

# Water Scavenger Hunt!

Can you find all the things in your house that use water? There may be more things than you think! Take some time and go around the house looking for anything that uses water! Try to find at least 10.

List your things/appliances here:

Now that you found some things, what are some ways you can reduce the amount of water your family uses? Write your water conservation ideas below and try to use them from now on!

Water conservation is important on Cape Cod because all our water comes from an **aquifer**, where all our groundwater is stored. This aquifer supplies all Cape Codders with water, so it is important to make sure there is plenty of water for everyone! The best way to do that is through conservation.

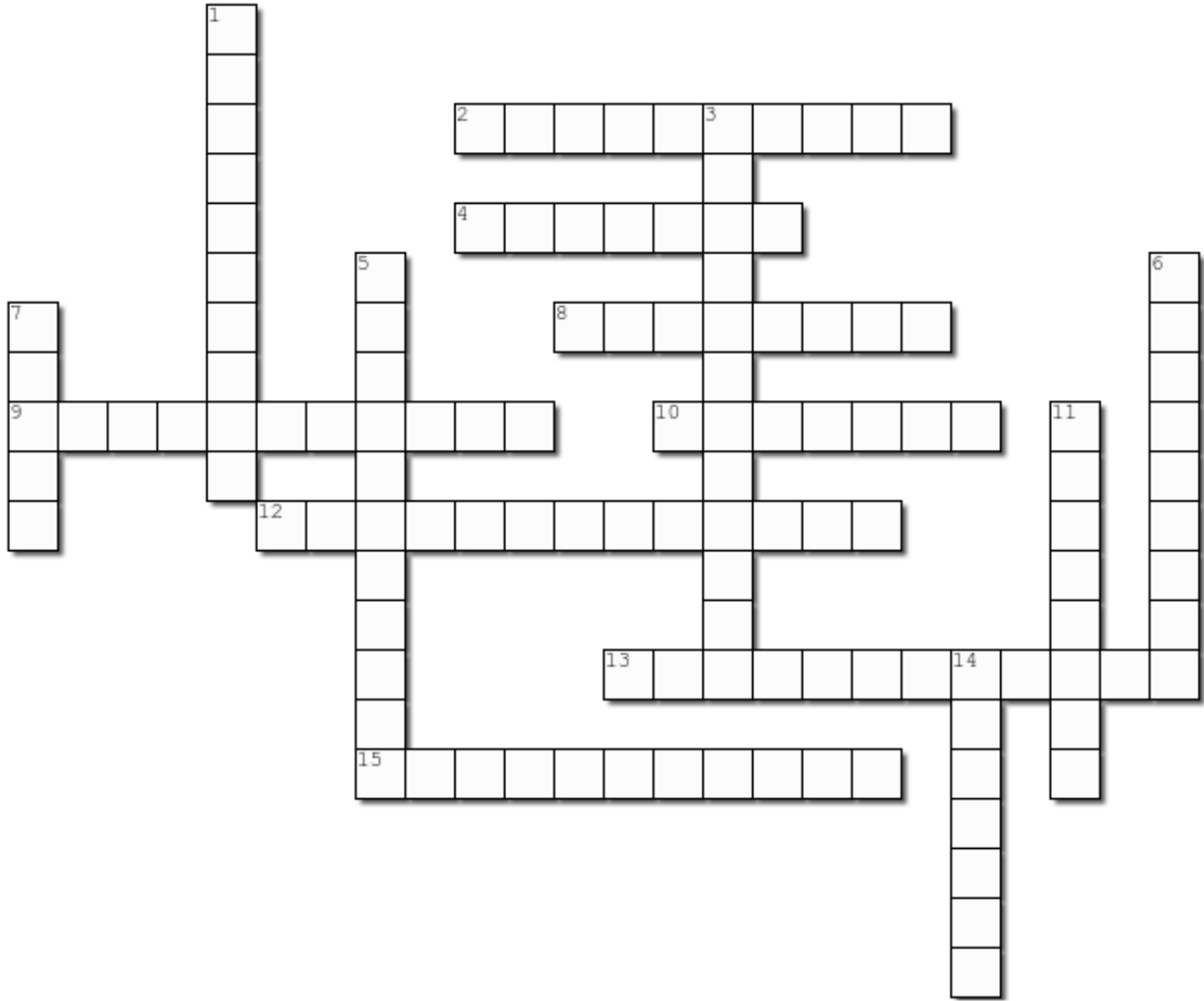
# Water Word Search

Can you find all the water words in this word search? Try to find all the words on the side! If you don't know a word, look it up to learn more!

