



# KIDS

*Water Activity Book*



This Activity Book is brought to you by the City of Santa Ana, Water Resources Division.

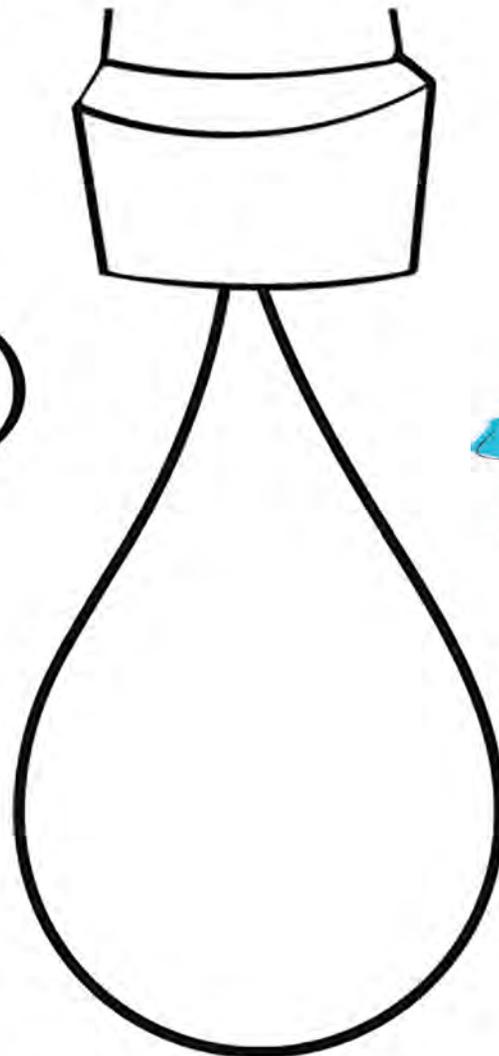
# The Facts About COVID & Your Drinking Water

**FACT:** COVID-19 is spread person to person and has **no impact** on the **quality** or **safety** of your drinking water.

- According to the Centers for Disease Control and Prevention (CDC), COVID-19 is spread person to person, **not** through water. To date, the novel coronavirus has **not been found** in drinking water supplies and has no impact on the quality and safety of tap water.
- It is **safe** to use and **drink tap water** as usual.

TRUST THE TAP!

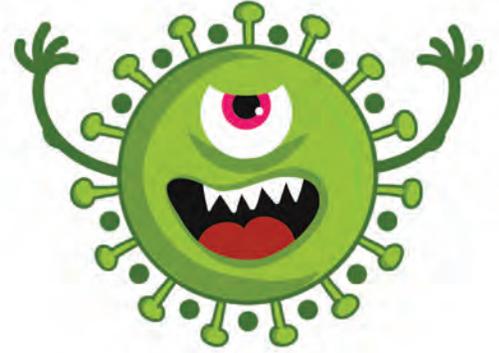
*Color Me!*



SAFE & COVID-FREE

# Germs Are Everywhere!

You can pick up **germs** on your **hands** from things you do every day. Many of these germs can make you **sick**. And, they are so small, you can't even see them with your eyes! Draw your own picture of the **coronavirus germ** in the **magnifying glass** below.



# Be A Germ Buster!

One of the best ways to prevent getting sick with COVID is to wash your hands. **Wash** your hands regularly, with **soap** and **warm water**, for at least **20 seconds** while singing the ABCs.

CORONAVIRUS



Color Me!



# 5 Steps For Handwashing

Here are the **5 Steps** you should take to make sure you are **washing your hands** properly. Remember, if you can't use **soap** and **water**, the next best option is to use **hand sanitizer**. Draw a line from each step to the picture below.

