2009

PLANET H2O

Environmental Science
Earth, Life and Space Science

3 10-min. Programs
Grades 5-8
Teacher's Guide
SOL Correlations Below

Three case studies show how young students and professionals are helping to solve the growing problem of global overuse and abuse of Earth's most precious and limited resource: water. Despite being more than two-thirds covered by water, our planet has only 1% of that in the form of fresh water that is easily available for human use. This series explores both the positive and negative scientific and social implications of global water use. Its worldwide, multicultural point of view and appealingly youthful presentation, coupled with solid academic content, make it essential viewing for middle-school science and social studies classrooms.

1. Underground Aquifer Water: Precision Farming — We learn in this program that despite its wonders, Earth's water cycle does not spread water evenly around the planet. The Ogallala Aquifer's huge underground reservoir of water gives the relatively dry Central Plains states such as Nebraska a large but limited irrigation source. But the aquifer's water is being used up faster than it is being replenished. We see how one progressive farm family uses technology to conserve water while producing higher food yields.
Science: 5.6, 6.3, 6.5, 6.7, 6.9, LS.7, LS.10, LS.11, LS.12

2. Cleaning Polluted Water: Pumped Up for Peace — Drinking polluted water can cause many deadly diseases, especially in the children of poor countries around the world. We see the crystal-clear water in a flowing Peruvian rainforest river but are amazed to learn that it is unsafe, due to runoff entering the great connected network of tributaries that flow into the Amazon, the world's largest source of fresh water. We learn how student fundraisers and field scientists from the U.S. have helped indigenous peoples develop water treatment systems, using their own technologies.
Science: 5.6, 6.3, 6.5, 6.7, 6.9, LS.7, LS.10, LS.11, LS.12

3. Restoring H2O Ecosystems: Saving Chesapeake Bay — Polluted waters can have damaging economic and social effects as well as destroy wildlife habitats. Chesapeake Bay is one of the most polluted bodies of water in America, but local students are working with commercial crab catchers and scientists in the Baltimore area to help restore its health.
Science: 5.6, 5.7, 6.3, 6.5, 6.7, 6.9, LS.7, LS.9, LS.10, LS.11, LS.12