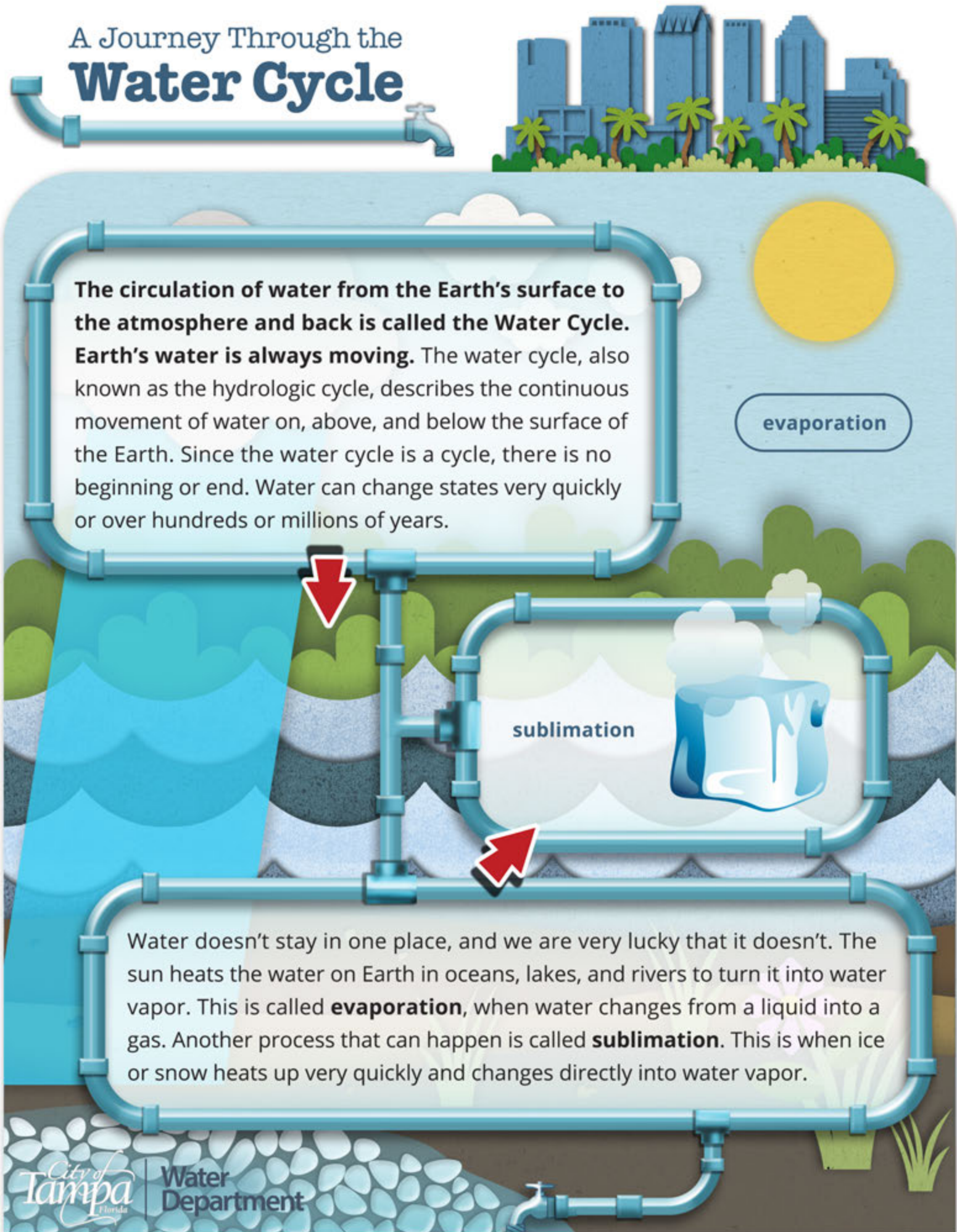


# A Journey Through the Water Cycle



The circulation of water from the Earth's surface to the atmosphere and back is called the **Water Cycle**. **Earth's water is always moving.** The water cycle, also known as the hydrologic cycle, describes the continuous movement of water on, above, and below the surface of the Earth. Since the water cycle is a cycle, there is no beginning or end. Water can change states very quickly or over hundreds or millions of years.

evaporation

sublimation

Water doesn't stay in one place, and we are very lucky that it doesn't. The sun heats the water on Earth in oceans, lakes, and rivers to turn it into water vapor. This is called **evaporation**, when water changes from a liquid into a gas. Another process that can happen is called **sublimation**. This is when ice or snow heats up very quickly and changes directly into water vapor.

