

## Video Lesson Plan 4A—*Water Pollution: The Dirty Details* “Reading and Water Play”

**Subject/Grade level:** Language arts and reading for grades 6–8

**Objective:** Students will practice reading fluency.

**Rationale:** Using a mini-play with repeated readings is a motivating way to practice fluency.

**Standards:**

- LA.6.1.5.1, LA.7.1.5.1, LA.8.1.5.1 Fluency: The student will adjust reading rate based on purpose, text difficulty, form, and style.

**Background/Links:**

- Find out more about this strategy and other learning strategies from the Florida Online Reading Professional Development Resource Database (FOR-PD) at <http://forpd.ucf.edu/resources/>
- Find out more about the St. Johns River Water Management District (SJRWMD) and water quality at [www.sjrwmd.com/education/pdfs/WQ\\_in\\_classroom.pdf](http://www.sjrwmd.com/education/pdfs/WQ_in_classroom.pdf).

**Lesson Plan**

**Engage** (3 minutes): Holding up the characters’ props, ask students if they would like to do a reader’s theatre for reading.

**Explore/Explain** (40 minutes):

Watch the DVD (8 minutes), and ask the students to notice all the different users of water. Give each student a copy of the play. Pair up students, and have them practice reading various roles several times. Help with the pronunciation of unfamiliar vocabulary. Ask the student pairs to provide definitions for unfamiliar vocabulary and to explain them to the group. Then have students assemble in groups of 4–6 and have them read the play in their group. Allow students to change roles within their group. Walk around and listen to the readers. Finally, pick a student to portray each role.

**Extend** (10 minutes): Assemble students, and have the selected cast perform a play for the class. Using costumes and props is another way to extend. Ask the students to read from a fact sheet from the SJRWMD Web site to learn more about pollution. From the fact sheet, “A Story of the St. Johns River, the

**Time:** 63 minutes

**Materials:**

- *Water Pollution: The Dirty Details* video (8 minutes) from the *Your Water Resources* DVD, St. Johns River Water Management District, 2006, or available to download free at [www.sjrwmd.com/video/index.html](http://www.sjrwmd.com/video/index.html)
- DVD player
- Copies of the play for each student
- Clothing and or props that might help identify each character, such as the boater might carry a paddle, the homeowner might have a watering can or hose, the angler might have a fishing rod or net, or the construction worker might wear a tool belt or hardhat.
- A handful of soil

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Big Picture,” have students read the section about the specific river basin where they live, [www.sjrwm.com/publications/factsheets.html](http://www.sjrwm.com/publications/factsheets.html).

### **Extensions:**

Do one or more of the following activities from the *Project WET Curriculum and Activity Guide*.

- **“Sum of the Parts”**— Illustrates visually and tactilely how a water body such as a river can become polluted from both point and nonpoint sources through the students’ creation of different uses for the land along a riverfront. It highlights best management practices for nonpoint source pollution.
- **“Rainy Day Hike”**— Focuses on watersheds and directs students to explore the watershed at their school by discovering how and where water flows on the school grounds. Students observe what materials flow into the storm drain, and they learn about stormwater pollution and nonpoint source pollution.

**Evaluate** (10 minutes): Have students answer the following standards-based writing question. Everyone contributes to water pollution. Think about specific sources of water pollution. Write to explain three ways that your school or family contributes to water pollution.

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### **Script for *Water Pollution: The Dirty Details***

<b>Narrator #1:</b>	In Florida, water is all around us. Florida’s water, and the quality of that water, is important to businesses, residents, and visitors. To each of us, water quality means something different.
<b>Angler:</b>	To the angler, good quality water means having plenty of fish to catch and areas for more fish to spawn and grow.
<b>Boater:</b>	To a boater, it means being able to pilot a boat through a waterway free of trash and hazards.
<b>Homeowner:</b>	To a homeowner, it means having plenty of fresh, clean water to drink and use inside and outside the home.
<b>Narrator #1:</b>	However, as more people live, work, and play on and around water, more water becomes polluted. So, what exactly is water pollution?
<b>Narrator #2:</b>	Water pollution is the contamination of water by harmful chemicals or waste materials, either by nature or by people.
<b>Homeowner:</b>	Many of the things people do each day increase the amount of pollution and the time it takes for a water body to become polluted. A body of water is considered to be polluted when it is no longer usable by people or other living things.
<b>Narrator #2:</b>	Pollution comes from all of us.
<b>Homeowner:</b>	A typical rain carries pollutants such as fertilizers, pesticides, oils, grease, pet or animal wastes, and trash from yards, fields, and roads to the nearest body of water.
<b>Construction worker:</b>	Sediments are one common form of pollution. Sediments are tiny bits of soil, leaves, wood, rocks, or other solid particles that are washed or blown from the land into the water. (Trickle soil through your fingers to demonstrate sediments.) Sediments can come from construction sites, farming activities, logging activities, mining, and stormwater runoff from neighborhoods and businesses. Sediments can cause flooding by clogging drains.
<b>Angler:</b>	Sediments can build up in ditches, lakes, and streams causing them to become shallow. Sediments can block the gills of water creatures, cover their eggs, and interfere with reproduction.

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<b>Homeowner:</b>	Nutrients are another type of water pollutant. Nutrients provide nourishment for plants and animals in the same way that food and water provide nourishment for people. Nutrients help living things grow. While normal amounts of nutrients make plants grow at a normal rate, too many nutrients in our waterways are harmful and can cause plants to grow wild and out of control.
<b>Boater:</b>	This can result in waterways becoming clogged and unmanageable. When nutrient pollution causes harmful changes to a water body, it can cause plants and animals to die.
<b>Angler:</b>	Sources of nutrients include sewage or septic tank run off, animal wastes, detergents, industrial wastes, and fertilizers.
<b>Narrator #2:</b>	Another type of water pollution is bacteria. Bacteria are very small creatures that can only be seen with a microscope. Some bacteria are harmful and some are helpful. Bacteria can come from improperly treated sewage, runoff from animal waste, and industrial sources such as slaughterhouses, food and paper processing plants, and some landfills.
<b>Fisherman:</b>	Bacteria reduce the amount of oxygen in the water. Lack of oxygen hinders the water’s ability to support aquatic animal and plant life. Bacteria can also be a source for the spread of some diseases in the water. These diseases can spread to aquatic wildlife and plants, and possibly even to human beings.
<b>Construction worker:</b>	Toxic pollution is another type of water pollution. Harmful substances like pesticides, poisons, or other chemicals, and heavy metals like mercury, lead, copper, or zinc cause toxic pollution. It can come from cleaners, dyes, paints, and solvents such as turpentine. All of these are toxic pollutants.
<b>Narrator #1:</b>	Pollution comes from all of us. We all do things that cause pollution, such as using too much fertilizer or pesticide, or not picking up our pet’s wastes from the yard.
<b>Narrator #2:</b>	We can all do things to reduce pollution, such as using less fertilizers or pesticides and picking up pet wastes. We can all do things to help reduce pollution.