

This presentation premiered at WaterSmart Innovations

watersmartinnovations.com



GETTING PEOPLE EXCITED ABOUT WATER

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PHX WATER SMART

Challenge

How do we create a water conscious public that understands where their water comes from and how it gets to the tap?

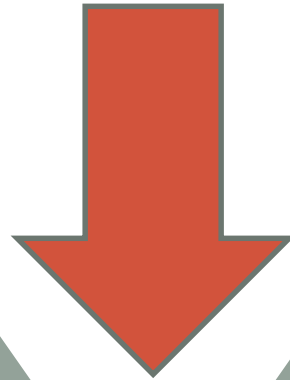
- Raising rates to repair an aging infrastructure
- Water supply impacted by drought and climate change
- Cooperation for voluntary water efficiency measures
- Cooperation for mandated water efficiency measures

Challenge

*We don't need to strive for a shared worldview; we need to have people take a specific action that advances our mission. They don't have to know everything; they simply need the information that is immediately relevant to them....**[W]e should not saddle people with the burden of becoming an expert on a topic before asking them to do something about it.**"*

From Robin Hood Marketing
by Katya Andresen

Close the Gap



Water Resource
Education for
Kids

Water Efficiency
Practice for
Adults

Outline

1. Principles of FUN (and effective) learning
2. Ways to engage adults and kids
3. Examples of activities you can use

What Kids Need to Learn

Touch

Connect

Ask

Discover

Act

Observe

Wonder

Contribute



Adults Want to Have Fun, Too!



The Principles of Fun (and Effective) Learning

DISCOVERY

WORK

COOPERATION

The Principles of Fun (and Effective) Learning

DISCOVERY

- Have big ideas in mind.
- Provide opportunities for observation.
- Lead with questions.

Groundwater Flow – Big Ideas

Groundwater is located in pore spaces.

Groundwater moves because gravity WORKS.

Groundwater is connected to surface water.

Groundwater is part of the water cycle.

Groundwater is an important part of our water resources.

Groundwater Flow – Objectives

Visualize how the groundwater system works, including its connection to the water cycle and surface water.

Demonstrate how both natural and human activities influence the height of the groundwater table.

