



Walter Waterdrop's

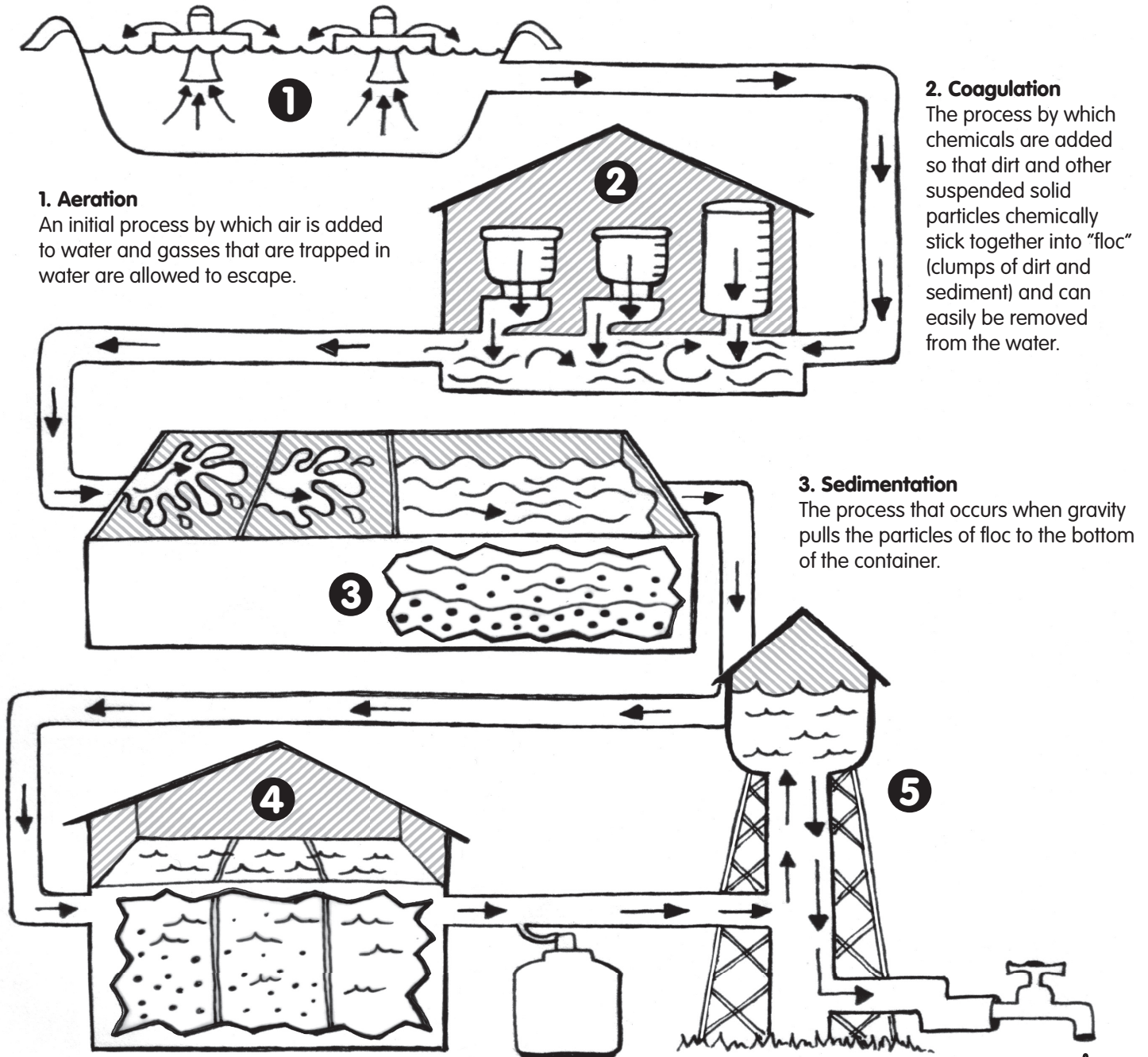
ACTIVITY BOOK ANSWER KEY

safe water science.org
lessons for life



Water Treatment

Join Walter Waterdrop as he makes his way through this water treatment plant. Color each step of treatment as you go along.



1. Aeration

An initial process by which air is added to water and gasses that are trapped in water are allowed to escape.