**1** Wet hands with warm water.



**2** Lather with soap.



**3** Scrub front and back of hands.



**4** Rinse with warm water.

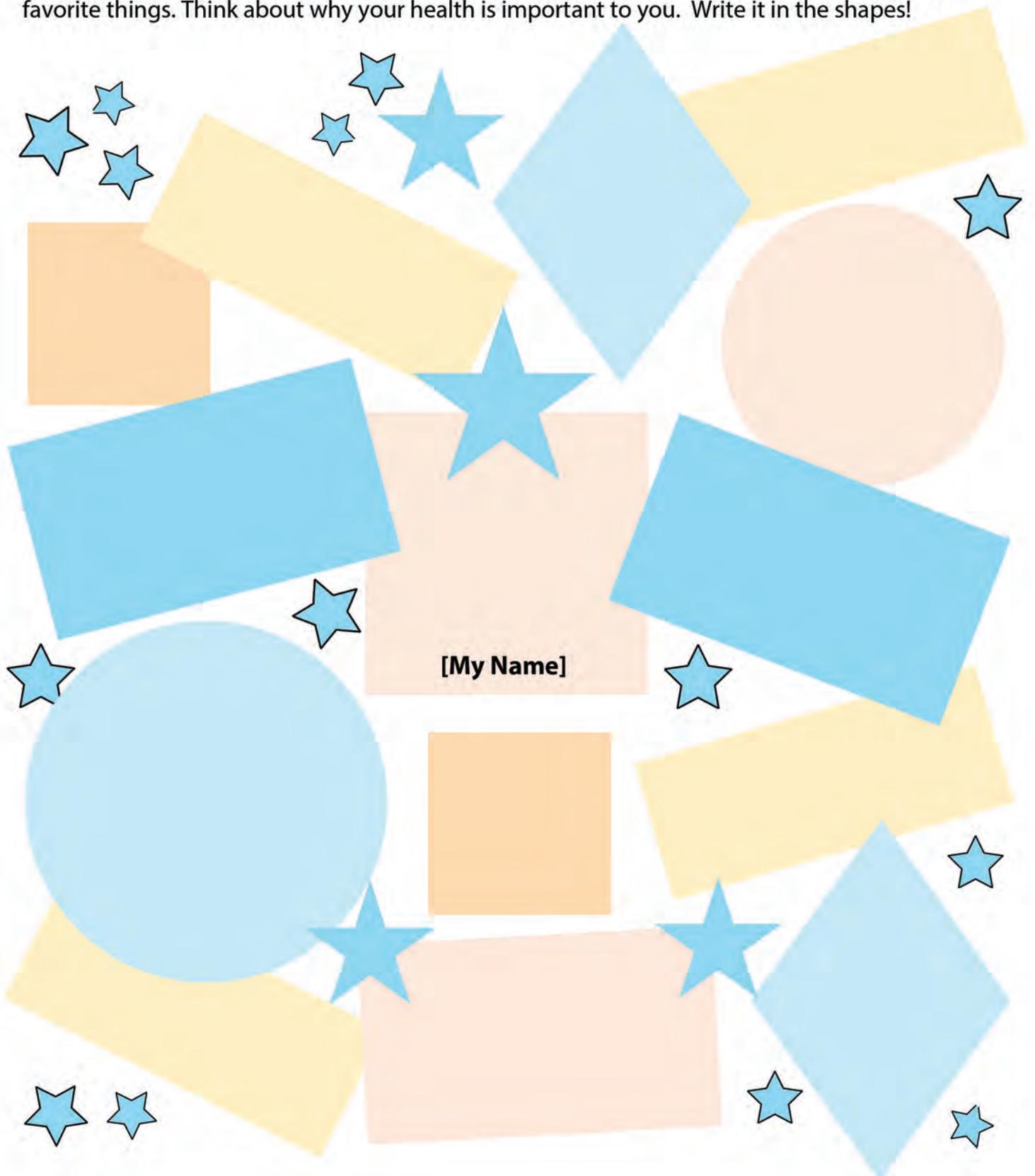


**5** Dry with clean towel.

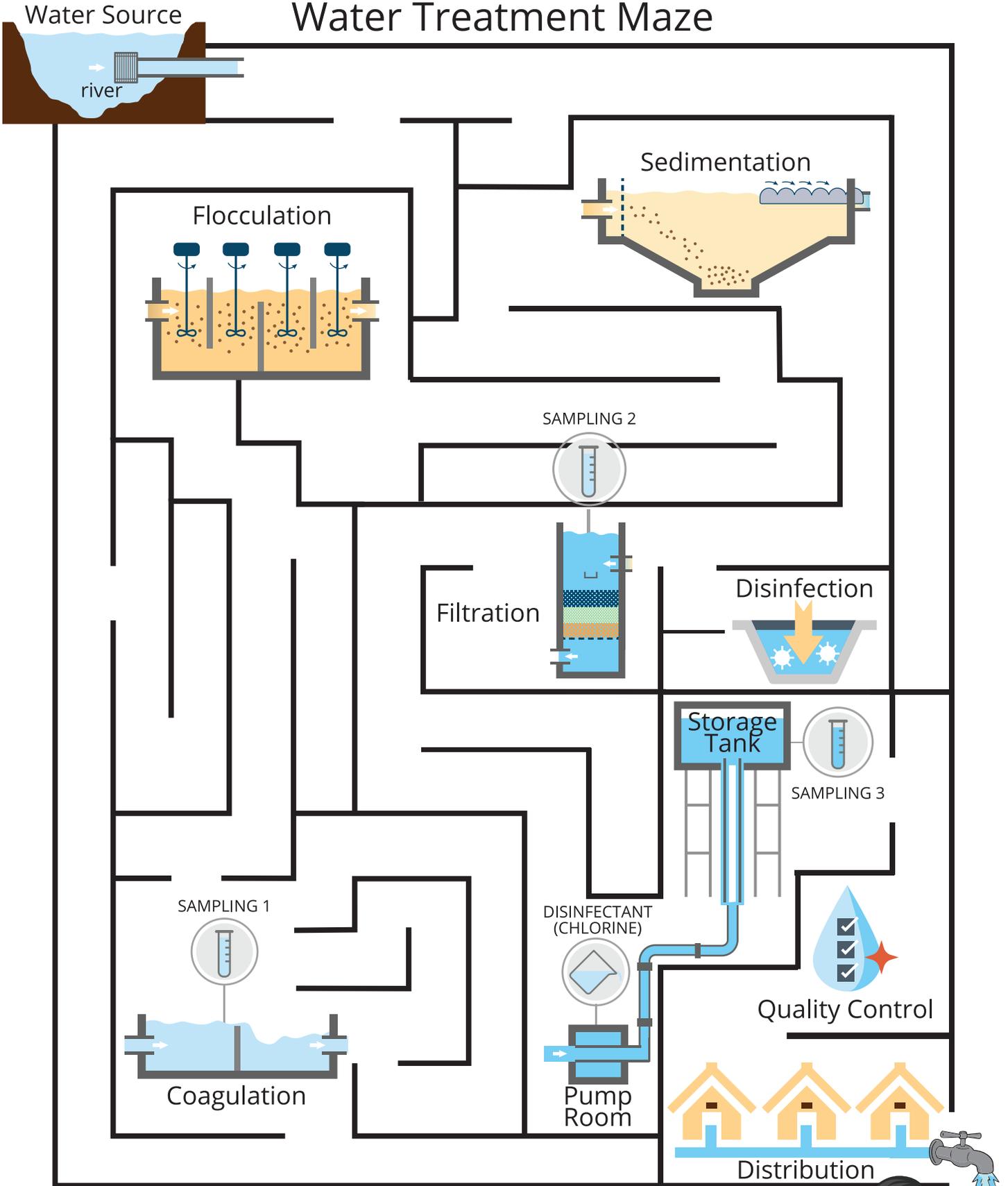


# My health is important to me because...

Germs are all around you. Washing your hands keeps you safe and healthy so you can do your favorite things. Think about why your health is important to you. Write it in the shapes!



# Water Treatment Maze



Water in lakes and rivers can have impurities and bacteria. That's why most surface sources of water must be "cleaned" through different processes. Draw a line from the water source through all the cleaning processes before it is delivered to you. Your tap water is 100% safe to drink!



# Word Scramble I: The Safety of Drinking Water

## Directions

Below are statements about the safety of drinking water from COVID-19 and any other bacteria that can cause disease. See if you can fill-in-the-blanks by unscrambling the words at the bottom of this page and placing them correctly in the sentences.

## Messages

1. According to the Centers for \_\_\_\_\_ Control and Prevention (CDC), COVID-19 has not been found in \_\_\_\_\_ water supplies. Even if the \_\_\_\_\_ was able to live and spread through drinking water, all \_\_\_\_\_ drinking water systems like the City of Santa Ana use a multi-barrier approach to ensure your drinking water is safe.
2. **Source Water** \_\_\_\_\_: 70% of Santa Ana's water comes from the Orange County \_\_\_\_\_ Basin, one of the best quality and most protected sources available.
3. **Treatment:** Santa Ana's water goes through \_\_\_\_\_ and \_\_\_\_\_ processes to specifically remove or kill \_\_\_\_\_, including viruses like COVID-19.
4. **Monitoring/Testing:** The City of Santa Ana uses trained, skilled staff and takes measures to constantly monitor and test its water to ensure public \_\_\_\_\_. Last year, Santa Ana collected 16,125 samples throughout its \_\_\_\_\_ system for water quality testing, all which met state and federal standards.
5. **Regulation:** Santa Ana's drinking water is highly \_\_\_\_\_, even more than \_\_\_\_\_ water, and must comply with \_\_\_\_\_ state and federal standards, which require removal of over 99.99% of all viruses.