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

- MARINE
- TIDE
- LAKE
- SEPTICSYSTEM
- AQUIFER
- RAIN
- POND
- FISH
- SNOW
- ESTUARY
- FRESH
- ALGAE
- CLOUD
- POLLUTION
- RUNOFF
- GROUNDWATER

# Water Crossword Puzzle



## Across

2. Describes how water moves around the earth!
4. When water goes from a solid to a liquid!
8. When water goes from a liquid to a solid!
9. When water goes from a liquid to a gas!
10. Where the river meets the sea!
12. Rain, snow, hail, fog, sleet, the list goes on and on!
13. Using less water in order to save some for the future.
15. When water goes from a solid to a gas!

## Down

1. When water goes from a gas to a solid!
3. When water goes from a gas to a liquid!
5. Chunks of ice that fell off a glacier made these!
6. When \_\_\_\_\_ makes it way into water, fish and other animals get sick.
7. Lots of fish live here, including whales and sharks!
11. When river water mixes with sea water, the water becomes slightly salty, or \_\_\_\_\_.
14. Groundwater comes from a(n)\_\_\_\_\_.

# Walking Rainbow

Capillary Action refers to the ability of a liquid to flow against gravity in a narrow space or absorbent material. For this experiment, we will be demonstrating capillary action by showing how water moves between cups of water when connected by a paper towel.

Materials Needed:

Six small cups

Paper towels

Food coloring (red, blue, and yellow)

Step 1. Rip off six sheets of paper towel and fold each sheet in thirds lengthwise. Test the paper towel to make sure it fits properly in the glasses. They should be able to go from the bottom of one jar to the next without sticking up much in the air. If they are too long, cut off a few inches.

Step 2. Arrange the glasses in a circle and add food coloring to three glasses (red, blue, and yellow), leaving an empty glass between each glass with food coloring.

Step 3. Fill **only** the glasses with food coloring with water, making sure the water almost reaches the top.

Step 4. Add the folded pieces of paper towel by placing one end in the red cup and the other end in the empty cup next to it. Continue around until the last paper towel was placed into the red glass. Each glass should have two paper towels in it, as shown below.



Step 5. Monitor the paper towels, taking a look every few minutes to see when the colors move up the paper towel. If it is taking a while, you may need to add more water.

Step 6. After about 5-7 minutes, the paper towels should be fully saturated with color, and should start dripping into the empty cups, making a new color!

After about 20 minutes, your experiment should look something like the image below. Take some time and make some observations about all the water levels, colors, and paper towels.



This experiment shows how liquids experience capillary action as the water moves up the paper towels and into the next glass. Paper towels are made of plant fibers called cellulose, which has tiny gaps between the fibers. Those fibers act like capillary tubes, which pull the water upwards. This also happens in plants! Roots take up water and that water uses capillary action to make its way to the leaves in the tree tops. Pretty cool!

It also shows how primary colors mix to create secondary colors! Don't throw out those paper towels, unfold them for a tie-die effect! Dry them out and use for future crafts.

This experiment is brought to you by [thestemlaboratory.com](http://thestemlaboratory.com) where you can find lots of other fun experiments too!

# Density Experiments

The density of water changes with salinity (salt). Density is measured as mass per volume. When salt is added to water, the density increases. This happens because salt dissolves in water, so mass is added without changing the volume. We will demonstrate this using the experiment below!

## Salinity

Materials:

Two cups

Salt

Food coloring

A tablespoon

Step 1: Add water to both cups, filling the cups halfway. Heat one cup in the microwave for 45 seconds.

Step 2: Add two tablespoons of salt to the hot water and stir until all salt has dissolved. This is our “ocean water” cup. The other cup without the salt will be our “fresh water” cup.

Step 3: Add a few drops of food coloring to the “fresh water” cup, leaving the “ocean water” cup clear.

Step 4: Slowly and carefully pour the “fresh water” into the “ocean water” cup. You should notice the clear “ocean water” sink to the bottom and a layer of colored “fresh water” floating on top!

The fresh water is less dense than the salt water so it sits on top. You can also practice density experiments with objects around the house! Different objects will sink or float in water depending on their density. Objects with a lower density than water will float, while objects with a higher density will sink. Follow the experiment below to see what sinks or floats!