2. Coagulation

The process by which chemicals are added so that dirt and other suspended solid particles chemically stick together into "floc" (clumps of dirt and sediment) and can easily be removed from the water.

3. Sedimentation

The process that occurs when gravity pulls the particles of floc to the bottom of the container.

4. Filtration

The process that removes most of the impurities remaining in water after coagulation and sedimentation have taken place.

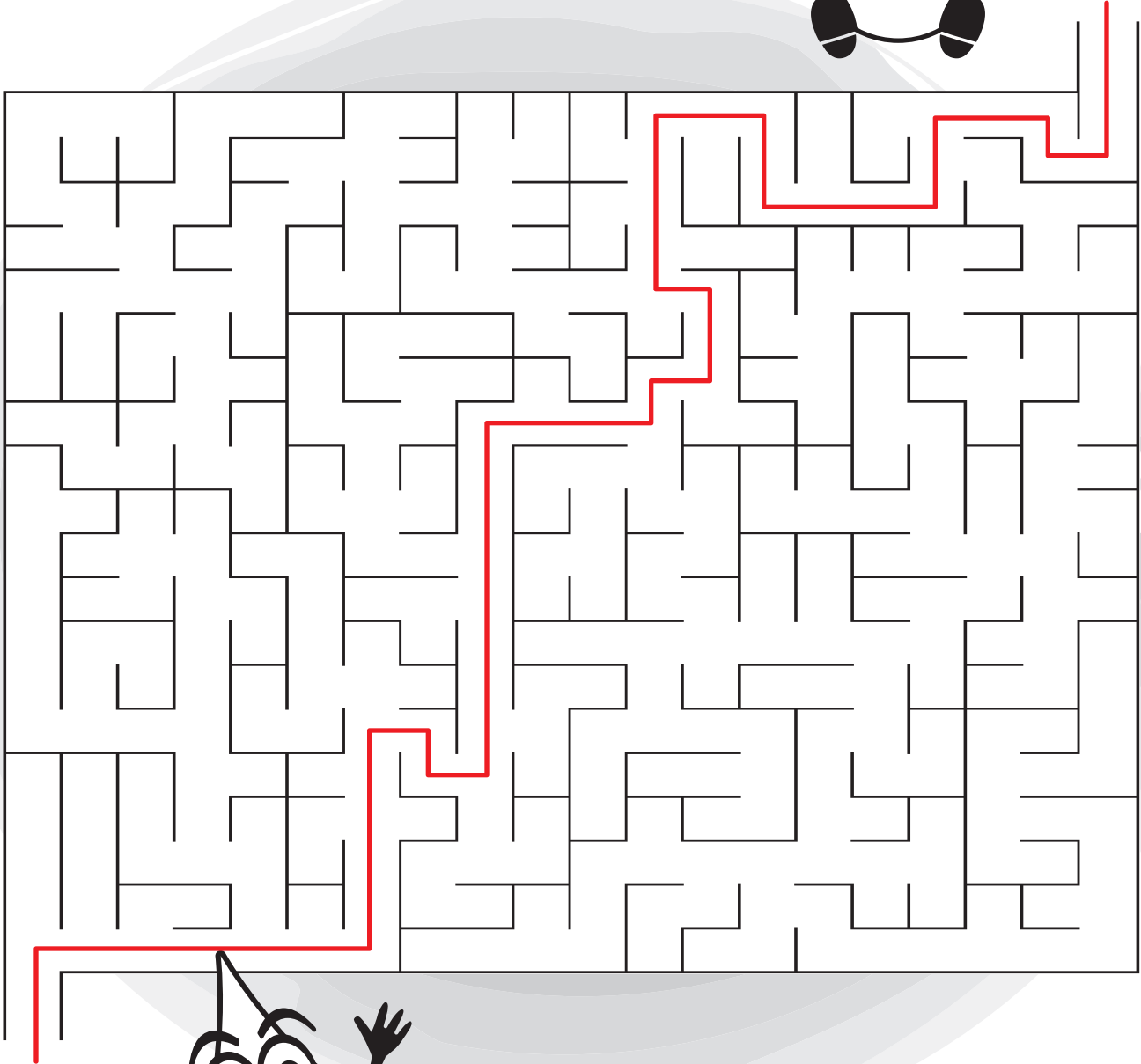
5. Disinfection & Storage

The final process in which chemicals such as chlorine are added to water to kill harmful micro-organisms (germs). The water is then stored in large quantities to be used by the community.