## Scrambled Words

dseeias \_\_\_\_\_ odcestniinf \_\_\_\_\_

ndiirngk \_\_\_\_\_ phoagsetn \_\_\_\_\_

oacosivrrnu \_\_\_\_\_ asfeyt \_\_\_\_\_

ilpunimca \_\_\_\_\_ uttoiibrinds \_\_\_\_\_

pecrnitoot \_\_\_\_\_ rluteadeg \_\_\_\_\_

ageroundtwr \_\_\_\_\_ blteodt \_\_\_\_\_

rolfnaiitt \_\_\_\_\_ etrnintsg \_\_\_\_\_

# Word Search: The Safety of Drinking Water

## Directions

The words listed below the puzzle are hidden in the word search. Please find each word and then explain to your classmates how these words are related to the safety of your drinking water.

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

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BARRIER

PROTECTED

STANDARDS

CONTROL

QUALITY

SYSTEMS

FILTRATION

REGULATION

TESTING

MONITORING

SAFE

TREATMENT

PREVENTION

SAMPLES

VIRUSES

PROCESSES

SOURCE

# Word Scramble II: Water Treatment Processes

## Directions

Below are statements about the five treatment processes that water goes through to clean it of any impurities before it is delivered to you. See if you can fill-in-the-blanks by unscrambling the words at the bottom of this page and placing them correctly in the sentences.

## Messages

1. Water in lakes, rivers, and swamps often contain \_\_\_\_\_ that make it look and smell bad. The water may also contain bacteria and other \_\_\_\_\_ organisms that can cause disease. Water treatment plants typically clean water through the 5 different processes before it is consumed by people.
2. \_\_\_\_\_ is the process of circulating air through water to remove dissolved gases and dissolved metals as well as other \_\_\_\_\_. The air and the contaminants released from the water are vented.
3. Coagulation is the process of adding iron or \_\_\_\_\_ salts to water to \_\_\_\_\_ particles together. Large particles are heavy and quickly settle to the bottom. This is called sedimentation.
4. In the \_\_\_\_\_ process, the large particles settle to the bottom of the basin, leaving "clear" water to pass out of the basin over a barrier called a "water \_\_\_\_\_" to control and improve water quality.
5. \_\_\_\_\_ is the process of passing the water directly through \_\_\_\_\_ material often made up of sand, gravel and \_\_\_\_\_, to remove impurities and smaller particles.
6. After filtration, a \_\_\_\_\_ like chlorine, \_\_\_\_\_ may be added to kill any remaining \_\_\_\_\_, bacteria and viruses, and to protect the water from germs when it is piped to homes and businesses.

