

Warm Up

Grab a sheet from the front turn-in tray table as you come in

1. Glue the tracking chart in your notebook.
2. Go to Google Classroom and open the assignment labeled “Tracking Hurricanes” and follow the NOAA website to access the coordinates.
3. Each day at the beginning of class you will go to the NOAA website and track the hurricanes in the Atlantic ocean.
4. Note the wind speed next to your hurricane symbol.

Make sure you have your homework out if you did it on paper so that I can come around and check it.

The Water Cycle



What are some of the effects of global warming?

The water on Earth is limited

- It goes through a cycle that changes its form and location, but no new water is created. **We drink the same water the dinosaurs did!**



The cycle

- There are 4 parts to the water cycle, and we can start the cycle at any point, then follow the cycle through.
- Can you name the 4 parts?

The 4 parts of the water cycle are:

- Evaporation/Transpiration
- Condensation
- Precipitation
- Accumulation; runoff/groundwater

What powers the Water Cycle?

- The Sun

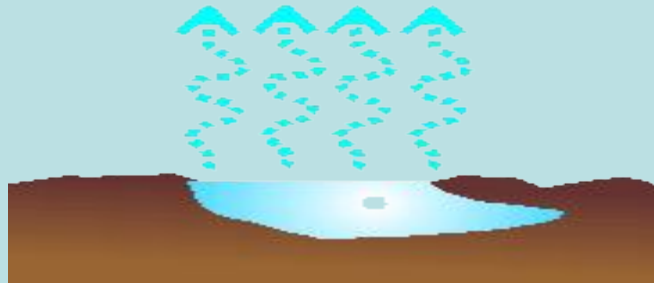


- How?

The Sun transfers its heat energy to the water on Earth, which causes **evaporation**.

- What is evaporation?

A change of a liquid to a gas—when water evaporates from the Earth's surface, it enters our atmosphere.



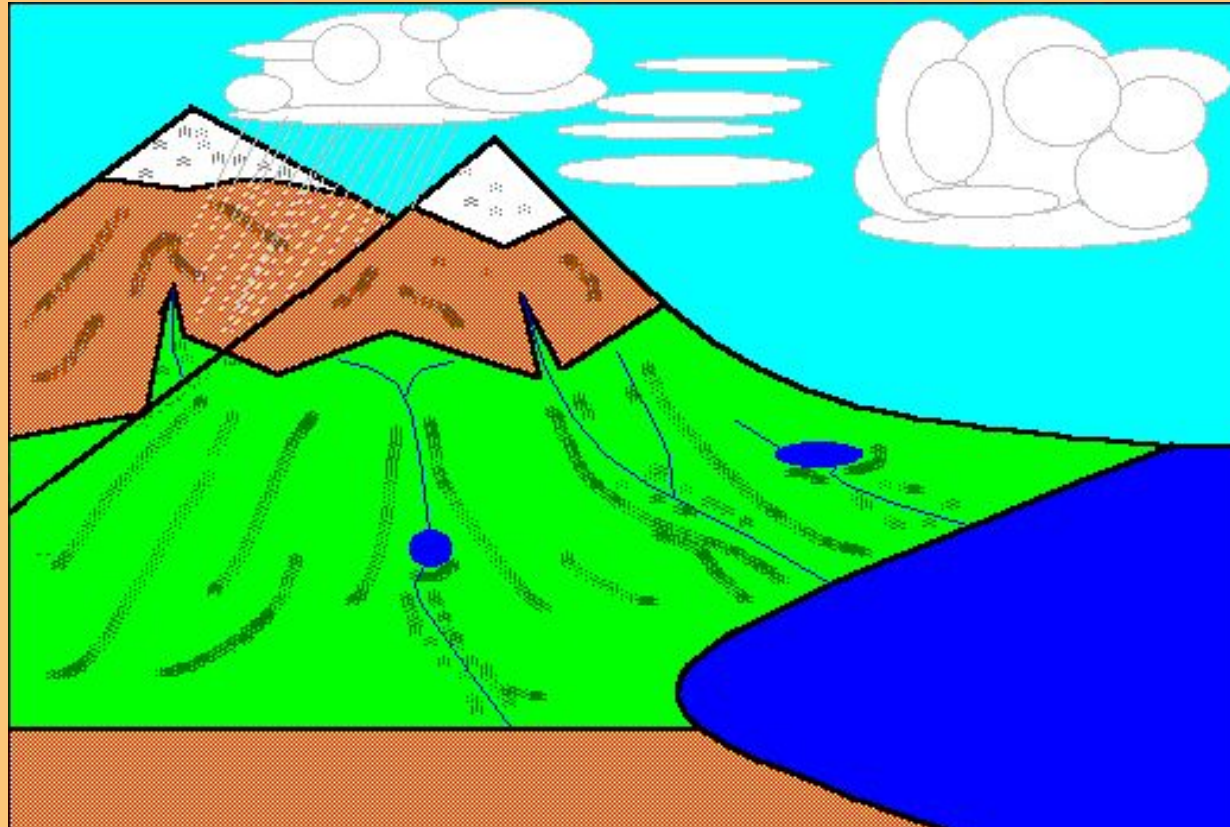
ALSO...

