

7th Grade: Water Works

Students create a “water web” to illustrate the interdependence among water users and producers.

Science

Str/std/bch	Performance Standard
II. I. I.	7.1. Explain how matter is transferred from one organism to another and between organisms and their environment (e.g., consumption, the water cycle, the carbon cycle, the nitrogen cycle).
II.II.I.	7.3. Explain how individuals of species that exist together interact with their environment to create an ecosystem (e.g., populations, communities, niches, habitats, food webs). 7.5. Describe how the availability of resources and physical factors limit growth (e.g., quantity of light and water, range of temperature, composition of soil) and how the water, carbon, and nitrogen cycles contribute to the availability of those resources to support living systems.
II.III.II	7.3. Know that changes to ecosystems sometimes decrease the capacity of the environment to support some life forms and are difficult and/or costly to remediate.

Social Studies

Str/std/bch	Performance Standard
Hist I.I-A.	7.1 Explain how New Mexicans have adapted to their physical environments to meet their needs over time (e.g., living in the desert, control over water resources, pueblo structure, highway system, use of natural resources).
Econ IV.IV-C	7.1 Understand the factors that currently limit New Mexico from becoming an urban state, including the availability and allocation of water, and the extent to which New Mexico relies upon traditional economic forms (e.g., the acequia systems, localized agricultural markets).

Extension – Read “El Agua Es la Vida” with your students. This is the declaration of the New Mexico Acequia Association. Afterwards, ask them to imagine what someone standing on the banks of the Rio Grande would have seen 100 years ago, before urbanization. Brainstorm words to describe the experience. Now ask them to brainstorm words about what they would see standing on the banks of the Rio Grande now. Don’t forget that besides homes and downtown, you might see the bosque surrounding the Rio Grande Nature Center. Ask students to write a paragraph about what they would like someone to be able to see from the Rio Grande 100 years from now. Ask them to share their ideas.

See the Social Studies Performance Standards above, as well as the final Science Performance Standard.

EL AGUA ES LA VIDA

CONGRESO DE LAS ACEQUIAS

DECEMBER 2, 2006

Statement of Principles

1. We recognize, honor, and respect that water is sacred and sustains all life.
2. We reaffirm the connection between land, water, and our communities as the material and spiritual basis for our existence.
3. We practice the principle that water is life in our customs and traditions of water sharing also known as the *repartimiento*.
4. We recognize that we live in a desert and water scarcity is part of our existence. Because it is scarce and precious, the utmost care must be taken in using our water.
5. We honor the indigenous knowledge of our elders which guides the day-to-day operation of acequias, the cultivation of ancestral crops, and the care of our animals.
6. We recognize that our ancestors viewed water as a communal resource attached to the land and our water rights exist as a result of generations of their labor and self-governance.
7. We honor water as part of our heritage and believe that treating water as a commodity for generating profit is a fundamental disrespect of our way of life.
8. We seek to sustain our ancestral connections to water which has historically been used for providing our families with household uses, growing food, and providing for our animals.
9. We believe that as needs for water in our communities change over time, decisions about reallocations or transfers of water rights should be made through a cultural and spiritual attachment to place, through a feeling of *querencia*, and through local self-governance.
10. We believe that our acequias are fundamental to our culture and our identity as land-based people and we must be intentional in passing on our traditions to future generations.
11. We maintain that water we use for growing food supports our self-determination as a people, enhances riparian habitat, contributes to aquifer recharge, and results in health benefits both to the farmer and to those who eat local, fresh, and culturally significant foods.

Threats to Acequia Water and Land-Based Livelihoods

1. Unprecedented growth and development in New Mexico are driving demands to move water rights out of agriculture to urban, resort, and commercial development.
2. According to studies on future supply and demand, acequia communities are projected to lose 30% to 60% of their water rights base and farmland to development in the next 40 years.
3. Acequias in areas with high water demands may be driven to extinction by water transfers because of reduced pressure head at the point of diversion and fewer families to contribute to the maintenance and governance of the acequia.
4. Acequia and rural agricultural communities are economically disadvantaged and will likely experience a net loss of water rights as wealthier individuals, entities, and regions acquire water rights from a position of greater economic power.
5. Demands to move water out of our acequias come at a time when our communities are dedicating themselves to revitalizing agriculture and rebuilding local food systems. Erosion of the acequia water rights base will foreclose future options for rural community development.
6. Water supplies in New Mexico are threatened by various sources of water contamination including mining runoff, lack of wastewater treatment facilities, improper dumping of solid, chemical, and radioactive waste, and urban drainage.
7. Traditional environmental knowledge embodied in the acequia culture is at risk because of a lack of intentional efforts in our educational systems to recognize its importance and incorporate it into curricula.

8. Poor condition of our watersheds from overstocked forests and invasive species are likely to be reducing stream flows in our rivers which impacts wildlife, streamflows, and water quality.

Acequia Plan of Action

1. We will cultivate our acequia lands with the crops of our ancestors using native seeds and we will continually improve our soils on our farms and ranches to enhance efficient use of our water.
2. We will actively participate in the governance of our acequias and encourage new leaders to serve as commissioners and mayordomos.
3. We will celebrate our culture through *funciones*, *cambalaches*, and *festivales* that honor traditional feast days and the culturally and spiritually important days in our growing season.
4. We will seek solutions to meet local water rights needs by supporting collaboration between acequias and mutual domestic water consumer associations in securing safe and healthy water for our families.
5. We will work to retain local ownership and control of water rights by strengthening acequia governance and preventing the transfer of acequia water rights out of their respective communities and the basins where they have historically existed.
6. We will establish projects to strengthen our farms and ranches as part of our way of life and as part of our livelihoods. We will also seek appropriate resources to rebuild our food system infrastructure locally and regionally.
7. We will establish community-based processes and centers for the documentation of indigenous and traditional environmental knowledge about our watersheds, acequia traditions, agricultural practices, and food traditions.
8. We will work to challenge the economic and political forces in New Mexico that result in growth and development patterns that are transforming our landscape and undermining our way of life.

Acequia Allies Solidarity Statement

1. We support and value the historical and cultural contributions of acequias to New Mexico and seek to sustain them and part of our collective heritage,
2. We will support acequia and agricultural communities in challenging the economic and political forces in New Mexico that result in growth and development that are transforming our landscape and undermining New Mexico's land-based cultures,
3. We will work to change the existing unsustainable growth patterns in New Mexico by supporting policies that appropriately manage new growth and development in such a manner that will reduce water consumption and the demands to transfer water rights out of agriculture,
4. We will promote policies and projects that more rigorously conserve, reuse, and recycle water to reduce water consumption and the demands to transfer water rights out of agriculture, make changes to our personal water use to reduce urban and residential demands for water, and reject wasteful uses of water.
5. We will support local farmers and ranchers by intentionally purchasing locally grown foods directly from farmers and by supporting businesses that serve or sell locally grown foods,
6. We will support policies to rebuild local food systems by increasing financial and educational resources to farmers and ranchers and by investing in agricultural infrastructure.
7. We will dedicate time and resources to projects aimed at strengthening acequias, engaging youth in land-based culture, and creating educational projects that seek to sustain the traditional community body of knowledge that underpins the acequia culture.
8. We will be advocates in our own towns, cities, associations, and organizations for policies that support acequia culture and serve as allies of acequia communities.

<http://www.lasacequias.org/programs/el-agua-es-la-vida/>