Teacher's Guide
Video Podcast: Using a Model to Learn About Watersheds

Southwest Florida Water Management District   **Grades 3-4**

This teacher's guide supports the Southwest Florida Water Management District's (SWFWMD) video podcast episode *Using a Model to Learn About Watersheds*, 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.
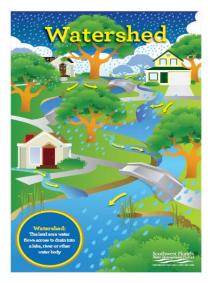
Lesson Time: Approximately 55 minutes

Objective: Students will identify common water sources, uses and pollutants in west-central Florida. Students will use technology to create a visual display to educate the public on preventing pollution to west-central Florida's water supply.

Vocabulary

Aquifer: An underground layer of spongelike rock that holds water

Pollution: Any change in water that causes it to become unclean or impure

Polluted runoff: Rainwater that picks up pollutants as it moves towards a larger body of water

Watershed: The land area water flows across to drain into a lake, river or other water body

> Great visual representations of these vocabulary words are available at WaterMatters.org/Publications where the SWFWMD offers a series of **posters** for electronic download.

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Lesson

Engage:

(15 minutes) Prior to watching the podcast, pose the following essential question to your students: How does pollution affect your everyday life? Remind students to look for evidence in the podcast to help them answer this question.

Watch podcast episode *Using a Model to Learn About Watersheds.* Review the vocabulary terms and use the following questions to frame a class discussion:

> What is pollution?
> What types of pollution can harm local water bodies and the water we drink?
> How could pollution affect an ecosystem?
> How could pollution in our drinking water affect people?

Explore/Explain:

(25 minutes) Ask students to access the *ClipPix* SWFWMD gallery (link below). Instruct students to open Word, Publisher or another program that can be used to create a visual display (brochure, poster, etc.). Tell students they will be creating a visual display to educate others about pollution in local water bodies and water supply.

Encourage students to use images selected from the ClipPix galleries to teach others how to prevent pollution and runoff from entering our water. Students should recall what they learned in the podcast, but can also use WaterMatters.org/Watersheds for ideas.

Extend:

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

Evaluate:

(10 minutes) Select several students to present their displays to the class. If time permits, take SWFWMD's watershed pledge as a class at: WaterMatters.org/Watersheds.

Additional Links

WaterMatters.org/Publications
- WaterDrops: Watersheds (3–5 student booklet and teacher's guide)
- Posters mentioned under vocabulary

WaterMatters.org/Watersheds
- View virtual watershed excursions
- Take the Watershed Pledge

WaterMatters.org/WaterMonitoring

http://etc.usf.edu/clippix/pictures/watershed-model/

http://etc.usf.edu/clipvideo/galleries/watershed-model/

Standards

Next Generation Sunshine State Standards:

SC.3.N.3.2
Recognize that scientists use models to help understand and explain how things work.

SC.3.N.3.3
Recognize that all models are approximations of natural phenomena; as such, they do not perfectly account for all observations.

SC.4.N.3.1
Explain that models can be three dimensional, two dimensional, an explanation in your mind, or a computer model.

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.

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.W.4.2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

CCSS.ELA-Literacy.W.4.4 Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)

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.W.4.8 Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.

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*.