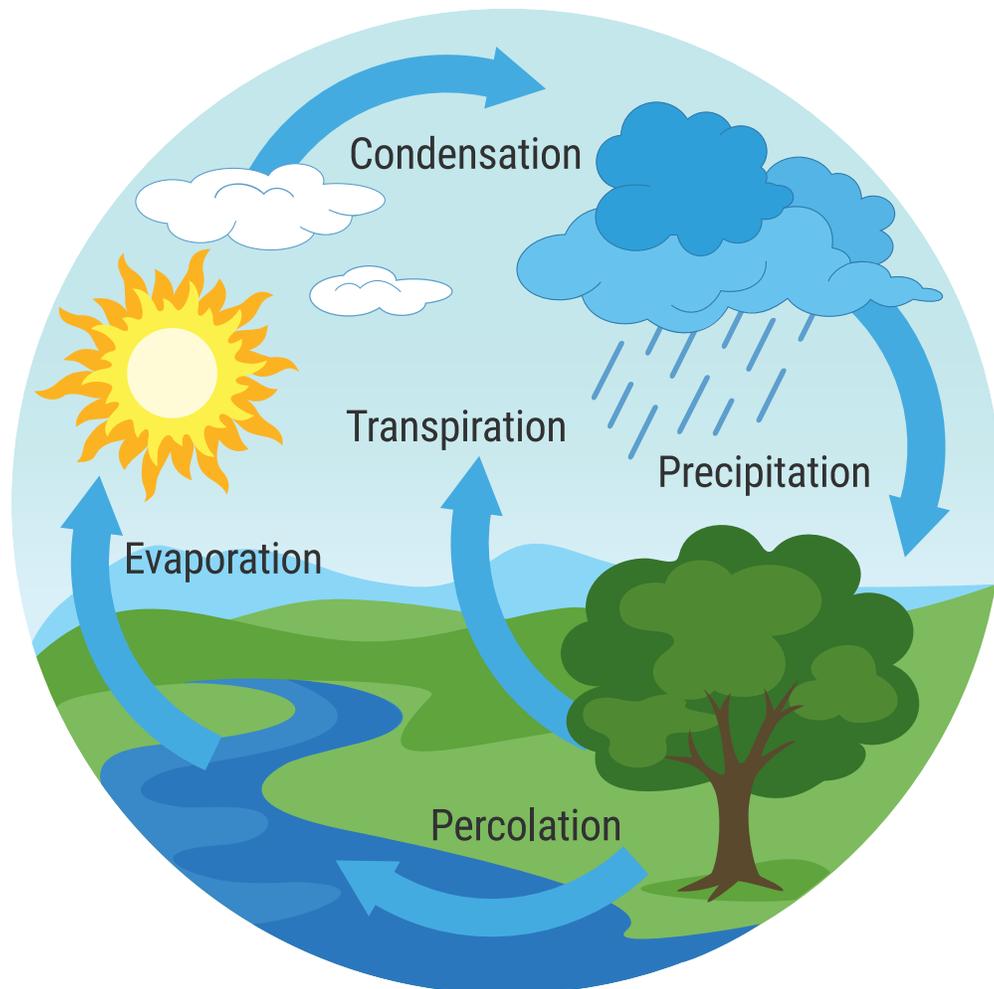


# THE WATER CYCLE



# ALL ABOUT... THE WATER CYCLE

Water, the most precious resource on Earth, is in a constant state of motion, embarking on a never-ending journey weaving through the atmosphere, land, and depths of the planet. This journey, known as the water cycle or hydrologic cycle, showcases Earth's natural ability to recycle water, ensuring that life thrives on our planet. The water cycle encompasses evaporation, condensation, precipitation, runoff, percolation, and collection, all intricately linked to form Earth's watery circulatory system. Let's dive into the stages of this incredible cycle and discover the forces behind it.



## **Why the Water Cycle Matters**

The water cycle does more than move water; it's a critical driver of weather patterns and climates, and the lifeline of ecosystems worldwide. This cycle ensures the continuous renewal and distribution of Earth's most vital resource. Understanding this cycle is crucial as it impacts everything from agriculture to

urban planning. Human activities and climate change are altering the water cycle, affecting precipitation patterns and water availability worldwide. This underscores the need for sustainable water management practices to safeguard this cycle.

## **Protecting the Water Cycle**

Given the vital importance of the water cycle, it is crucial that we take steps to protect and conserve this precious resource.

This can include:

- Reducing water consumption and improving water efficiency
- Protecting and restoring wetlands, rivers, and other water bodies
- Implementing sustainable land use practices to reduce erosion and runoff
- Addressing climate change through reducing greenhouse gas emissions
- Improving water treatment and reducing water pollution



By understanding and appreciating the water cycle, and taking action to protect it, we can ensure that this vital process continues to support life on Earth for generations to come.