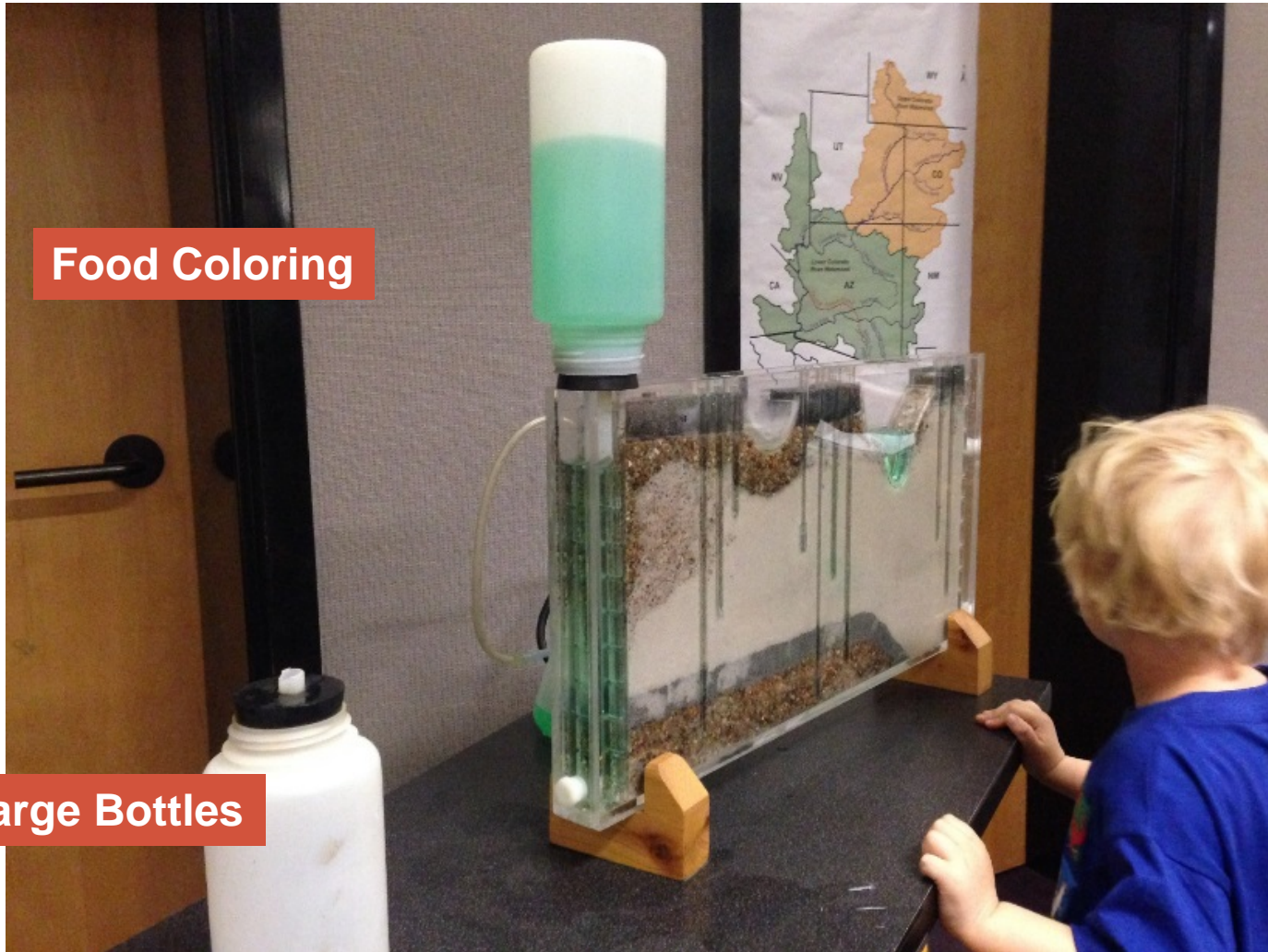
Demonstrate what happens to surface water when the groundwater table raises and lowers.

Explain why groundwater is important to our water resources and the environment.

Groundwater Flow - Observation

Food Coloring

Recharge Bottles



Groundwater Flow - Observation



Groundwater Flow – The Questions

- What are the layers you see?
- What changes in the model as water is added?
- Where is groundwater?
- What is groundwater doing under the ground?
- What direction is it moving?
- Why?
- What does this mean?



The Principles of Fun (and Effective) Learning

WORK

- Do something.
- Share something.

Water Cycle – Big Ideas

Water is constantly moving and constantly changing form.