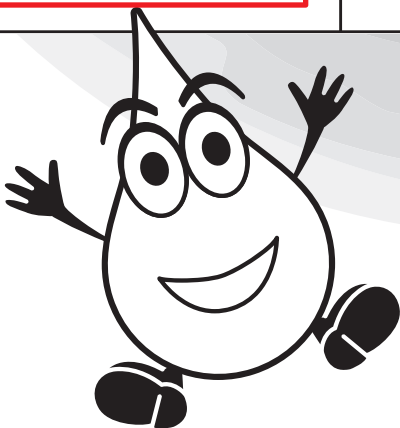


A-maze-ing!

Walter Waterdrop isn't feeling too well. He has germs that can make people sick. Help Walter work his way through the filter-maze. When he comes out the other end, he'll be clean, clear, and safe to drink!



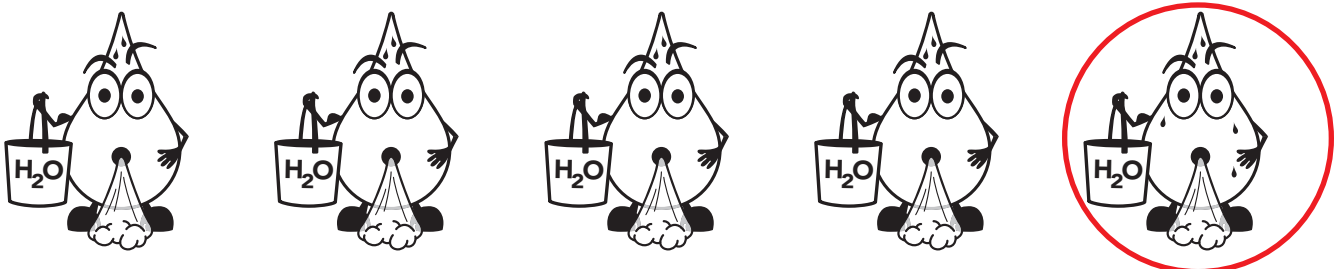
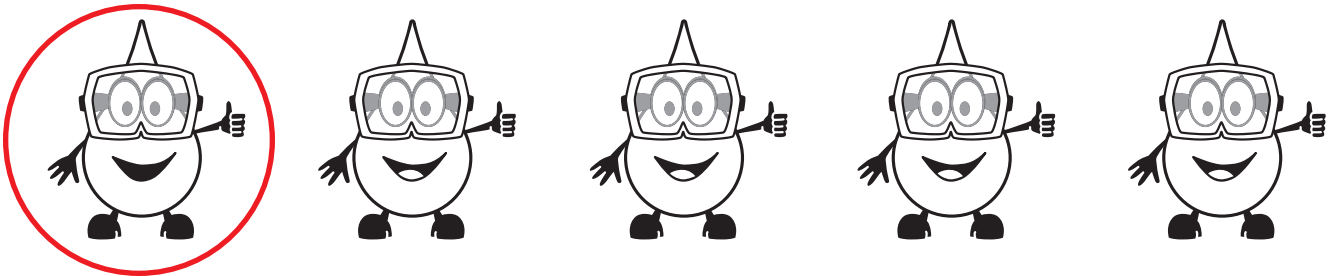
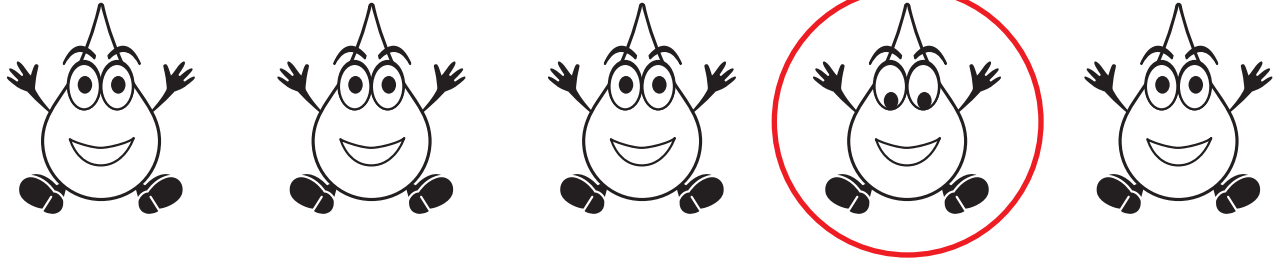
finish!