# THE CYCLE'S STEPS: A CLOSER LOOK

## Evaporation and Transpiration:

The water cycle begins with evaporation, as water absorbs heat from the sun and transforms into vapor (gas) that rises from oceans, lakes, and rivers. Plants contribute through transpiration, releasing water vapor through their leaves. This combined process, evapotranspiration, moves water from Earth's surface into the atmosphere. As temperatures rise due to climate change, evaporation rates increase, leading to more intense storms and changes in water distribution.

## Condensation : Formation of Clouds:

As water vapor rises, it meets cooler air and condenses into tiny droplets or ice crystals, forming clouds and fog. Condensation is crucial for cloud formation, serving as the prelude to precipitation. Clouds, Earth's fluffy floating water reservoirs, play a unique role in the coming precipitation.

## Precipitation : Rain, Hail, Snow, and Sleet:

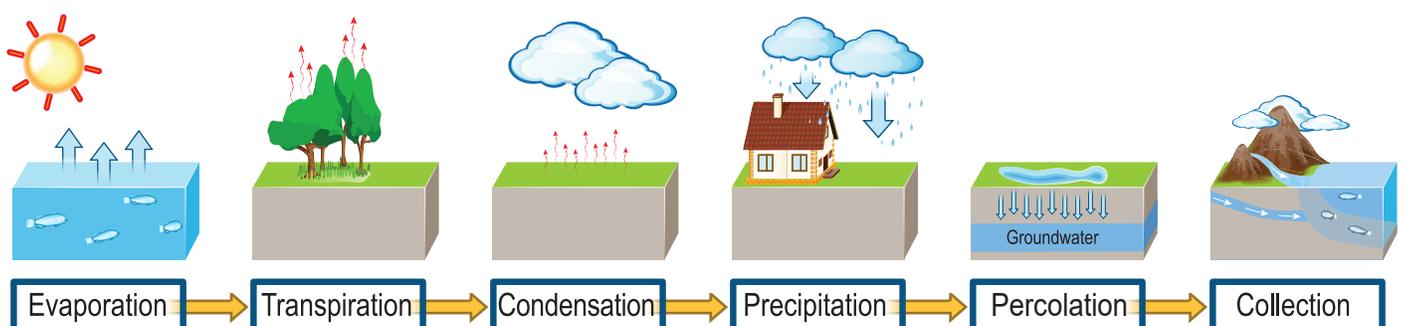
Precipitation occurs when water droplets or ice crystals in clouds become too heavy, falling to Earth as rain, snow, hail, or sleet. This phase is vital for transferring water from the atmosphere back to the surface, replenishing rivers, lakes, and groundwater. Precipitation's form and intensity are influenced by temperature, atmospheric conditions, and geographic location.

## Runoff and Percolation:

Once on the ground, water doesn't stay put; it moves. Runoff sees water flowing over land, shaping the landscape, filling streams, rivers, and lakes, and eventually finding its way to the oceans. Meanwhile, percolation allows water to seep through the soil, replenishing underground aquifers that feed springs and wells. This subterranean journey is essential for filtering pollutants, maintaining Earth's freshwater reserves, and supporting ecosystems in dry periods.

## Collection:

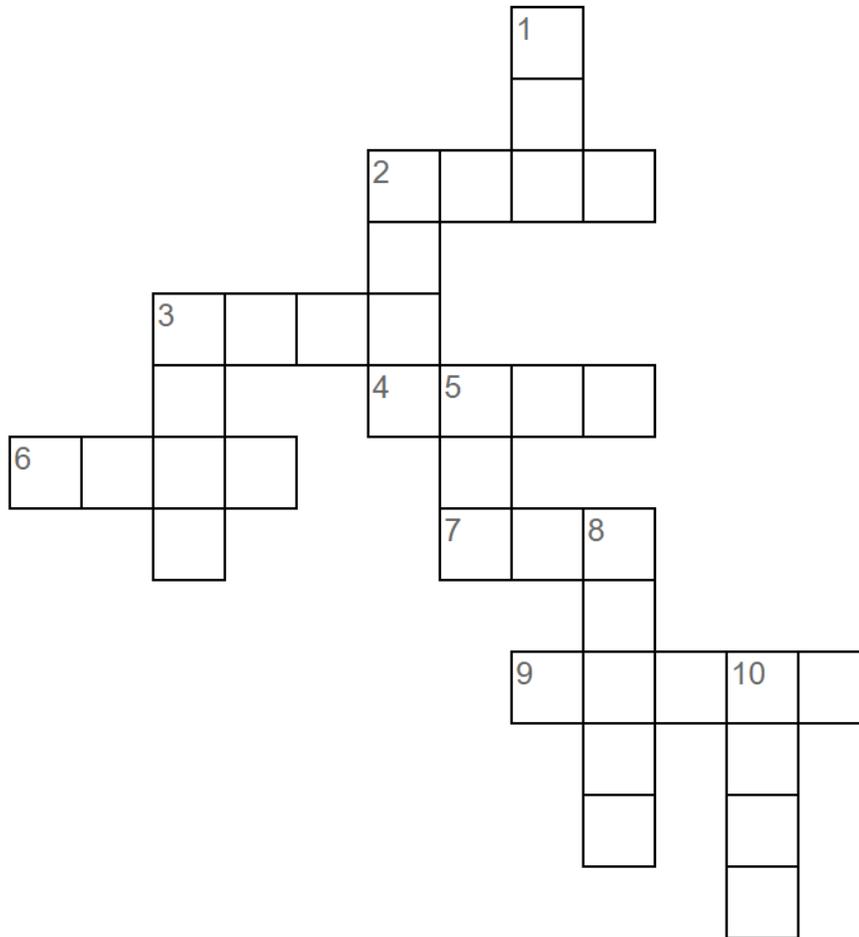
Water's journey pauses in lakes, oceans, and rivers, where it gathers before once again being warmed by the sun, evaporating to start the cycle anew. These collection points are vital for life, providing habitats and supporting biodiversity, enabling water to continue its endless cycle.