The Water Cycle – DO SOMETHING



The Water Cycle – Share Something



Watershed – Do Something, Share

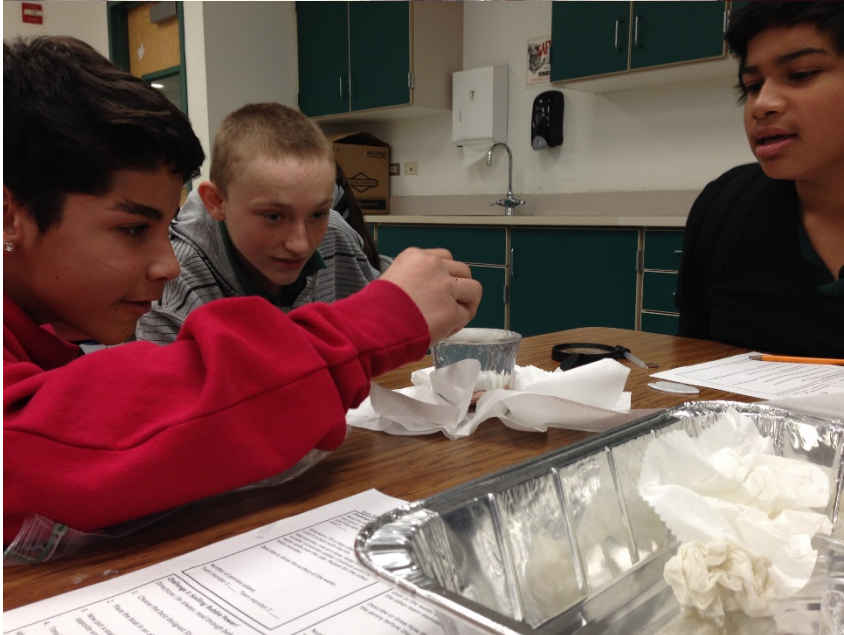


The Principles of Fun (and Effective) Learning

COOPERATE

- Work together.
- Solve problems.

Water Olympics – Work Together



Water Olympics – Work Together

- Pair them up.
- Provide competition.
- Allow two tries.



Watershed - Solve Problems



Watershed - Solve Problems

- Pose a problem.
- Give participants roles.
- Allow for discussion and dissent.
- Provide helpful clues.



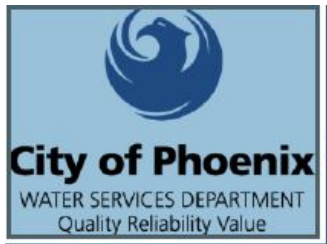
Adults?

- They want an excuse to have fun.
- Give them a valid “adult” reason to engage with their inner child.



Parents and Grandparents

- Do it for the kids
- Engage the summer time blues
- Science, Technology, Engineering, and Math (STEM)



Family H2O Science Labs for All Ages

Learn and Have Fun at the Library

Help your kids get ahead in Science, Technology, Engineering, and Mathematics (STEM) at this FREE, family-friendly Family H2O Science Lab.

This hands-on science lab will engage your child in learning about water on the earth system through fun activities that involve the whole family.

Learn about the water cycle, groundwater flow, and where we get our water here in Phoenix.



Parents and Grandparents



Parents and Grandparents



Adult Volunteers

- Cooperative Extension
 - Master Gardener Program



Family H2O Science Labs

- Located public libraries, community centers, and schools
- Adult and teen volunteers trained to lead activities
- Several stations
 - Groundwater Flow Model demonstration
 - Create a Watershed
 - Water Magic Challenge
 - Sustainability Story Time
 - Stormwater Simulation Model
 - Water Cycle Tour
 - Urban Water Cycle Tour
 - Adding it Up for Faucet Leaks

University and College Students

- Teacher preparation programs
- Science and environmental clubs
- Service learning
- Volunteer requirements
- Networking
- Free food