You can learn more about the water quality issues facing kids all over our world at our website. Remember to ask your parents or teacher first!

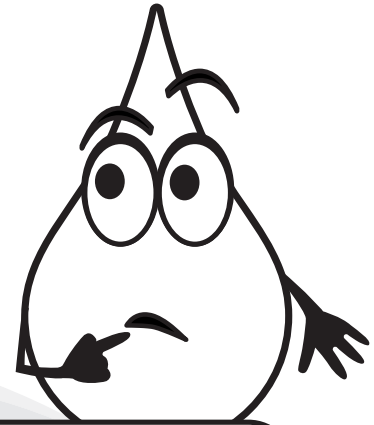
Match Game

Walter Waterdrop needs help sorting out his friends! In each row, ONE of the water-dudes is different from the others. Can you find them all?



Seek-A-Word

Walter Waterdrop needs help finding all the words listed below. Circle the words in the box; they could be horizontal, vertical, diagonal, or backwards. Can you find them all? The answer key is available online at www.safewater-science.org.

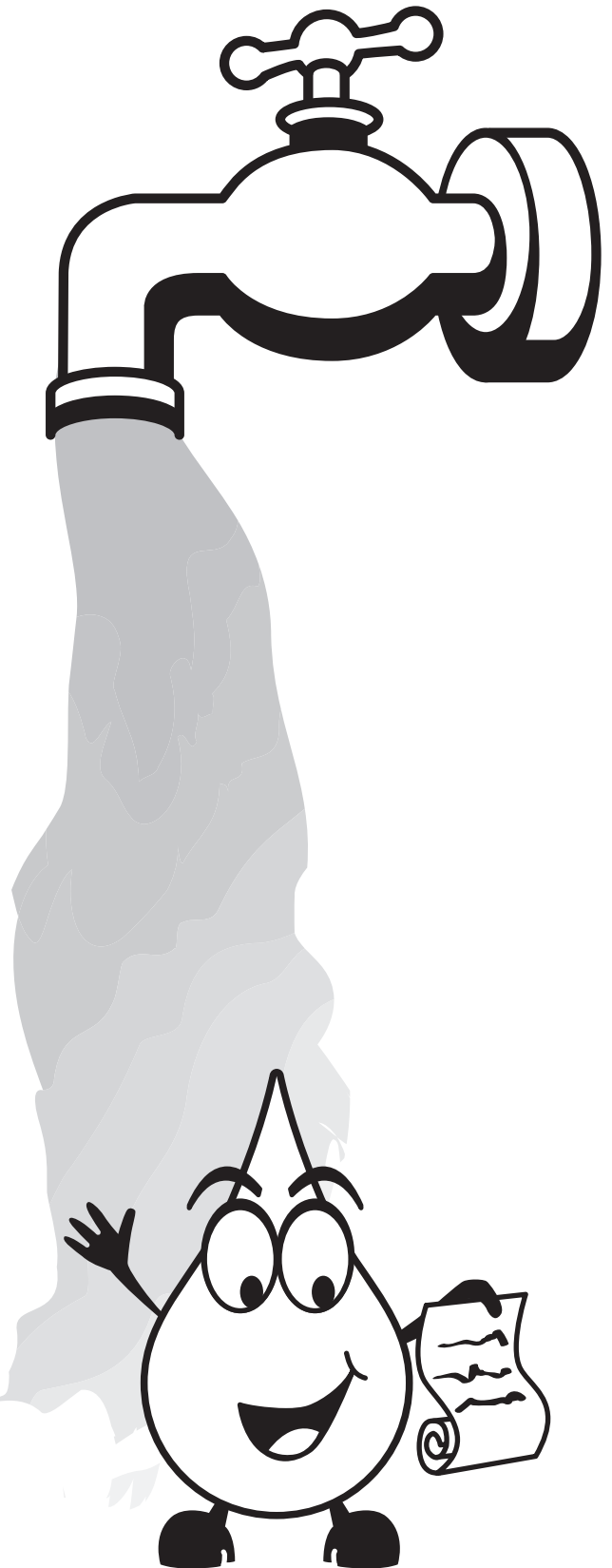


- | | | | | |
|-------------|-----------|----------|-----------|---------|
| AERATE | DISINFECT | FAUCET | OXYGEN | SAFE |
| BACTERIA | DISSOLVE | FILTER | PESTICIDE | SCIENCE |
| CHLORINE | DRINKING | FLOC | PUMP | WATER |
| CONTAMINATE | DROP | HYDROGEN | PURE | WELL |
| | LIFE | | | |

