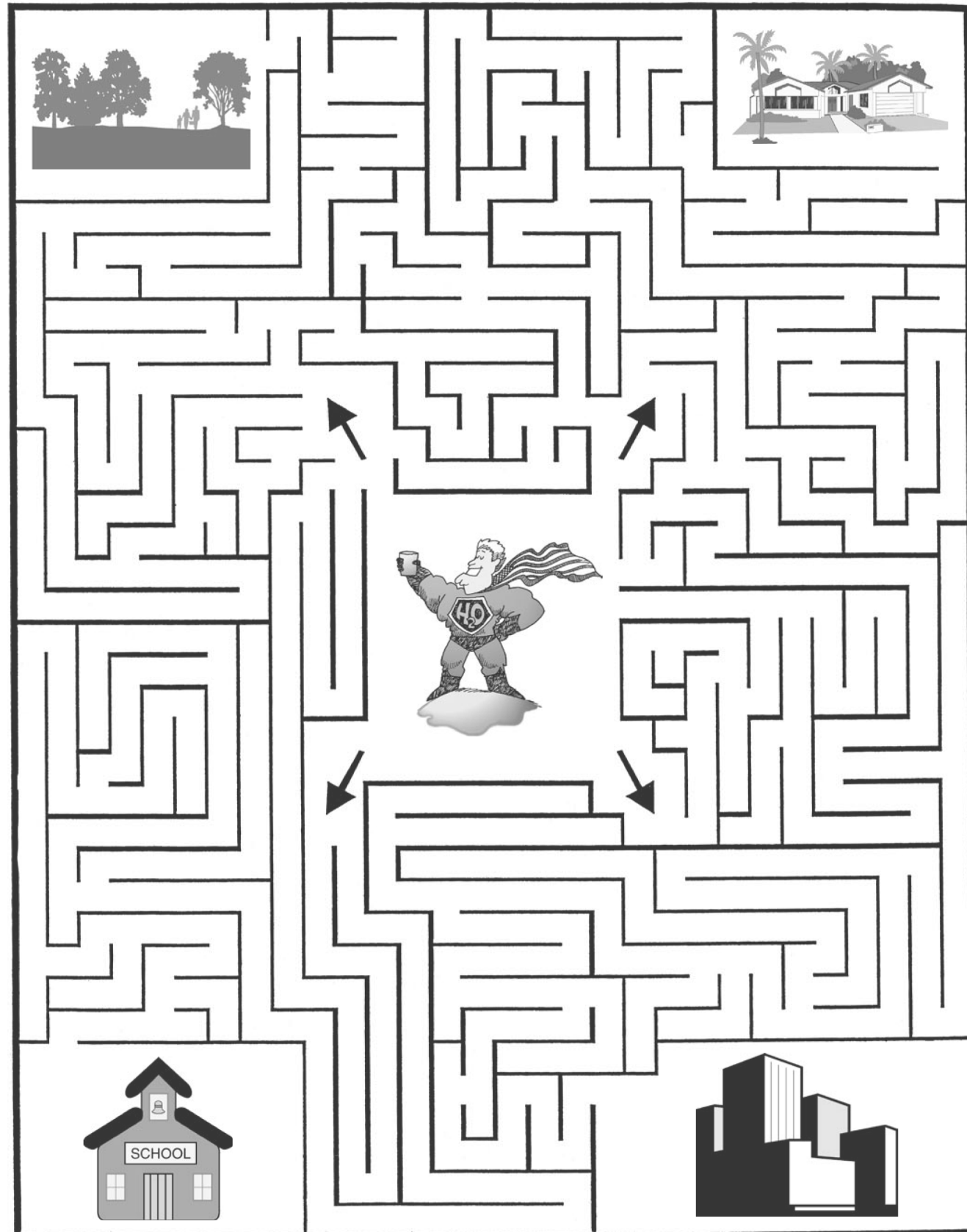


Maze

Help our water superhero find his way to the park, home, school and business.



Water Purification Demonstration Project Activity Page



Test your Demonstration Project knowledge!

Water is essential for life. We need it for cooking, cleaning, bathing, watering lawns, and drinking! In San Diego, most of our water is imported, or brought in, from Northern California and the Colorado River. Importing water costs a lot of money. Also, many other people use the water before it gets to San Diego.

The City of San Diego is looking at ways to create a local water supply. With the Water Purification Demonstration Project, the City is testing whether the water San Diegans flush down their drains can be cleaned and used for drinking again. This activity page will help you learn more about the Water Purification Demonstration Project.

