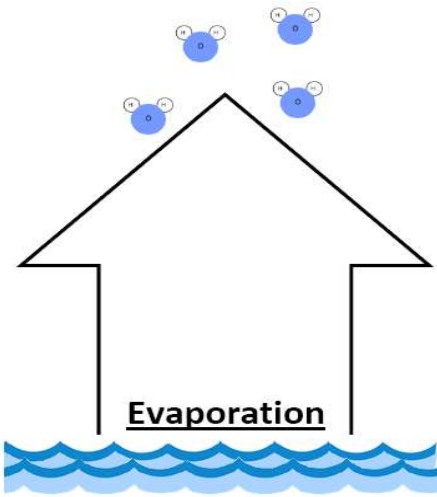
Liquid water droplets combine and grow too large for the atmosphere, so the droplets fall.





Precipitation

Rain	Sleet	Snow	Hail
Liquid drops	Rain passes through a layer of freezing air near earth's surface	Water vapor changes to a solid	Water freezes inside a cloud before it falls



http://www.atmosedu.com/meteor/Animations/51_Sleet/51.html

Homework Tonight

Water Cycle and Atmospheric Conditions

Name _____ Date _____ Period ___

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

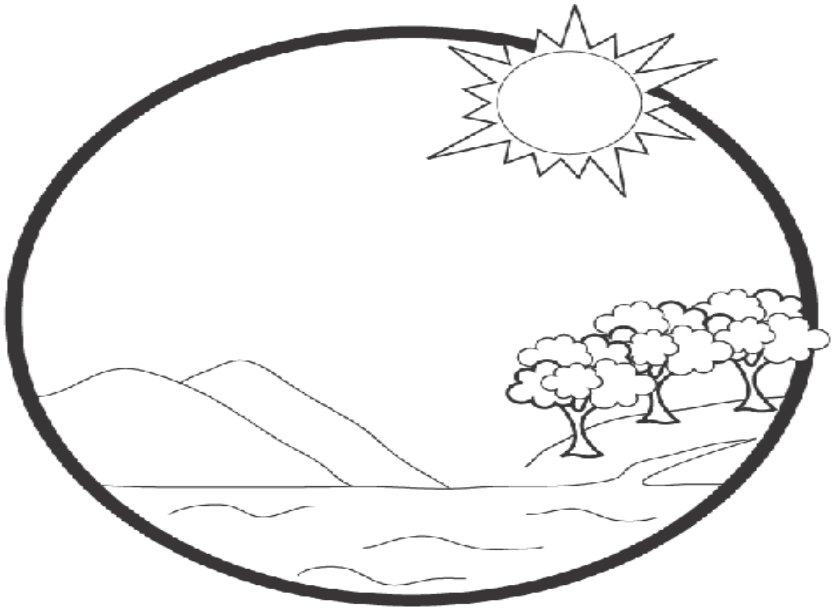
2. Identify an atmospheric condition(s) that occurs for each of the following stages of the water cycle.

Evaporation: _____
_____
_____

Condensation: _____
_____
_____

Precipitation: _____
_____
_____

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



Use the notes on the front to help you!

Cool Visuals/Videos

http://commons.wikimedia.org/w/index.php?title=File%3AThe_Water_Cycle_Watering_the_Land.ogv

http://www.atmosedu.com/meteor/Animations/51_Sleet/51.html