Word Scramble

Walter Waterdrop needs help clearing things up! Can you help him unscramble the words below?
The answer key is available online at www.safewater.org.

- | | |
|--------|--|
| ELACN | 1. <u>C</u> <u>L</u> <u>E</u> <u>A</u> <u>N</u> |
| KIRND | 2. <u>D</u> <u>R</u> <u>I</u> <u>N</u> <u>K</u> |
| ERATW | 3. <u>W</u> <u>A</u> <u>T</u> <u>E</u> <u>R</u> |
| CIE | 4. <u>I</u> <u>C</u> <u>E</u> |
| PAROV | 5. <u>V</u> <u>A</u> <u>P</u> <u>O</u> <u>R</u> |
| ERVRI | 6. <u>R</u> <u>I</u> <u>V</u> <u>E</u> <u>R</u> |
| EAKL | 7. <u>L</u> <u>A</u> <u>K</u> <u>E</u> |
| ETFLIR | 8. <u>F</u> <u>I</u> <u>L</u> <u>T</u> <u>E</u> <u>R</u> |
| ELWL | 9. <u>W</u> <u>E</u> <u>L</u> <u>L</u> |



Fun-Fact Match

Draw a line matching the items on the left to the amount of water each activity uses on the right.

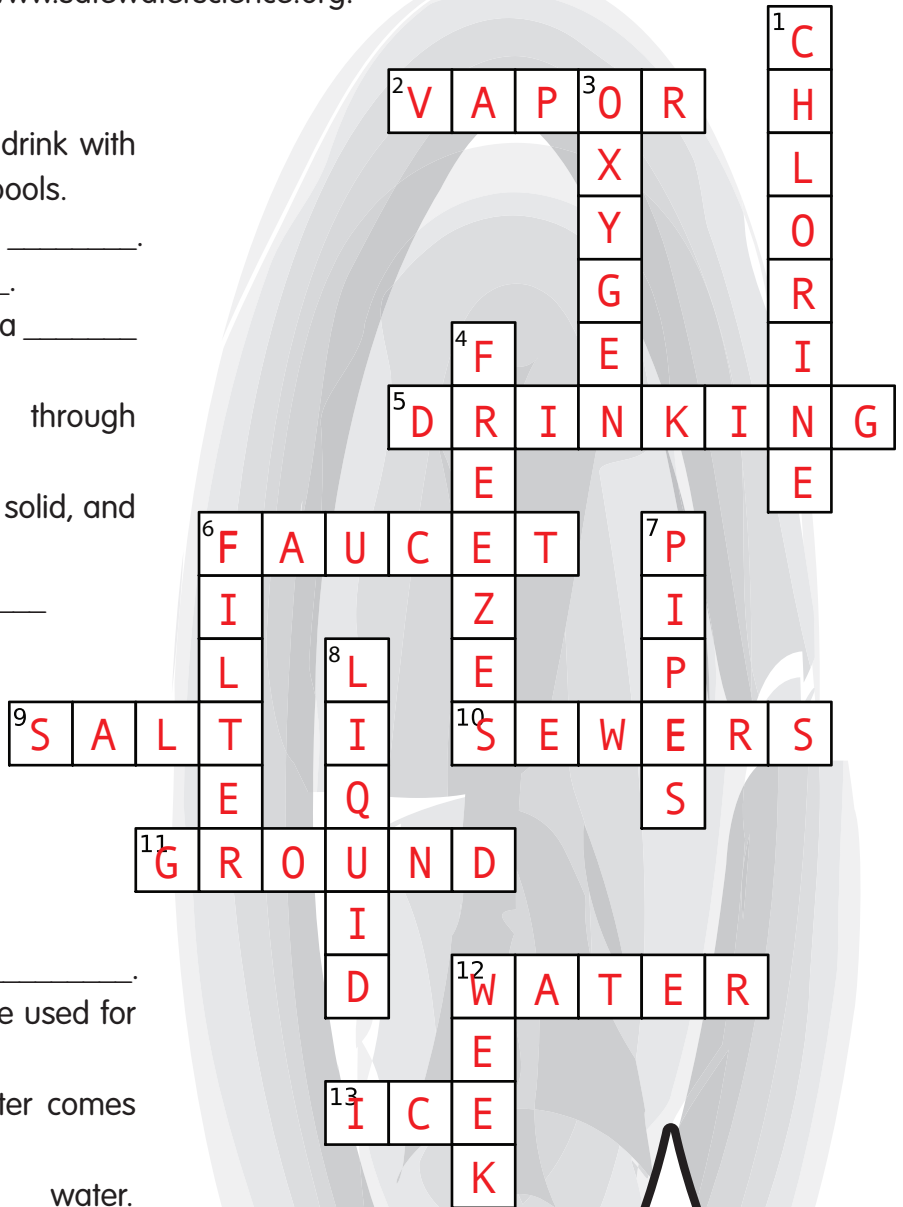
- | | |
|--------------------------|------------------|
| Taking a 5 minute shower | A. 30 gallons |
| Watering the lawn | B. 180 gallons |
| Washing the dishes | C. 2-7 gallons |
| Washing clothes | D. 1/2 gallon |
| Flushing the toilet | E. 1 gallon |
| Brushing teeth | F. 15-25 gallons |
| Drinking for a day | G. 9-20 gallons |