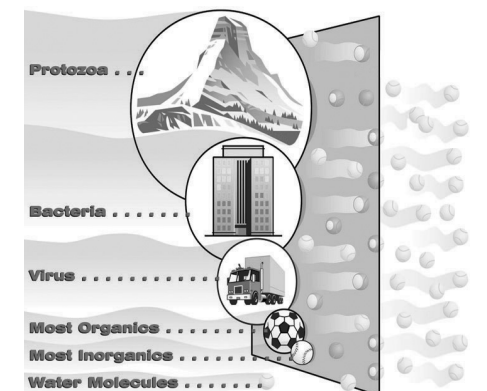
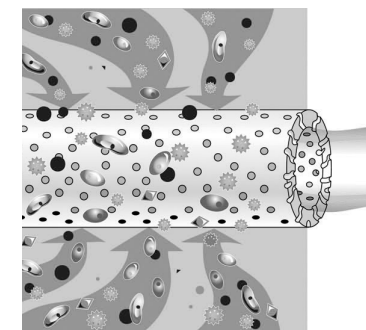
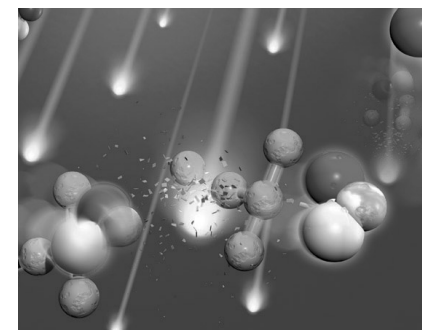
Match the Technology

Three technologies used in the Water Purification Demonstration Project are described below. Write the name of the technology underneath the matching picture.

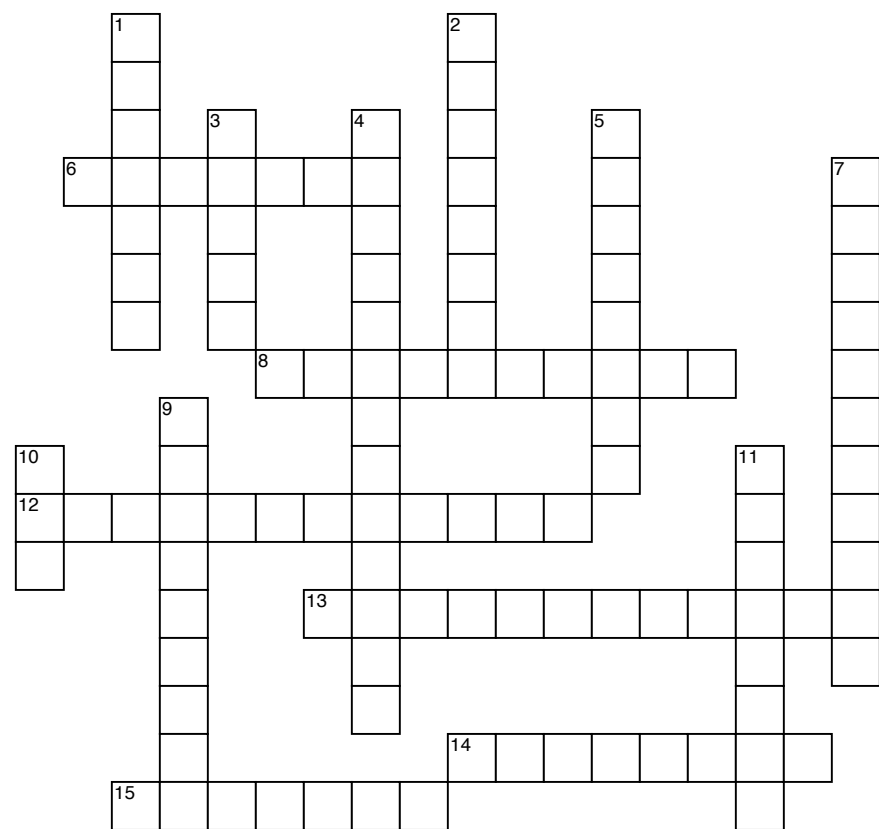
Membrane filtration: Consists of "straws" with holes in the side that suck in the water and keep out the contaminants. The Demonstration Project uses microfiltration and ultrafiltration.

Reverse osmosis: Forces water through several sheets of thin plastic membranes to filter out anything bigger than a water molecule, such as minerals and contaminants. The RO membranes are like microscopic strainers.

