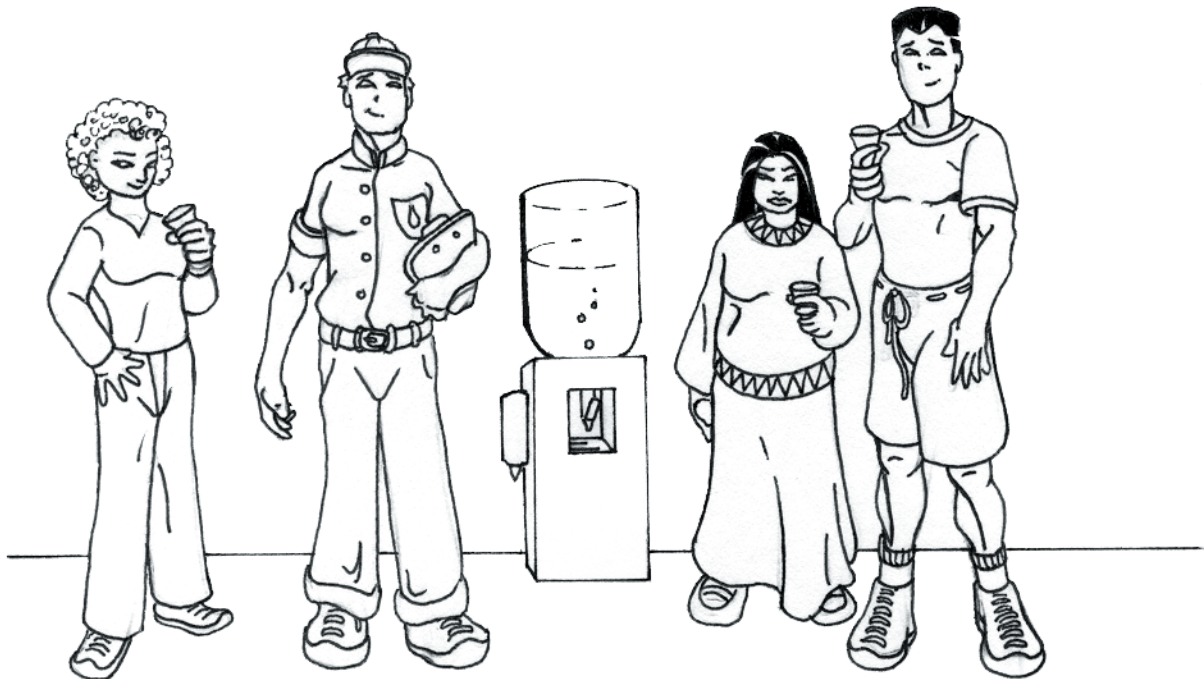


UNIT 3 WATER ATTITUDES

What forms a person's attitude towards water? The thought one gives to water and the manner in which one uses or doesn't use water is based on a multitude of factors. Like countless human attitudes, our view of water is the result of a complex combination of experience, education, role modeling, etc., solidly in place by the end of our adolescence, and likely not given much conscious thought in subsequent years. Probably one of the strongest determinants of an individual's attitude towards water is where he/she was raised. A person from Tucson is much less likely to take water for granted than someone from the Brazilian rainforest. The degree of technology and/or personal effort involved in supplying water is another important determining factor. If you live in a city where a water company delivers a clean, reliable water supply to your home, you'll have a much different attitude towards water than someone who gets their water by walking a great distance to the source and then has to carry water back home.

On the Hopi Indian reservation in Northern Arizona, the villages are on top of mesas. Fresh water is a scarce resource and comes from springs at the bottom of the mesas. The Hopis do not have a plumbing system to transport water to their homes. Hopi children, who come to cities such as Flagstaff and Prescott to go to school, have to become accustomed to indoor plumbing.

Individual attitudes toward water are a matter of perspective. Yet attitudes manifest themselves in habits and behaviors which affect use and quality of this precious liquid resource. The collective actions of many individuals based upon their water attitudes can have significant consequences for the general public's water supply. It is a valuable exercise for people to evaluate their water attitudes to see if they are in keeping with the environment that they inhabit their personal value system, etc.