Crossword Puzzle

Help Walter Waterdrop fill in the boxes with the correct answers.
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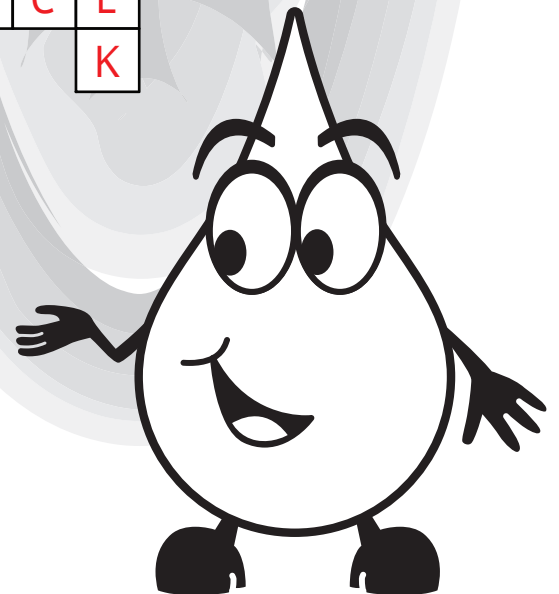
DOWN

1. Dirty water can be made safe to drink with this chemical, found in swimming pools.
3. Water is made up of hydrogen and _____.
4. Water expands when it _____.
6. Dirty water can be passed through a _____ to remove particles.
7. Water comes to our homes through _____.
8. Water is found in three forms: gas, solid, and _____.
12. A human can live about one _____ without water.



ACROSS

2. Another word for steam is water _____.
5. Only 1% of the Earth's water can be used for this.
6. In developed countries, clean water comes out of a _____.
9. 97% of the Earth is covered with _____ water.
10. In developing countries, _____ carry away dirty water.
11. _____ water is drinkable water accessed by pumps and wells.
12. This freezes at 32 degrees Fahrenheit.
13. This is water in solid form.



Did You Know?



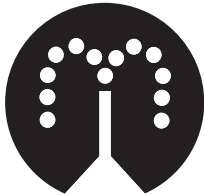
Don't wait to fix a leak!

You can waste up to 200 gallons of water a day from a leaking toilet.



Never pour used motor oil into a storm sewer!

The oil can leak into lakes, rivers, and wells. Just one pint of oil can spread over more than an acre of water. Take your used oil to a recycling center.



Water when you wake!

Use your sprinkler in the morning. The afternoon sun will evaporate the water your lawn needs before it can soak into the ground.



80% of the Earth's surface is water.

That is the same amount of water as when the Earth was formed. The water from your faucet could contain molecules that dinosaurs drank!

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