

It's Raining, It's Pouring, It's Flooding! In Maricopa County Lesson 1: The Water Cycle

Key Vocabulary

Evaporation—When the sun heats up the water and turns it to vapor, which rises into the air

Condensation— Water vapor gets cold and returns to a liquid, forming clouds

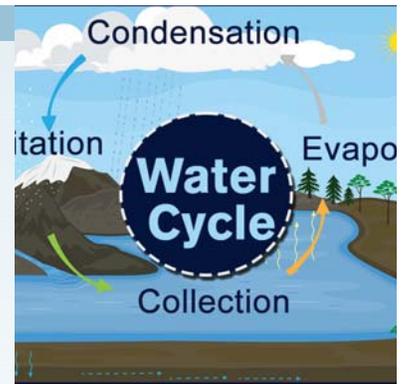
Precipitation—Rain, snow, sleet, or hail. Water falls back to the ground when the clouds get too heavy.

Runoff— The draining away of water from the surface of an area of land

Collection— When precipitation collects in the oceans, rivers, lakes, and streams

Atmosphere—The gasses that surround the Earth

Hydrosphere— All the waters on the Earth's surface, such as lakes and seas, and sometimes including water over the Earth's surface, such as clouds.



Outcome

Students will understand the key components in the water cycle and that the sun is needed to power the cycle.

Objectives

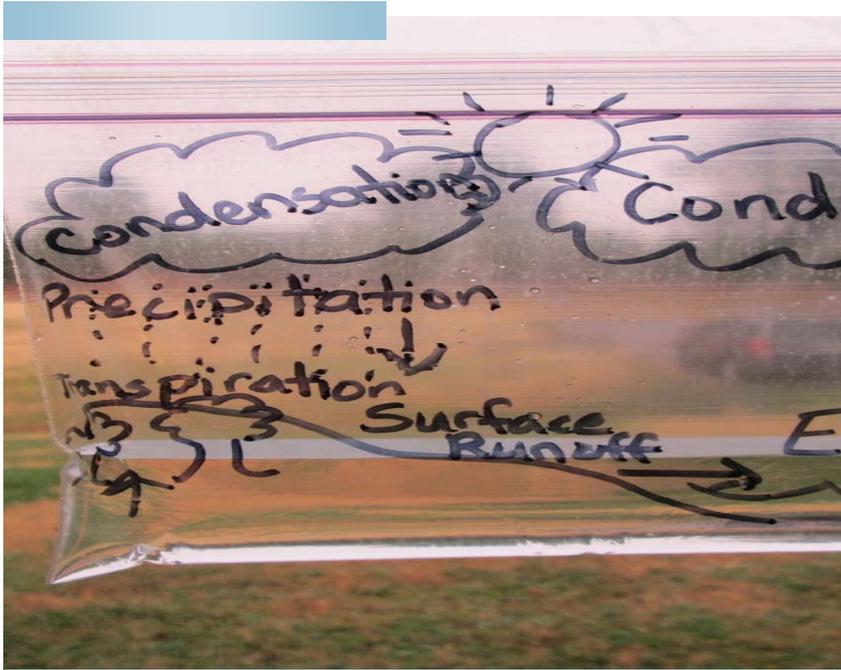
- Students will be able to explain the key components of the water cycle.
- Students will be able to identify 2 of Earth's major systems as they relate to the water cycle.
- Students will be able to describe how the sun is the primary source of energy and how it impacts the water cycle.

Essential Question

What powers the water cycle?

Length of Lesson

Two 45-minute periods



Materials

- It's Raining, It's Pouring, It's Flooding! In Maricopa County PowerPoint
- Plastic sandwich bags
- Permanent markers
- Water supply

Only 3% of all of Earth's water is fresh water.

Before Teaching

Preview PowerPoint

Choose videos to show

Create sample bag so students can see how to draw the water cycle

Additional Resources

<http://www.kidzone.ws/water/>

<http://wayofwater.weebly.com/the-water-cycle.html>

<https://www.youtube.com/watch?v=52wY4r66OVc>

<https://www.youtube.com/watch?v=nIkRu9LL4sk>

<https://www.youtube.com/watch?v=4GcJeScKwrg>

Books:

Water Dance by Thomas Locker

Water is Water by Miranda Paul

Water by Seymour Simon

Activities

- ◆ Review vocabulary with students, using TPR
- ◆ Review the remainder of the PowerPoint
- ◆ Have students work in partners to create a model of the water cycle using the plastic bags
- ◆ Have students hang the plastic bags around the classroom and observe for a couple of days. You will begin to see the water condensing on the sides of the bag.

Extension

- Students can choose where to hang their bags—this will help you assess if they understand that they need the sun to power the water cycle.
- As an extension activity, have students work in groups to create a dance to represent the water cycle.