ACTIVITY 3.1 WHAT'S ESSENTIAL?

**Activity adapted from "Choices, Preferences & Trade-offs," A Sense of Water. 1984. SAWARA, Inc.*

At a Glance

In this activity your students will need to prioritize various common water uses. This is intended to encourage critical thinking about the ways individual students use water. An optional second part to the activity involves having the students conduct the Water Use Survey with a family member.

Arizona Department of Education Academic Standards

Please refer to the Arizona Department of Education Academic Standards section for the ADE standards addressed by this lesson.

Learning Objectives

Students will be able to:

- 1) Choose which kinds of water usage they feel are most important.
- 2) Identify which choices on water usage a family member makes.

Materials

water use survey (Student Activity Book)

Procedure

PART 1

Have your students turn to the Water Use Survey in the Student Activity Book. Tell the students they each have thirty votes, and can give each water use as many votes as they would like. The water uses that are most essential receive more votes and the least essential water uses receive fewer or no votes. After the students have finished voting lead a class discussion.

Discussion questions:

- “What were the reasons for the voting choices you made?”
- “Was it difficult to decide among the various uses?”
- “Would you have made different choices if you had more votes?”
- “Would you have voted differently if there really were a water scarcity that forced you to change your water use habits?”

PART 2

Have the students conduct the Water Use Survey the very same way at home, asking a family member to vote.

Water Uses to be ranked

Swimming pool	Cooking	Decorative water fountain
Drinking	Watering grass	Making ice cubes
Bath/Shower	Watering vegetable garden	Evaporative cooler
Brushing teeth	Hot tub	Shaving
Washing clothes	Washing hands	
Washing dishes	Filling & maintaining an aquarium	
Washing car	Watering high-water use trees+shrubs	
Washing dog	Watering low-water use trees+shrubs	
Flushing toilet	Watering house plants	



ACTIVITY 3.2 TUCSON WATER STORIES

At a Glance

By reading five accounts from Tucsonans of different age, ethnicity, and background, students will contemplate various views of water and will be encouraged to think about what factors contribute to form an individual's attitude towards water. The students will then explore their own water attitude by writing their personal water story.

Arizona Department of Education Academic Standards

Please refer to the Arizona Department of Education Academic Standards section for the ADE standards addressed by this lesson.

Learning Objectives

Students will be able to:

- 1) Evaluate how events, surroundings, education and role models have formed their attitudes to water.
- 2) Describe their personal attitude towards water.
- 3) Understand that different people may have greatly differing perspectives towards water.

Materials

Tucson Water Stories (Student Activity Book)

Procedure

Distribute copies of the Tucson Water Stories to each student. Allow them to read the stories by themselves or choose five different students to read a single story in front of the class while the rest of the class follows along. After everyone has read the stories conduct a class discussion using the following discussion questions as a guide.

- “Was there a big difference in the age of the people?”
- “Did the older people experience much change during their lifetimes?”
- “Were all the people born and raised in Tucson? If not, where were they from?”
- “Did any of the people come from foreign countries where water was much different than it is in Tucson?”
- “What were some of the different impressions/recollections of the Santa Cruz River?”
- “Did any of the people have a water experience that left a big impression? If so, what was it?”

Finally, ask the students to write their own individual Tucson Water Story on the appropriate page in the Student Activity Book. The story they write should be based on what they have experienced during their life regarding water. Remind them that if they need help starting their story they might want to respond to the questions in the Student Activity Book, Activity 3.2.



TUCSON WATER STORIES

Erica Bielenstein – 5th Grade student

I'm 10 years old and have lived in Tucson for four and a half years. I live kind of close to Arroyo Chico and a bunch of my friends live right by there. Before I moved to Tucson I lived with my family in Brazil. It was fun living there. We lived kind of out in the middle of nowhere on a big ranch. It was really green with lots of plants and flowers all over the place. Brazil is unlike Arizona because it's so dry here, and there it's very moist. I was too little to know where our water came from when I lived in Brazil. But I know that Tucson's water comes from aquifers under the ground. I really need water and believe that it's important to conserve water because there's not very much of it here in the desert. In Brazil there's so much water that people aren't concerned with saving water, and don't have to be nearly as careful of how much water they use as we do. I've read a bunch of books that talk about water, and things dying because of droughts, and that's influenced the way I feel about saving water.

