

TWDB KIDS

TEXAS WATER DEVELOPMENT BOARD K-12 EDUCATIONAL RESOURCES

Children today will face a daunting challenge when they are adults: managing and conserving Texas' dwindling water supplies. So that they are equipped for this challenge, these future decision makers will need to be educated on the scientific background as well as the complex issues surrounding this critical resource.

The place to begin water education is in the school classroom. School programs can result in both short- and long-term water savings. The information students learn now is often shared with their parents and affects current water use patterns in their households. Youth educated about water resources are also more likely to make life-long behavioral changes.

<http://www.twdb.texas.gov/kids>



What are the TWDB K–12 educational programs?

TWDB scientific research forms the cornerstone for these programs. They include units developed for specific age groups and range from coloring books for younger children to complete curricula for older students, with teachers' guides and Texas Essential Skills and Knowledge (TEKS) guidelines. Interactive Web games and lessons are also featured.

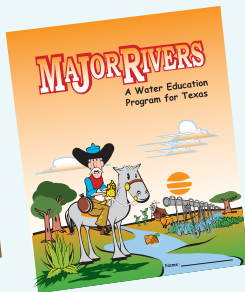
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The TWDB Kids Web site serves as the gateway to the agency's K-12 conservation education resources. The Web site also features visualizations, interactive games, and other activities to help students learn about key water resource concepts.

Water for Texas coloring book (K–3rd)

This popular publication engages young children in exploring Texas water resources. It features Grandpa Lizard, Sally Mander, Amanda Armadillo, and Billy the Bull. Aimed at K-3 students, the coloring book teaches them about the importance of water resources and water conservation.

The coloring books may be ordered from TWDB or downloaded from the TWDB Kids Web site.



Major Rivers (4th–5th)

Major Rivers, along with his horse, Aquifer, has been visiting Texas classrooms for the past 20 years. This multidisciplinary curriculum includes a teacher's guide on CD-ROM, colorful and engaging student workbooks and home leaflets, and an introductory movie on DVD. The program teaches students where water comes from, how to protect water resources, and how to use water wisely.

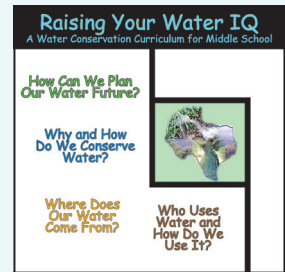
Major Rivers has been updated to incorporate the latest information from the TEKS requirements for students. Student materials for *Major Rivers* are available in both English and Spanish language versions.

Raising Your Water IQ (6th–8th)

Raising Your Water IQ is an inquiry-based, hands-on approach to teaching middle school students about Texas water resources. This free curriculum has a teacher's guide and includes lessons on:

- watersheds and pollution
- groundwater
- water cycles
- permeability
- porosity
- wise water use

Activities in this program offer community-based service learning opportunities. Relevant TEKS standards are listed in the teacher's guide.



Water Exploration (9th–12th)

This new Web-based water education program for Texas high school students is aligned with the learning standards for Earth and Space Science, Advanced Placement Environmental Science, Biology, Chemistry, Environmental Systems, and Aquatic Science. By using a project-based learning approach, *Water Exploration* encourages students to conduct research and build an understanding about water science and critical water-related issues.

All learning activities and resources are packaged into modules, or Legacy Cycles, which enhance student learning by making use of Internet and computer technology to promote inquiry learning. Service learning is also incorporated into this program by challenging students and community members to conduct school water audits and implement water conservation strategies such as rainwater harvesting.



Know Your Texas Water

Teachers and parents are often primarily responsible for educating youth about the importance of water resources and conservation. Know Your Texas Water is a Web-based education resource for teachers and parents who would like to know more about Texas water. It features Web quests, animations, maps, and other tools based on TWDB's research, including the State Water Plan.



Who Uses Water in Texas? Almost all of the water used in Texas is consumed for agricultural, industrial, and municipal uses. In this game, drag the handles of a pie chart to guess the percentage of water you think is used by each water user group.

Surface Water and Groundwater Module
Watch rivers flood and water infiltrate into an aquifer. See how droughts and floods affect

people, and watch the effects people have on water resources. Then test your knowledge with a vocabulary quiz!

Power of Many Learn how many football fields of water the state of Texas uses every year, and find out how much water can be conserved if everyone in your city and in the state of Texas followed those water conservation practices.

The Water Planner Game In this game, it is your job to make sure that Texas will have enough water for the future, even in times of drought. Learn about municipal, agricultural, and industrial water use; water sources; and water conservation tools. Different feedback appears in this game depending on how you play.

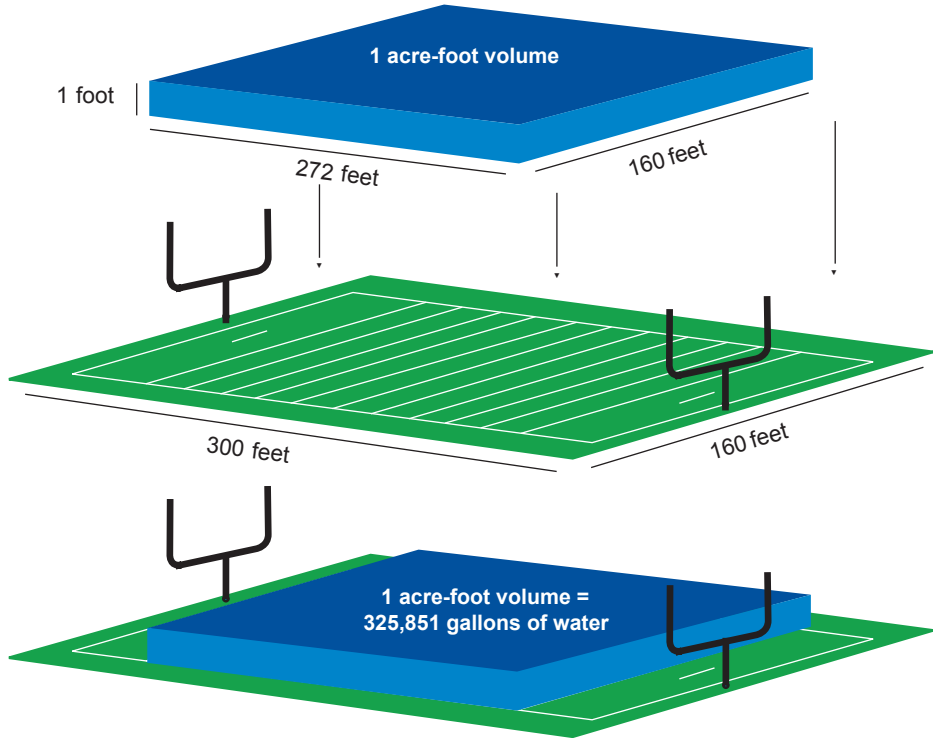
Texas Water
Development Board

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WATER
IQ
Know your water.SM

WHAT IS AN ACRE FOOT?



An acre-foot is the amount of water it would take to flood an acre to a depth of one foot.

One acre-foot of water is enough to support the municipal use of six Texans for one year.

By 2020, Texas is projected to have a demand of 18.5 million acre-feet of water for all water uses per year.

For games and animation, visit our TWDB Kids Web Site.

<http://www.twdb.texas.gov/kids>