

**Discipline:** Science & Technology, Environment & Ecology

**Standard Category:** Watersheds and Wetlands

**Lesson Focus:** Water cycle

<b>PA Standard(s):</b>	<b>Related TESOL Standard(s):</b>
3.1.4C: Illustrate patterns that regularly occur and reoccur in nature. 3.5.4C: Recognize the Earth's different water resources. 4.1.7A: Explain the role of the water cycle within a watershed. Explain the water cycle.	Goal 2: To use English to achieve academically in all content areas. Standard 2: Students will use English to obtain, process, construct and provide subject matter information in spoken and written form.

**Key Objectives in Accordance with TESOL Level:**

<b>Pre-Conversational/ Beginning</b>	<b>Intermediate</b>	<b>Advanced</b>
Students will be able to: • Label parts of the water cycle provided drawings	Students will be able to: • Draw the water cycle • Describe what happens during each step in the cycle.	Students will be able to: • Draw the water cycle • Describe what happens during each step in the cycle. • Applying knowledge through a creative writing piece in which they describe what happens to a raindrop as it journeys through the water cycle.

**Materials:**

1. Computer access for students to access a web site or a computer and projector for students to observe the Hydrologic (water) Cycle via computer animation.
2. Picture of the water cycle
3. Pictures of boiling water, rain or snow, runoff
4. Graphics for the sun, water, clouds, confetti (snow)
5. Glass filled with cold liquid
6. Labels of each step of the water cycle.

**Procedures:**

Prior to teaching this lesson you may want to access this web site to become familiar with the graphics and materials. This is a NASA Web site designed for students.

<http://kids.msfc.nasa.gov/Earth/Default.asp>

When you access the home page, click on the box entitled "The Water Cycle". This will lead you to a NASA animated program entitled the

**Suggested**

**Level:**

Intermediate

**Lesson Focus:**

Hydrologic  
(water) cycle

**Teaching  
Strategies:**

Whole group  
instruction

Discussion

Lecture

Modeling

Cooperative groups

**Assessment  
Strategies:**

Graph and label

Illustrate with written  
explanation

Creative writing

“Hydrologic Cycle”. Follow the prompts and the web site will guide you through the entire water cycle.

1. Group students in pairs to have them work access the website for the water cycle.
2. Have students go through the entire web site either with you as the guide or in pairs.  
*ESL students at all levels benefit from the use of visuals.*
3. Once they have gone through the entire water cycle have them label the diagram step by step to define the following terms:  
**Evaporation** (NASA refers to this as evapotransportation)  
**Condensation** - If students are unsure of this concept use the example of a glass with ice water in it on a hot day.  
**Precipitation** - rain, snow  
**Transpiration** - water escapes from the leaves of plants  
**Run-Off** - Flow of water into larger bodies of water
4. Define **Cycle**. Use it as a suffix to clarify meaning tricycle, bicycle – generalize meaning to water cycle.
5. Explain that humans supply the power to make a tricycle or bicycle move and that the sun supplies the energy for the water cycle (heat).
6. Talk about the constancy of Earth’s water – **Recycling**
7. Review the steps of the **Water Cycle**
8. Given a picture and labels, students in groups of two will cut and glue labels at the correct place in the water cycle.

**Assessment:**

Day 2 Provide students with materials needed to assess understanding of the Water Cycle.

**Beginner**

Provide graphic of the water cycle and words to label.

**Intermediate**

Provide plain paper.

Student should label parts on his/her drawing, describing what happens throughout the water cycle.

**Advanced**

Draw, label and describe, then write a creative piece from the point of view of a raindrop as it travels through the water cycle. Use terms to know.

**Notes:**

Terms to Know: **Evaporation, Condensation, Precipitation, Transpiration, Run-Off, Rain, Snow, Sleet, Hail, Recycled, Water Cycle**

**Helpful websites for Water Cycle:**

<http://www.epa.gov/OGWDW/kids/cycle.html>

<http://ga.water.usgs.gov/edu/followdrip.html>

<http://www->

[k12.atmos.washington.edu/K12/pilot/water\\_cycle/grabber2.html](http://www.k12.atmos.washington.edu/K12/pilot/water_cycle/grabber2.html)