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Introduction
Water in the desert is a precious commodity. In this lesson, students will investigate water cycles and water usage in their community and create a multimedia presentation about what they learn.

Technology Use
Required
- Internet access
- Word processing software
- Draw/Paint program
- Spreadsheet software

Recommended
- Desktop publishing software
- Multimedia software
- Printer

Resources
Online
- Know Your Watershed [http://www.ctic.purdue.edu/KYW/KYW.htm](http://www.ctic.purdue.edu/KYW/KYW.htm)
- Surf Your Watershed [http://www.epa.gov/surf2/hucs/13030102](http://www.epa.gov/surf2/hucs/13030102)
- Water Wiser [http://www.waterwiser.org](http://www.waterwiser.org)

Preparation
- Allow students one day to surf six web sites cited above. Have them do the quiz and questionnaires located on the Water Science for Schools web site to spark interest and provide some background knowledge.
- Ensure that all software programs and Internet connections are working properly.

Tasks
- Students study the water usage and cycling at the web sites listed in Resources.
- Students interact with the Student Activity at the RETA site. ([http://reta.nmsu.edu/techshare/modules/agua/index.html](http://reta.nmsu.edu/techshare/modules/agua/index.html))
- Students create a multimedia presentation describing the water cycle as it relates to the Mesilla Valley (or your local) watershed. Include a glossary with all key words.
- Students can then create graphs with water usage data for Mesilla Valley and US. The data should include at least three of the following areas: irrigation, public, domestic, commercial, livestock and industrial water use for both surface and ground water.

Assessment
A rubric is provided for the evaluation of the multimedia presentation. Overall, evaluation of the students' works may be performed by the teacher or by peer review.
Extensions
Suggested extensions for this activity include having students create and administer surveys for water usage. Surveys can be given to the student body or members of the community. Results of the surveys can then be graphed, printed and displayed to increase consumer awareness. Another activity might be to do "what if" water usage scenarios based on the population of the local community. For instance, what if people only showered for 5 minutes instead of 10? How much water would that save a day? A month? A year? Use formulas in spreadsheet program to arrive at answers and graph results.

Outcomes
Upon successful completion of this unit, the learner will:
- understand the water cycle.
- learn how the river is used.
- gain an appreciation for water conservation.

Content Standards and Benchmarks

National Educational Technology Standards
3) Technology productivity tools
4) Technology communications tools
5) Technology research tools

New Mexico's Standards and Benchmarks

Visual Art
2) Students will use visual art to express ideas.

Language Arts
1) Students will understand and use Language Arts for communication.
2) Students will understand and use Language Arts as a learning tool.
3) Students will listen and read for a variety of purposes.
5) Students will speak clearly and write effectively for a variety of audiences and purposes.
10) Students will use state-of-the-art computer technology to gather, use and synthesize information, and to create and communicate knowledge.

Mathematics
2) Students will understand and use Mathematics in communication.
4) Students will understand and use mathematical connections.
5) Students will understand and use numbers and number relationships.

Science
12) Students will know and understand properties of Earth Science.