Differentiation

Write a journal entry (or draw a picture) about a time that you experienced one of the forms of precipitation (rain, snow, sleet, or hail).



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Lesson 1: The Water Cycle

Outcome

- Students will understand the steps of the water cycle.



Objectives

- I will be able to define the four basic steps of the water cycle.
- I will be able to identify what powers the water cycle.
- I will be able to create a diagram of the water cycle.



Essential Question

- What powers the water cycle?



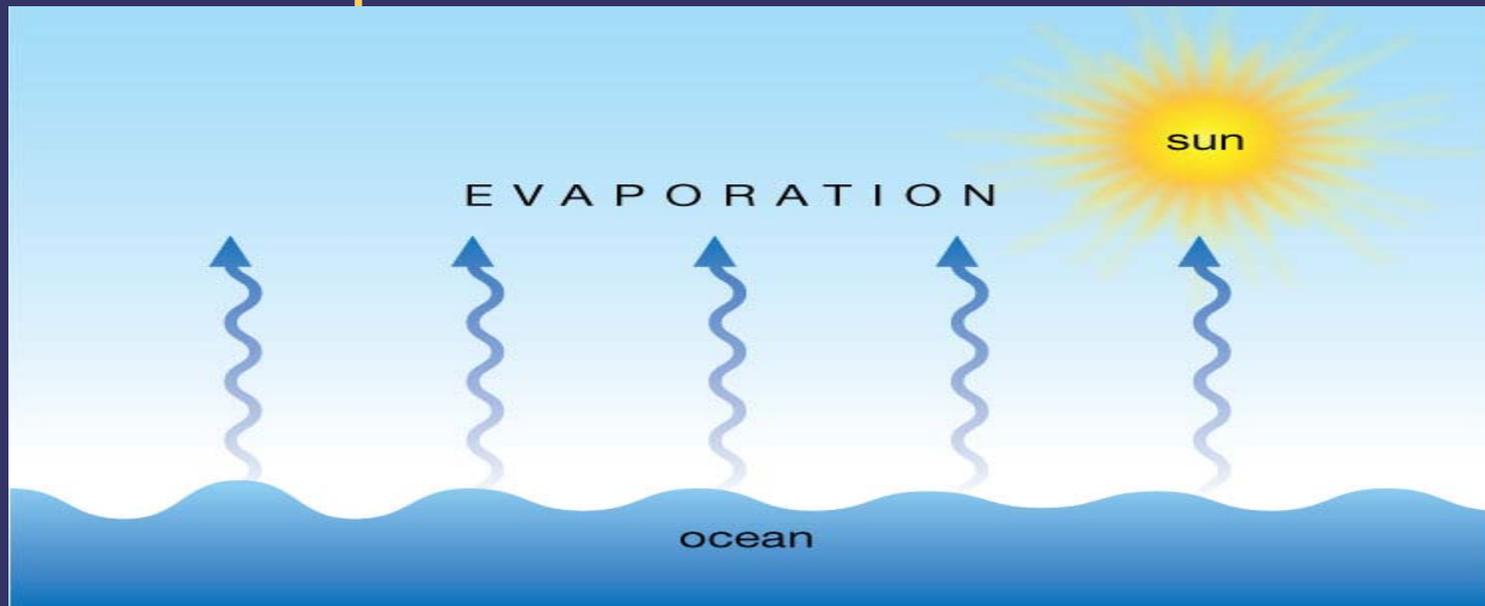
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- Condensation – Water vapor gets cold and returns to a liquid, forming clouds.
- Precipitation – Rain, snow, sleet, or hail. Water falls back to the ground when the clouds get too heavy.
- Runoff – The draining away of water from the surface of an area of land.
- Collection – When precipitation collects in the oceans, rivers, lakes, and streams.
- Atmosphere – The gasses that surround the Earth.
- Hydrosphere – All the waters on the Earth's surface, such as lakes and seas, and sometimes including water over the Earth's surface, such as clouds.



Evaporation

- When the sun heats up the water and turns it to vapor
- That vapor then rises into the air