Ultraviolet disinfection/advanced oxidation: Intense light, like sunlight, that works with hydrogen peroxide to zap any remaining contaminants in the water.



Crossword Puzzle



www.Puzzle-Maker.com

Determine the word that best fits the clues and definitions provided. Fill the word in the crossword puzzle.

ACROSS

- 6 _____ water. Another name for "drinking water."
- 8 Untreated water collected in the sewer system from residences and businesses (e.g., from bathtubs, showers, bathroom sinks, clothes washers, toilets, kitchen sinks, and dishwashers).
- 12 A reduction in water waste. Saving water.
- 13 Removing or destroying microorganisms in water that may be harmful to humans.
- 14 _____ water. Wastewater that has undergone a high level of treatment at a reclamation facility so that it can be reused for a variety of purposes, such as irrigation and industrial use. This is the water that comes into the AWP Facility.
- 15 A period of time when rainfall is far below average.

DOWN

- 1 Reverse _____ (RO). A high-pressure membrane filtration process that forces water through several sheets of thin plastic membranes to filter out minerals and contaminants. The RO membranes are like microscopic strainers.
- 2 _____ filtration. A filtration process used to separate particles from the water. The Demonstration Project uses microfiltration and ultrafiltration.
- 3 _____ cycle. The movement of water as it evaporates from rivers, lakes or oceans, returns to the earth as precipitation, flows into rivers and evaporates again. This cycle is aided in urban areas by modern technology, which includes wastewater and drinking water treatment facilities.
- 4 Water Purification _____ Project. This test project is examining the use of water purification technology to provide safe and reliable water for San Diego's future.
- 5 _____ water. A water source that begins in one region and is transferred to another region. For example, San Diego's water comes from Northern California or the Colorado River.
- 7 A substance found in the water. Can be safe or unsafe.
- 9 A manmade lake or tank used to collect and store water.
- 10 Abbreviation for personal care products. Products that can be found in wastewater such as shampoos, fragrances, soap, and deodorant.
- 11 _____ water. The water that the AWP Facility produces. It starts as recycled water and is treated with membrane filtration, reverse osmosis and ultraviolet disinfection/advanced oxidation.

Word Search

Words related to the Water Purification Demonstration Project are hidden in the puzzle to the right. Find the Word Bank words in the puzzle. Words may go right, left, up, down, and diagonal.

WORD BANK:

- ADVANCED
- DEMONSTRATION
- DISINFECTION
- MEMBRANE
- MICROFILTRATION
- PURE
- RECYCLED
- REVERSE OSMOSIS
- ULTRAVIOLET
- WATER

C R G B M S M E Y Y J F T B M
 N I E C K L L F A Y B E K I T
 O O C C V Q M V H N L G C L W
 I U I R Y T I F H O R R L O W
 T M T T U C C H I F O A B A X
 C D C L A A L V Y F C M T F T
 E D Z M J R A E I C U E F X L
 F E R U P R T L D A R M Z M K
 N H A C T O T S D R Q B U I W
 I E K L C R K T N U R R Q U Y
 S W U M A B C R Y O O A M V A
 I S Z T Q X E N M C M N S T I
 D S I S O M S O E S R E V E R
 F O A D V A N C E D V J D Y K
 N G D S E Y I P F C I K Q S I

Water Quiz

Below are statements about water. Some are true. Some are false. Circle T if a statement is true and F if a statement is false.

- | | True/False |
|---|------------|
| 1. The water coming out of your faucet contains molecules that the dinosaurs drank. | T F |
| 2. Most of San Diego's water supply comes from local rainfall. | T F |
| 3. San Diego is at the end of the pipeline when importing water from the Colorado River and Northern California. | T F |
| 4. The City of San Diego's "purple pipes" carry recycled water to use on lawns and for industries. | T F |
| 5. Recycled water from the purple pipes is safe to drink. | T F |
| 6. The Water Purification Demonstration Project is testing whether San Diego can purify recycled water and add the purified water to a local reservoir. | T F |
| 7. A reservoir is a manmade lake or tank used for storing water. | T F |
| 8. The Demonstration Project is using membrane filtration, reverse osmosis and ultraviolet disinfection to purify recycled water. | T F |
| 9. San Diego is the first in the nation to use water purification technology. | T F |
| 10. If you drink tap water at Disneyland, you are most likely drinking purified water. | T F |