Employees

- Employee volunteer programs
- In-kind donation
- Employ satisfaction

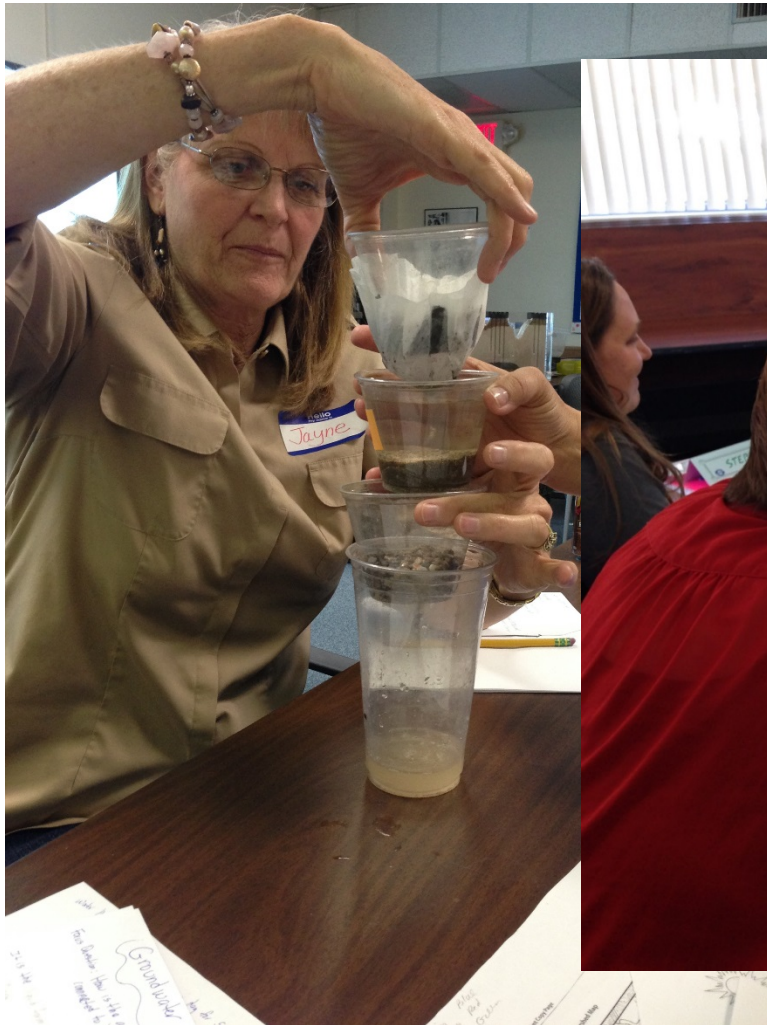


Teachers

- Professional development hours
- State Standards
- Common Core English and Math
- Next Generation Science Standards (NGSS)
- Science, Technology, Engineering, and Math (STEM)



Teachers



Teachers



Teachers



City of Phoenix

Phoenix Water Workshop – For Teachers!

Do you teach in the City of Phoenix? Join us for a free teacher workshop created just for you!



What You Will Learn

The workshop will provide you with hands-on experience with interdisciplinary lessons about water on the earth system. You will also learn where Phoenix gets its water and the incredible process water takes to get to our homes.

What You Will Receive

- A binder full of lessons correlated to the Arizona State Standards and College and Career Ready Standards
- Lesson kits you can use in the classroom to teach about the water cycle and watersheds

When You Should Attend

Phoenix Water will begin offering workshops in the 2015-2016 school year, and they will be offered at community centers, libraries, and schools in Phoenix. Sign up now and we'll make sure to offer a workshop near you.

Call : (602) 534 – 3950 or **e-mail** tina.sleeper@phoenix.gov to register for an upcoming workshop.

For Classroom Materials: Order online at www.phoenix.gov/waterservices/resourcesconservation

or e-mail conservation@phoenix.gov

Phoenix Water Fests

- Volunteers
 - City Staff
 - Local high school students
 - Employees
- Learners
 - 4th graders
 - Teachers
- Teacher workshop
- Multiple stations



Volunteer with us!

Roosevelt Water Festival 2016

Join us for the inaugural Roosevelt Water Festival, an educational field day event that instills a deeper understanding of water in the earth system and Arizona's water resources through:

- Facilitating a lesson
- Helping setup and breakdown
- Escorting student classes
- Registering volunteers
- Monitoring festival parking
- Coordinating water activities
- And more!



Estimated Attendance
800+ Roosevelt Students

We Need YOU!

Join us for a fun field day celebrating science and water conservation!

To volunteer please email conservation@phoenix.gov

Or Call
602-261-8367

Many thanks to the students of the Roosevelt Elementary School District and to the City of Phoenix for hosting and supporting our event!



VOLUNTEER TRAINING DATE

November 8, 2016

Tuesday

9 A.M. to 11:00 A.M.
23rd Ave WWTP
2474 S. 22nd Ave.
Phoenix, AZ 85009

FESTIVAL DATE

November 16, 2016

Wednesday

7:00 A.M. to 3:30 P.M.
El Reposo Community Park
502 E Alta Vista Rd,
Phoenix, AZ 85042

Other Ideas?



Contact Information for Questions and Resources

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