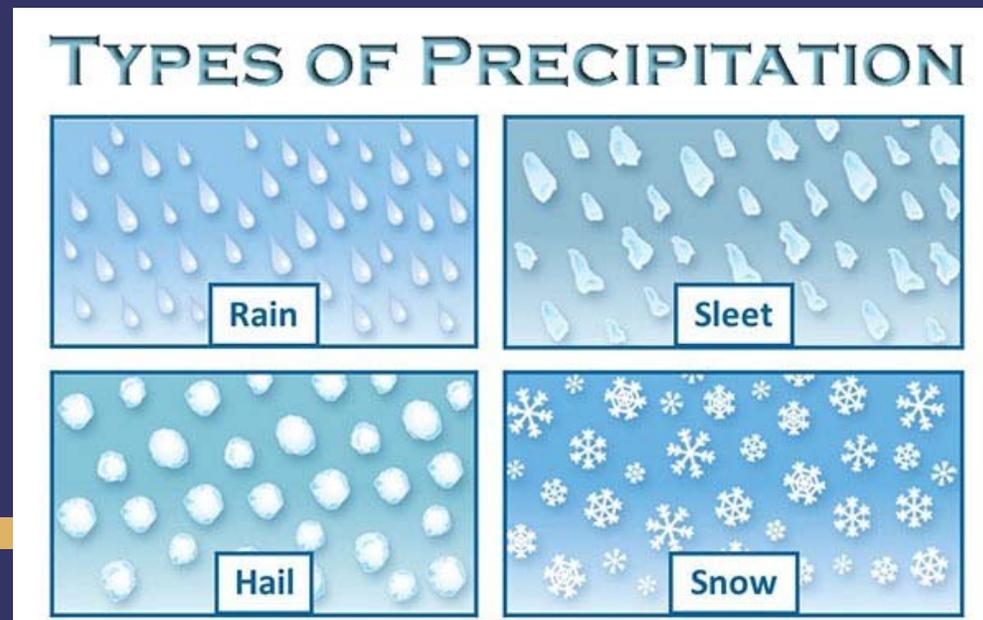
Condensation

- As the water vapor rises, it cools off
- The vapor then collects back into water droplets and forms clouds



Precipitation

- When clouds get too heavy, the water droplets fall back to the ground as rain, snow, sleet, or hail.



Runoff

- After the precipitation falls, the water “runs off” the land back to bodies of water



Collection

- Precipitation collects in rivers, streams, lakes, and oceans



The Sun

- What affect does the sun have on the water cycle?
 - Think time
 - Partner A will share for 30 seconds
 - Partner B will agree or disagree and support for 45 seconds



Watch

- [Water Cycle Song](#)
- [What is the water cycle and why does it rain?](#)
- [Water Cycle Explained](#)
- [Water Cycle Song](#)



Make a Model

- How can you make a model of the water cycle using this plastic bag?
- Partner A – Sun/Evaporation
- Partner B – Clouds/Condensation
- Partner A – Mountain/Runoff
- Partner B – Water/Collection



Four Corners

- What provides the energy source for the water cycle to work?
 - A. The ocean
 - B. The mountains
 - C. The sun
 - D. Runoff



When the sun heats up the water and turns it to vapor, which rises into the air

Rain, snow, sleet, or hail that falls to the ground

Water vapor gets cold and returns to a liquid, forming clouds

The draining away of water from the surface of an area of land

When precipitation collects in the oceans, rivers, lakes and streams

3rd – 5th Grade
Lesson 1

The gasses that surround the Earth

All the waters on the Earth's surface, such as lakes and seas, and sometimes including water over the Earth's surface, such as clouds.

Water vapor gets cold and returns to a liquid, forming clouds
- Condensation

Rain, snow, sleet, or hail that falls to the ground - Precipitation

When the sun heats up the water and turns it to vapor, which rises into the air
-Evaporation

When precipitation collects in rivers, lakes, streams, and oceans
- Collection

The draining away of water from the surface of an area of land
- Runoff

All the waters on the Earth's surface, such as lakes and seas, and sometimes including water over the Earth's surface, such as clouds. - Hydrosphere

The gasses that surround the Earth - Atmosphere



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Lesson 1: Hydrological Cycle Rubric

Risks and Hazards			
	Excellent (3 Points)	Satisfactory (2 Points)	Needs Improvement (1 Point)
Accuracy of Information	<ul style="list-style-type: none"> • All parts of the water cycle are included and labeled correctly 	<ul style="list-style-type: none"> • The model is missing 1-2 parts of the water cycle or they are labeled incorrectly 	<ul style="list-style-type: none"> • The model does not include the parts of the water cycle or none of them are labeled
Organization	<ul style="list-style-type: none"> • Appropriate materials were used and the model is easy to understand 	<ul style="list-style-type: none"> • The model is difficult to understand or the materials are inappropriate 	<ul style="list-style-type: none"> • The model is difficult to understand and the materials are inappropriate
Participation in Team	<ul style="list-style-type: none"> • All team members have equal participation • Team members communicate effectively 	<ul style="list-style-type: none"> • All team members participated, but not equally or Communication was lacking 	<ul style="list-style-type: none"> • Some team members did not participate • Communication was lacking

Score:	Feedback:
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Name: _____ Date: _____

KWL Chart		
<i>K</i> What I Know	<i>W</i> What I Want to Know	<i>L</i> What I Learned