

# Water Quality 101

## Pre & Post Activities and Assessment Questionnaire

Thank you for scheduling the Water Quality presentation for your class. The more familiar your students are with what they will learn and experience, the better their understanding. To prepare your class for this program, or to follow-up our presentation and reinforce learning concepts, Colorado Springs Utilities suggests the following:

### 1. Online Videos and Websites

#### General Water Facts

- Quick facts About Water and Our World from General Electric (3 minute video):  
[http://www.youtube.com/watch?v=laJYq\\_Mfk7Q](http://www.youtube.com/watch?v=laJYq_Mfk7Q)
- The Ways of Water (2.5 minute video) discussing water reuse:  
<https://www.youtube.com/watch?v=RwrYFJEJSQ0>
- Downstream – Excellent video on water facts and reuse (8 minutes long):  
<https://www.youtube.com/watch?v=GVm-d-zOxJs>

#### Colorado Springs Water System

- The History of Colorado Springs Utilities Water (12 minute video):  
<https://www.youtube.com/watch?v=mMRDhQNO34c&feature=youtu.be>
- Overview of the Southern Delivery System (1 minute video):  
<http://www.youtube.com/watch?v=-j8Fm45DxWE&index=13&list=PL74C0959D84E7BA62>

#### Colorado Springs Water Quality

- Colorado Springs Utilities website with information and links to our water quality report, fluoride, and emerging contaminants such as pharmaceuticals and personal hygiene products: <https://www.csu.org/pages/water-quality-r.aspx>

#### The Colorado River

- An overview of current Colorado River challenges, particularly related to climate change from the Smithsonian (3 minute video):  
<http://www.smithsonianmag.com/videos/category/science/climate-change-and-the-colorado-river/>
- Colorado's Transmountain Diversions from the Colorado River District (8 minute video)—the what, how and why of Colorado's water projects:  
<http://www.youtube.com/watch?v=Jxu0kJKFdGo>

## Water Conservation

- Water Conservation Wizard Supplemental Activity – student workbook (includes shower timer and toilet leak test kit):  
<https://www.csu.org/Pages/classroomactivities-r.aspx>
- Water Use Calculator from the Alliance for Water Efficiency with interactive clicks on rooms within the home and tips on water conservation: <http://www.home-water-works.org/calculator>
- Conserve Water from National Geographic (3 minute video – water savings tips students can implement):  
<http://video.nationalgeographic.com/video/green-guide-howdini/conservewater-greenguide>

## Bottled Water

- The Story of Bottled Water: It's Quality Comparison to Tap Water (8 minute video):  
<http://www.youtube.com/watch?v=Se12y9hSOM0>

## 2. Water Quality Pre/Post-Assessment Quiz

1. What does “potable” mean?
2. What Federal agency sets maximum contaminant levels and regulates drinking water in the United States?
3. What is the difference between primary and secondary MCLs?
4. What does “first use” mean?
5. What three materials does Colorado Springs Utilities filter its water through to make it clean?
6. How does Colorado Springs Utilities disinfect your drinking water?
7. When did Colorado Springs first start chlorinating water?
8. Does Colorado Springs Utilities add Fluoride to your drinking water?
9. How many water quality tests do we collect and analyze yearly?
10. How does Colorado Springs Utilities keep the water pipes from scaling or corroding?

Answer key: 1. Potable water is clean enough for human consumption; 2. The Environmental Protection Agency (EPA); 3. Primary MCLs are enforceable with fines, Secondary are more stringent “goal” levels; 4. First use water is water cleaned through the natural water cycle that hasn’t been used in homes and businesses yet; 5. Coal, sand, gravel; 6. Chlorine; 7. 1942; 8. No fluoride is added because enough is naturally occurring; 9. Over 80,000; 10. Managing pH, conductivity or TDS, and temperature for the Langlier Index to prevent too much precipitation of minerals, or too corrosive water. We also use cathodic protection on the outside of the pipes.