# A Journey Through the Water Cycle

condensation

Water vapor also enters the water cycle through a process called **transpiration**. Plants, animals and people all give off water through this process. As warm, moist air rises, it cools and condenses. The water vapor becomes water molecules or ice crystals and makes clouds. This is called **condensation**. After enough water molecules gather in a cloud, they get heavy. When so much water has condensed that the air can't hold it anymore, the clouds get heavy and it rains. This is called **precipitation**. Rain, snow, sleet, fog, and dew are all forms of precipitation.

precipitation

Precipitation creates runoff that travels over the ground surface and helps to fill lakes and rivers. When the rain comes down, it goes into a variety of places - streams, ponds, swimming pools, and it can be absorbed in the ground. If we're lucky, the rain will "run-off" into the Hillsborough River, Tampa's water source. Precipitation also **percolates** or moves downward through openings in the soil to replenish aquifers under the ground.

transpiration

percolation

# A Journey Through the Water Cycle

## Our Ecosystem

An **ecosystem** is the relationship between living things and the environment. Communities of plants, animals, insects and other organisms along with sunlight and air make up an ecosystem. The health of an ecosystem relies on each part of it.

If one thing changes, it will affect all of them. If we cut down trees to make way for homes or new roads, or a hurricane destroys the land, the lives of all living things is altered. Pollution can get into our river and streams and affect the quality of the water we drink and kill fish and other organisms that live in the water. Keeping our environment clean benefits all living creatures.

# A Journey Through the Water Cycle



## Vocabulary

- |   |                         |
|---|-------------------------|
| ___ 1. Circulation of water, from ground to air | <b>A.</b> Condensation  |
| ___ 2. Lose water                               | <b>B.</b> Water Cycle   |
| ___ 3. When water goes back into the air        | <b>C.</b> Precipitation |
| ___ 4. Rain, sleet, snow                        | <b>D.</b> Transpire     |
| ___ 5. Water air changes back into a liquid     | <b>E.</b> Evaporation   |
| ___ 6. Community of plants, animals             | <b>F.</b> Water vapor   |
| ___ 7. Water steam                              | <b>G.</b> Ecosystem     |

## Activity

On one day, write down all the ways you used water and compare that list with your class. Think of ways you can cut down on your water use from that list.

With the local newspaper, go through it and note any articles that talk about water, rain or our ecosystem. Discuss with your class if the news you found is good for our environment.

Answer  
(backwards)



1.B  
2.D  
3.E  
4.C  
5.A  
6.G  
7.F

# A Journey Through the Water Cycle



## Word Search

R D V B V P S Z X Y Z R G T N  
 U B B C N R R T H O I D R Y O  
 N B R T N E Q N R V U A F K I  
 O N U O L C J F E E N L J B T  
 F B I J P I P R U S A J F A A  
 F D U A S P T M P E M M S E R  
 B M A J R I J I R E T A W D O  
 P C O J O T R U B T N I S F P  
 B G J E U A M P V X Y B J W A  
 X B W Z T T W M W O M V U F V  
 O S U I F I U O W J H I F B E  
 P R O Q K O V N R V F N K W T  
 Z N V E F N E C O S Y S T E M  
 N O I T A S N E D N O C C R Q  
 D E V F R L U G W V T Z Y F J

CONDENSATION

EVAPORATION

RAIN

RUNOFF

TRANSPIRATION

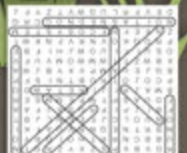
ECOSYSTEM

PRECIPITATION

RIVER

STREAM

WATER



# A Journey Through the **Water Cycle**



## **Experiment / Activity**

Fill a clear plastic cup about half full with warm water. Carefully place the cup of water into a dry plastic zip lock bag. Slowly, zip the top of the bag until tightly closed. Tape the top of the bag to the window.

Kneel to eye level of the cup and carefully draw a line with a colored marker on the outside of the bag, where the water line is on the cup.

The next day, observe what has taken place inside of the bag. The water line on the cup should now be lower than on Day 1. Draw a line with the marker at the new water line. The water line is lower because of the phase of "Evaporation".

Also notice the 'cloudy' appearance at the top of the bag. This is the phase of the water cycle known as "Condensation." This is how clouds are formed in the sky. Water droplets on the side of the bag got there because of "Precipitation." In nature this is when it rains or snows.