

Teacher's Guide

Video Podcast: *The Water Cycle*

Southwest Florida Water Management District

Grades 4-5

This teacher's guide supports the Southwest Florida Water Management District's (SWFWMD) video podcast episode *The Water Cycle*, available at WaterMatters.org/Podcasts. This guide includes Florida standards, Common Core Standards, vocabulary, suggested activities and links to additional resources. Students will need computer and internet access for this lesson.

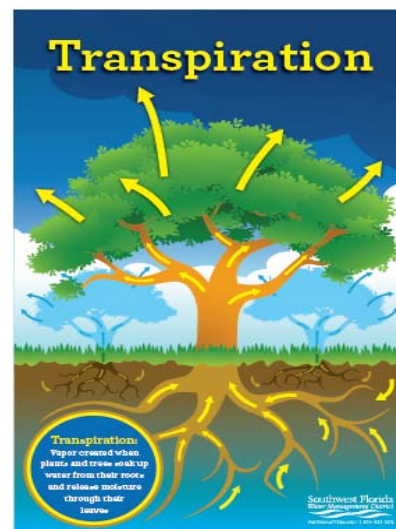
Lesson Time: Approximately 70 minutes (divided among class periods)

Objective: Students will engage in collaborative discussion about the parts of the water cycle and create a visual display using technology.

Vocabulary:

<u>Aquifer:</u>	An underground layer of spongelike rock that holds water
<u>Condensation:</u>	Tiny droplets of water formed when water vapor rises into the air and cools, forming clouds
<u>Evaporation:</u>	Vapor created when the sun heats water in lakes, streams, rivers and oceans
<u>Percolation:</u>	Movement of water through the ground
<u>Precipitation:</u>	Moisture released from clouds in the form of rain, sleet, hail or snow
<u>Transpiration:</u>	Vapor created when plants and trees soak up water from their roots and release moisture through their leaves

Great visual representations of these vocabulary words are available at WaterMatters.org/Publications where the SWFWMD offers a series of **posters** (for electronic download) that include the following vocabulary words: Aquifer, Condensation, Evaporation, Percolation, Polluted Runoff, Precipitation, Solar Energy, Transpiration, Watershed and Wetland.



Lesson

Engage:

(15 minutes) Prior to watching the video, pose the following *essential question* to your students: What is the importance of the water cycle in Florida?

Remind students to look for evidence in the video that will help them identify the parts of the water cycle and answer the essential question.

Watch podcast episode *The Water Cycle*. Review the vocabulary terms and ask aloud the following questions:

What happens when it rains?

What happens to the water after it rains?

What is steam? When have you seen steam?

Explore/Explain:

(20–25 minutes) Ask students to access the [ClipPix](#) and [ClipVideo](#) SWFWMD galleries (links below). Instruct students to open PowerPoint, Inspiration or another program. Students will use images from the galleries to create individual diagrams of the water cycle. Ask students to label the photos he or she selects with the proper vocabulary word that describes each part of the water cycle.

Extend:

(10 minutes) After 20–25 minutes, instruct students to save their diagram. Allow students to get up and view other student's diagrams. Perhaps tell students to stand up and move to their left to see the neighboring diagram. After 10–15 seconds, have students move to the next diagram to the left. Continue until the students have seen 3–4 other students' diagrams. Then ask students to return to their seats.

Evaluate:

(20 minutes) Select several students to explain how the photos in their diagrams represent each part of the water cycle. Ask students if other student diagrams used similar photos to represent the same parts of the water cycle.

Additional Lesson Topics:

Students identify the properties and common uses of water in different states. Students describe how energy is needed to alter the state of water.

Additional Links

WaterMatters.org/Publications

- WaterDrops: Water Cycle (3–5 student booklet and teacher’s guide)
- Poster: Hydrologic Cycle (K-5)
- Water cycle bracelet class kits (not listed online, in the comments box of your order form, request water cycle bracelet supplies for XX students, or email WaterEducation@WaterMatters.org to learn more)

<http://etc.usf.edu/clippix/pictures/the-water-cycle/>

<http://etc.usf.edu/clipvideo/galleries/the-water-cycle/>

Standards

Next Generation Sunshine State Standards

SC.4.E.6.6

Identify resources available in Florida (water, phosphate, oil, limestone, silicon, wind, and solar energy).

SC.4.P.8.2

Identify properties and common uses of water in each of its states.

SC.4.P.10.2

Investigate and describe that energy has the ability to cause motion or create change.

SC.5.E.7.1

Create a model to explain the parts of the water cycle. Water can be a gas, a liquid, or a solid and can go back and forth from one state to another.

SC.5.E.7.2

Recognize that the ocean is an integral part of the water cycle and is connected to all of Earth's water reservoirs via evaporation and precipitation processes.

SC.5.E.7.3

Recognize how air temperature, barometric pressure, humidity, wind speed and direction, and precipitation determine the weather in a particular place and time.

Common Core State Standards:

[CCSS.ELA-Literacy.SL.4.1](#) Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 4 topics and texts*, building on others' ideas and expressing their own clearly.

[CCSS.ELA-Literacy.SL.4.2](#) Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.

[CCSS.ELA-Literacy.SL.4.4](#) Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.

[CCSS.ELA-Literacy.SL.4.5](#) Add audio recordings and visual displays to presentations when appropriate to enhance the development of main ideas or themes.

[CCSS.ELA-Literacy.L.4.4](#) Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.

[CCSS.ELA-Literacy.W.4.6](#) With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single sitting.

[CCSS.ELA-Literacy.W.4.7](#) Conduct short research projects that build knowledge through investigation of different aspects of a topic.

[CCSS.ELA-Literacy.RI.4.1](#) Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

[CCSS.ELA-Literacy.RI.4.3](#) Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.

[CCSS.ELA-Literacy.RI.4.4](#) Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a *grade 4 topic or subject area*.

[CCSS.ELA-Literacy.RI.4.5](#) Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text.