## Sink or Float

Step 1: Gather some objects around the house. Some suggestions include: metal utensils, legos, plastic utensils, sticks, cork, coins, crayons, stones, sponges, etc. Get creative!

Step 2: Fill a bucket with water. Discuss which objects may sink and which may float, and then test your theory!

Objects that are filled with air typically float, which heavier, more compact objects typically sink. You can learn more about these concepts [here!](#)

# Just Add Tap!

Here are a few easy breakfast recipes you can make with what is probably already in your cabinets! These recipes can be mixed with water immediately or simply do without the water and store for later use!

## Pancakes:

### Ingredients:

- 4 ½ cups all-purpose flour
- ¾ cup nonfat dry powdered milk
- ⅓ cup sugar
- 2 tbs baking powder
- 1 ½ tsp salt

### **Mix Instructions**

1. In a large mixing bowl, stir together flour, powdered milk, sugar, baking powder, baking soda, and salt.
2. Store in a large airtight container at room temperature for up to 6 weeks.

### **Cooking Instructions**

1. When ready to make pancakes, preheat nonstick griddle to medium high heat. For every 1 cup of pancake mix, whisk with ¾ cup water. You can add additional ingredients like blueberries and chocolate chips if you'd like! 1 cup of mix makes 4 to 5 pancakes.
2. Scoop ¼ cup of pancake batter onto griddle. Let pancakes cook until bubbles form before flipping. Flip and cook other side until golden brown. Serve hot with syrup.

Note: if you do not have powdered milk, you can create the mix without it and use milk instead of water when ready to cook. This method increases the shelf life to 18 months.

## Homemade Instant Oatmeal

To make any of the following: add 1/2 cup of boiling water to the jar. Stir well, cover, and let rest for 5 minutes. Enjoy!

### Mocha Instant Oatmeal in a jar

- 1/2 cup oats
- 2 tablespoons unsweetened cocoa powder
- 2 teaspoons instant espresso powder
- Pinch of salt
- 0–2 tablespoons sugar, to taste (optional)

### Orange Cranberry Instant Oatmeal in a jar

- 1/2 cup oats
- 1/3 cup dried cranberries
- 1 teaspoon dried orange peel
- Pinch of salt
- 0–2 tablespoons sugar, to taste (optional)

### Apple Raisin Instant Oatmeal in a jar

- 1/2 cup oats
- 1/3 cup chopped dried apples
- 1/4 cup raisins
- 1/4 teaspoon ground cinnamon
- Pinch of salt
- 0–2 tablespoons sugar, to taste (optional)



## Infused Water!

Water by itself can be flavorless and boring, but adding just a few ingredients can really help you step up your water game! Adding fruits and herbs to your water is a good way to add a refreshing taste and get some added benefits. Try these recipes at home and feel free to experiMINT on your own!

### **For All Options:**

3. 5 cups water
4. 1 cup ice cubes optional

### **For Strawberry, Basil and Lemon:**

- 1/2 cup strawberries stemmed and sliced, fresh or frozen
- 5 large fresh basil leaves torn
- 1 lemon thinly sliced

### **For Honeydew, Cucumber, and Mint:**

- 1/2 cup honeydew cubes
- 1 cucumber thinly sliced
- 10 fresh mint leaves torn

### **Blackberries, Orange, and Ginger:**

- 1/2 pint blackberries
- 1 orange thinly sliced
- 1 (2-inch) piece ginger peeled and thinly sliced

### **Blueberry, Lemon, and Rosemary:**

- 1/2 pint blueberries
- 1 lemon thinly sliced
- 4 sprigs fresh rosemary

**Pineapple, Coconut, and Lime:**

- 1 cup pineapple chunks, fresh or frozen
- 1 cup coconut chunks, fresh or frozen
- 1 lime thinly sliced

**Watermelon, Kiwi, and Lime:**

- 1 cup watermelon cubes
- 1 kiwi diced or cut into circles
- 1 lime sliced into circles

**Grapefruit, Pomegranate, and Mint:**

- 1 grapefruit thinly sliced
- 1/2 cup pomegranate seeds
- 10 mint leaves torn

**Mango, Raspberry, and Ginger:**

- 1 mango peeled and cubed
- 1/2 pint raspberries
- 1 (2-inch) piece ginger peeled and thinly sliced