Bill Wright - Tucson Water employee

I was born and raised in Tucson and have lived here for most of my 62 years. I have worked for Tucson Water for 23 years in different departments, and have witnessed much growth and change in Tucson's water company. I have always lived in the central part of Tucson. The house I live in now is close to Reid Park and the water I receive there is delivered by Tucson Water. I can remember the rivers running through town when they were Mother Nature's rivers; uncontrolled, not channelized with stabilized banks as they are today. As a kid, I recall observing the course of the Santa Cruz River meander periodically over the years. During floods it was common to see a hundred feet of land along the banks get sucked into the river by the raging water. Because of the flood danger, homes and businesses were not built close to the river as they are now. Instead, little farms were planted along the riverbanks. I have fond memories of picnicking along the Rillito River in the shade of tall cottonwood trees, right about where the Tucson Mall is now located. People would grow watermelon patches along the river there, and if you were fast enough you could snatch a watermelon and bring it back to the picnic table! On the West Side of town, along the Santa Cruz, the farmers diverted water from the river through concrete irrigation canals. These canals were popular play spots when I was a kid. Now property along the rivers is valuable. In fact, I would like to build a home along one of the rivers in town.

Stella Tucker – Cook at San Xavier Mission school

I grew up in Tucson and on the Tohono O'odham reservation in Topawa. I've lived in Tucson for the last 27 years and get water from the city of Tucson. During my childhood I also spent time on the San Xavier reservation just south of Tucson. When my mom would take us out to San Xavier there were always farms. One farmer would invite everyone to come pick all they wanted. We'd go over there and pick chilies and corn. The farmers used to be able to farm using water from the Santa Cruz River, but now they can't rely on the river to provide water. Very little farming is happening out there now. Maybe one person is trying to grow his own crops. The mines and all the industries that are building around the reservation have sucked up the water. When I was a child I lived very close to the Santa Cruz River. I remember it being a big river, but I wasn't too fond of it because I almost drowned there twice. Ever since that I've had a fear of learning how to swim. On days when it rained so hard and the water was running, all the kids in the neighborhood would walk over to the Santa Cruz and go swimming. Everyone enjoyed it, but one time I slipped on something and panicked and went under. When I was growing up the river used to run; a lot of water used to come through there. The Santa Cruz today is different. Not too long ago, when some friends from California were visiting, we drove by the Santa Cruz and I told them that I almost drowned in that river and they laughed. From the appearance of the dry wash they couldn't imagine that water ever flowed in it. Now there are more houses and industry along the Santa Cruz River than when I was young. Nowadays you can't even get to the river unless you go to a bridge because most of the property along the river is privately owned.

Juan Lopez – Middle School student

I'm 13 years old and have lived in Tucson my whole life. The water in my family's house comes from Tucson Water. Tucson is a hot place and we need water. I live by the Santa Cruz River and just the other day my brothers and sisters and I went wading in the river for the first time. It's been raining a bunch this July and the water in the Santa Cruz was about a foot deep and flowing pretty fast. This is the second or third time I've seen the river running this summer. Most of the time it's dry and sandy. The river doesn't change much; it's always the same. I have fun in water. Whenever it rains I just run outside and get wet. Water is important because it's something that my body needs to keep me alive.

Alex Rancier – Middle School student

I'm 14 years old and was born in Texas. I lived in Washington, D.C. before moving to Tucson two years ago. My house in Washington, D.C. was right by the Potomac River, and I used to see the river every single day on my way to school. People would fish in the Potomac and big boats would cruise the river. I haven't seen any rivers in Tucson. There's less water here, only when it rains, when I get it from the faucet and when I go swimming. Tucson Water provides the water to my house, but I don't really know where the water company gets the water from. I live on Tucson's East Side and go to Gridley Middle School. The closest big wash to my home is the Pantano Wash. I know that the human body is made up of something like 70% water, and I have to drink water to live. We all need water.