- Another form of transferring water to the atmosphere is called **transpiration**.
- This is similar to evaporation, but it comes from plants and trees.
- Think of it like a plant that is sweating, and the plant “sweat” (water) evaporates.



Transpiration

- **Transpiration** is the transfer of water vapor from plants to the atmosphere
- [Water cycle](#)





Condensation



- Condensation is when water vapor (or gas) changes back to a liquid.
- This happens when the water vapor in our atmosphere cools enough to form droplets.
- This is how clouds form. We will discuss this more in-depth later.



After condensation, we have ***precipitation***;
can you figure out what ***precipitation*** is?

- **CORRECT!!!**
- As the water droplets combine and get bigger and bigger they fall back to Earth and ***accumulate*** to complete the cycle.
- Precipitation can be in one of four forms;
can you name them?



After precipitation is ***Accumulation***

- This is simply the water coming back to Earth's surface and accumulating in the form of ice caps, rivers, lakes and oceans.



I said the Sun transfers its **Heat Energy** to the water, what is meant by heat energy?

- Heat is a form of energy which causes molecules to move faster and spread out.
- There are three main ways to transfer heat...can you name any?



Heat Transfer

- The three methods of heat transfer are
 1. Radiation
 2. Conduction
 3. Convection

Radiation

- This can best be described as the warm feeling you get from the Sun, or by sitting next to a fire.
- The heat is *radiating out*, and you feel its *energy warming you*.



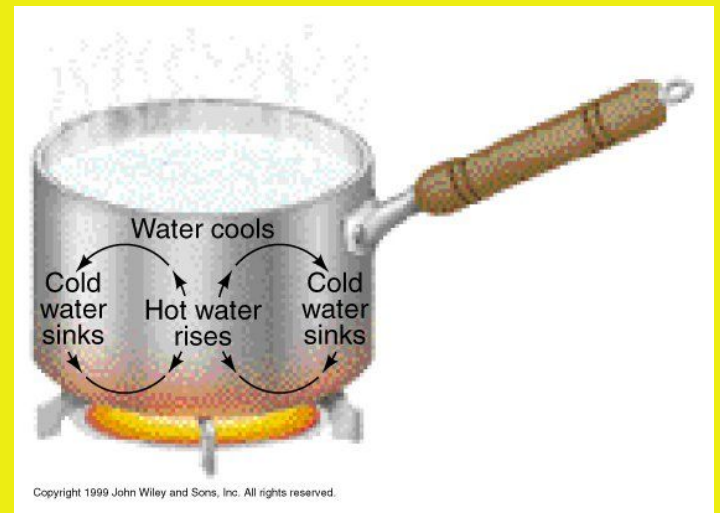
Conduction

- This is the actual transfer of heat through contact.
- Some examples would be
 1. Touching a hot plate
 2. Walking barefoot on the sand at the beach and burning your feet
 3. Can you think of one?



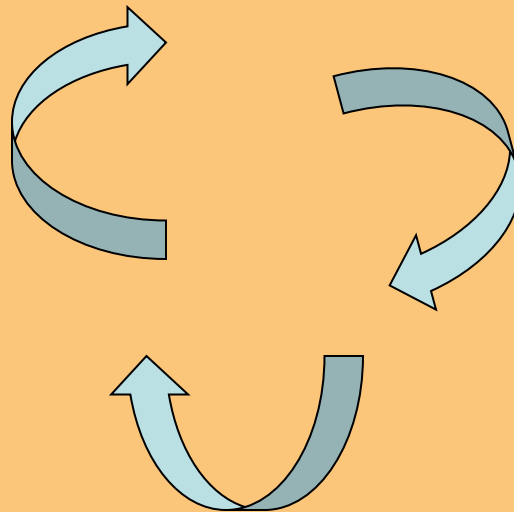
Convection

- Convection is the transfer of heat by the flow of material.
- Examples of convection heat transfer are
 1. Using a blow-dryer
 2. Heating a bowl of soup



So now we know the Sun powers the water cycle...what is next?