# JUMBLE

EVERY ANSWER USES ONLY THE LETTERS IN THE WORD:

## PRECIPITATION



### Across

2. Prime
3. Center
4. To capture
6. Close by
7. Leaf water
9. Roof loft

### Down

1. Frozen water
2. Verse writer
3. Jacket
5. Rodent
8. Performing artist
10. Idol

# WORD SEARCH

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

---

Water  
Cycle  
Collection

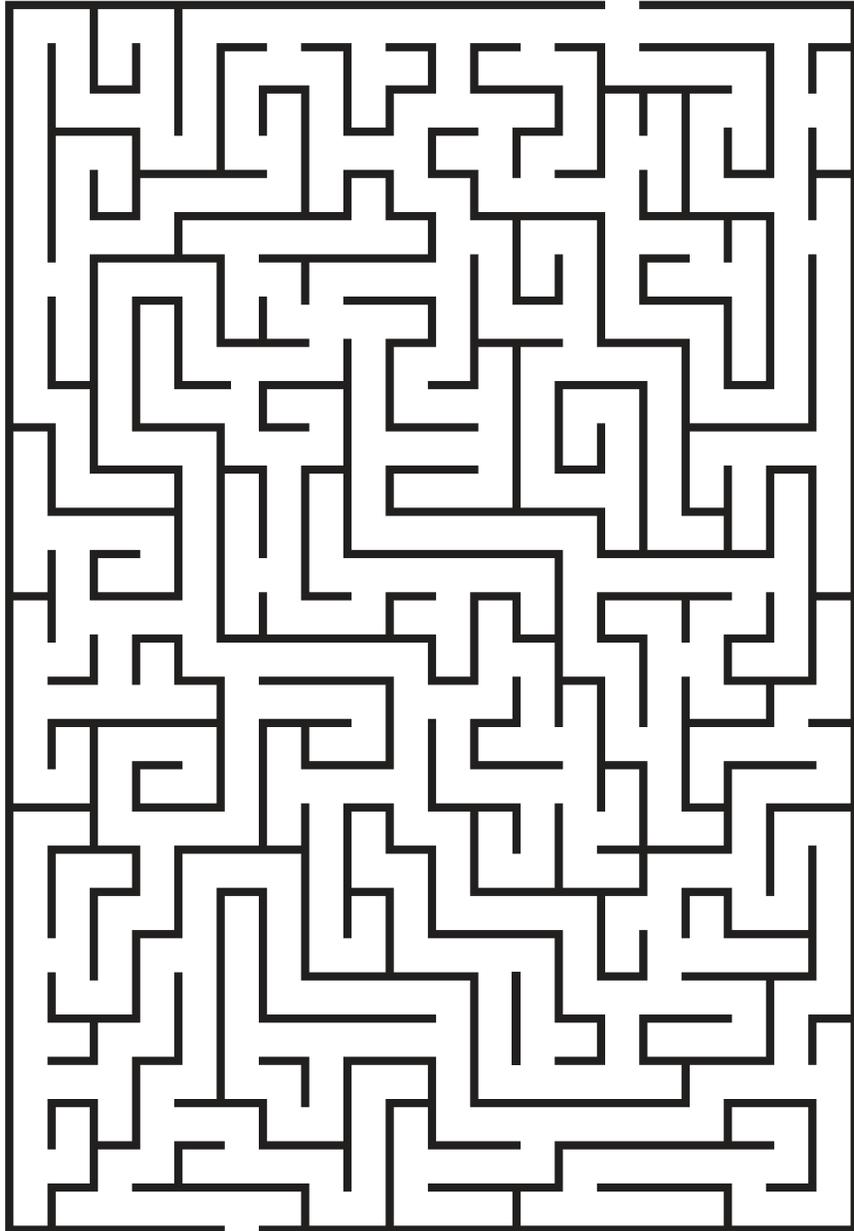
Rain  
Hail  
Clouds

Snow  
Sleet  
Journey

System  
Earth  
Runoff

# MAZE

Help the water droplets find their way to the clouds.



# SOLUTIONS