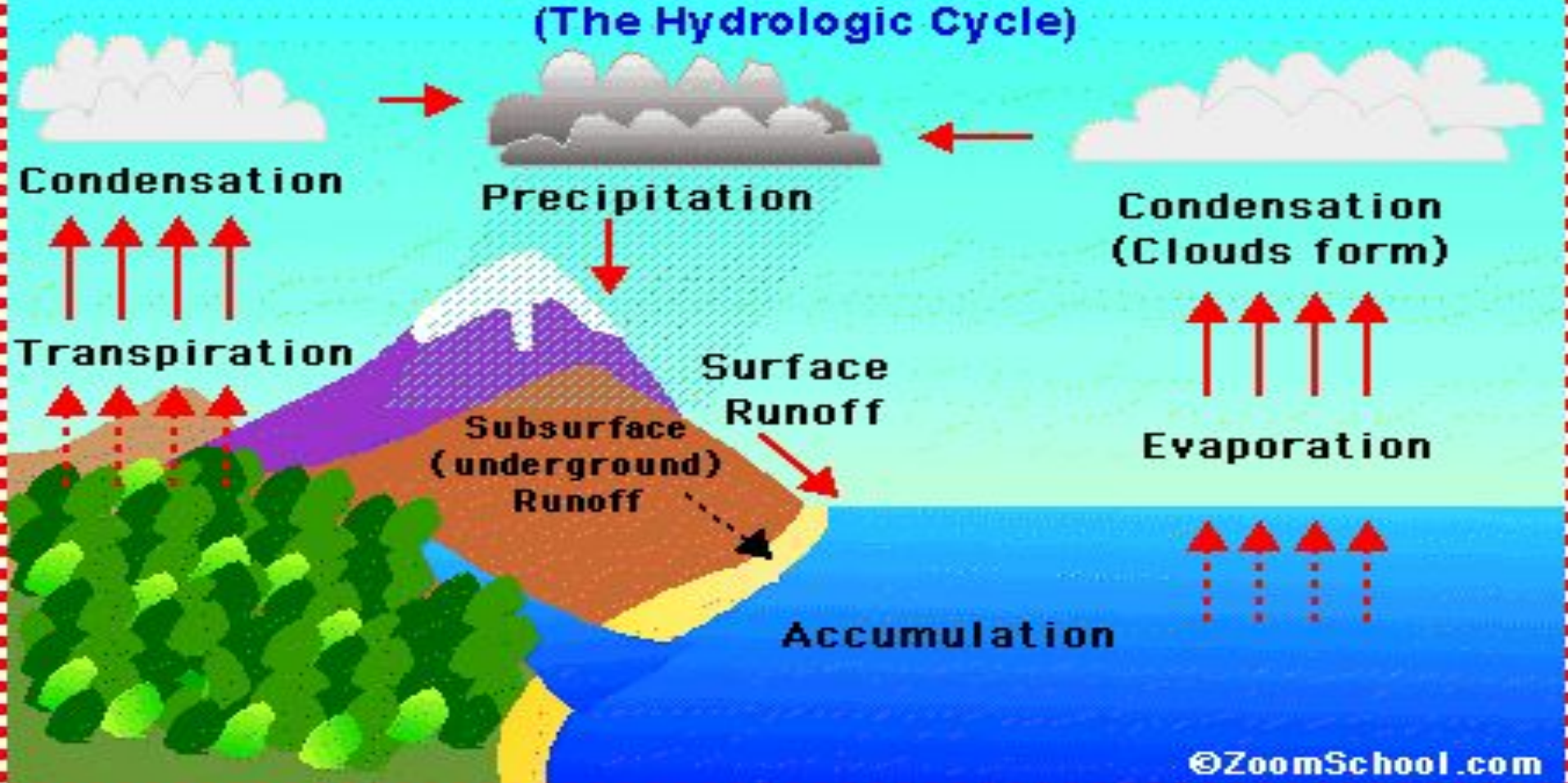
- Well, after evaporation and transpiration we have **condensation**, followed by **precipitation**, and **accumulation**, then the cycle continues.



Sun's Heat Energy



The Water Cycle (The Hydrologic Cycle)



Atmospheric Conditions

- The type of precipitation we have depends on the atmospheric conditions in a particular place.

Review

1. What are the 4 parts of the water cycle?
2. List and describe the 3 ways heat is transferred.

Quizziz

Homework

Read article on How Global Warming is Affecting the Water Cycle.