## Scrambled Words

iiipmerust \_\_\_\_\_

beffla \_\_\_\_\_

lorialgiciobcmo \_\_\_\_\_

naliottfir \_\_\_\_\_

taranioe \_\_\_\_\_

rspuoo \_\_\_\_\_

acnomtasinnt \_\_\_\_\_

ohrcaacl \_\_\_\_\_

anumumil \_\_\_\_\_

stcfiinndat \_\_\_\_\_

aoceugtla \_\_\_\_\_

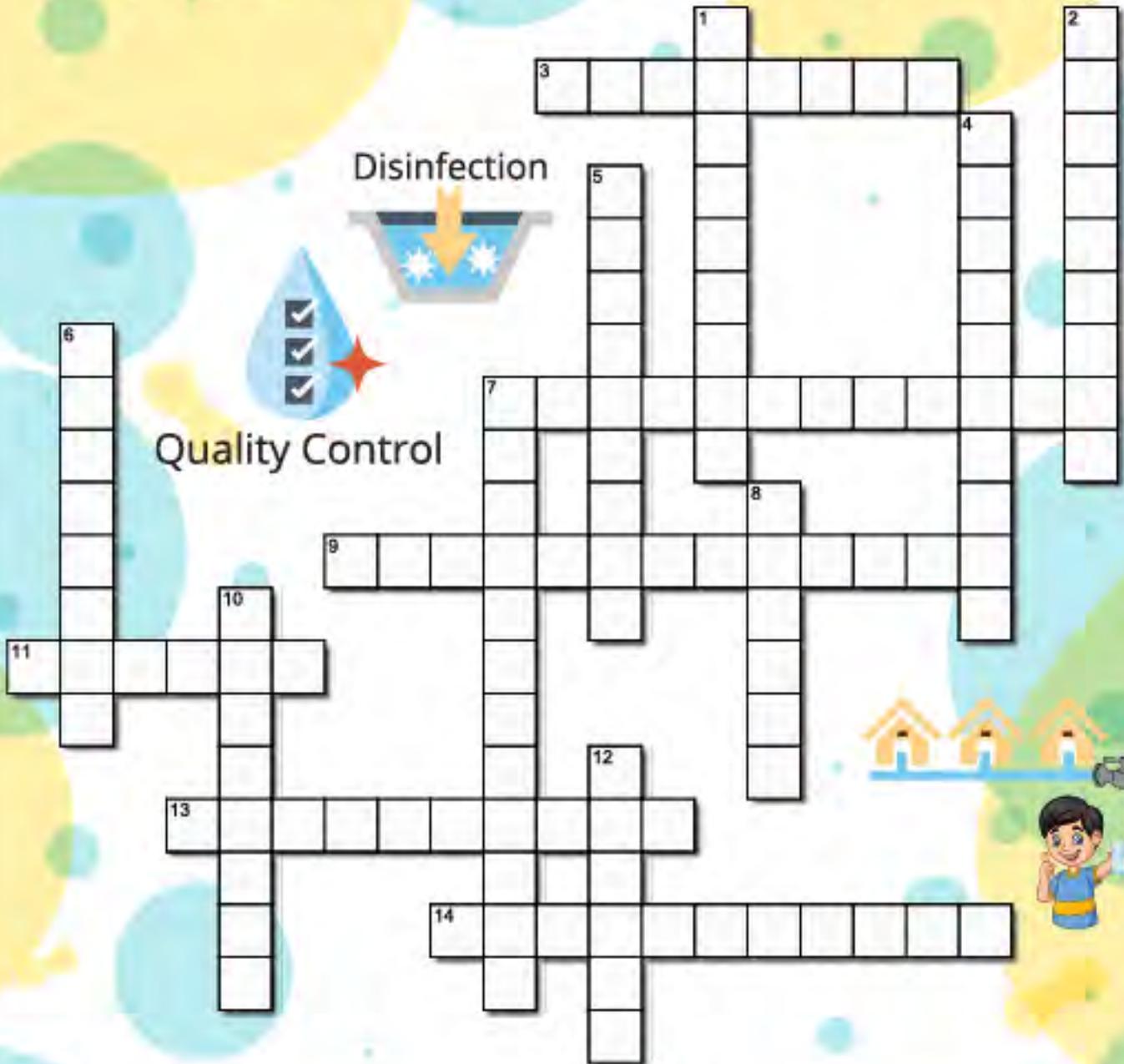
ionmhracel \_\_\_\_\_

ieomninetdta \_\_\_\_\_

eitaasspr \_\_\_\_\_

# Water Treatment Crossword

Complete the crossword puzzle below.  
(Reading the statement in the word scrambles will give you clues.)



## Across

3. Adding air into water
7. A chemical liquid that destroys bacteria
9. The process of settling
11. A device used to restrain the flow of water
13. Process of filtering something
14. Another way of saying COVID-19

## Down

1. Microorganisms that can cause disease
2. A fluid that changes to a solid/semisolid state
4. An organic compound (chlorine + nitrogen)
5. An organism that feeds on another organism
6. A porous black substance used for barbecuing
7. Chlorine is used to do this
8. Santa Ana's #1 priority
10. A chemical element, also used in cans
12. Having tiny holes through which liquid can pass

# Answer Key

## Word Scramble I: The Safety of Drinking Water

### Messages

1. According to the Centers for Disease Control and Prevention (CDC), COVID-19 has not been found in drinking water supplies. Even if the coronavirus was able to live and spread through drinking water, all municipal drinking water systems like the City of Santa Ana use a multi-barrier approach to ensure your drinking water is safe.
2. **Source Water Protection:** 70% of Santa Ana's water comes from the Orange County Groundwater Basin, one of the best quality and most protected sources available.
3. **Treatment:** Santa Ana's water goes through filtration and disinfection processes to specifically remove or kill pathogens, including viruses like COVID-19.
4. **Monitoring/Testing:** The City of Santa Ana uses trained, skilled staff and takes measures to constantly monitor and test its water to ensure public safety. Last year, Santa Ana collected 16,125 samples throughout its distribution system for water quality testing, all which met state and federal standards.
5. **Regulation:** Santa Ana's drinking water is highly regulated, even more than bottled water, and must comply with stringent state and federal standards, which require removal of over 99.99% of all viruses

### Scrambled Words

dseeias \_\_\_\_\_ Disease \_\_\_\_\_ odcestniinf \_\_\_\_\_ disinfection \_\_\_\_\_

ndiirngk \_\_\_\_\_ drinking \_\_\_\_\_ phoagsetn \_\_\_\_\_ pathogens \_\_\_\_\_

oacosivrrnu \_\_\_\_\_ coronavirus \_\_\_\_\_ asfeyt \_\_\_\_\_ safety \_\_\_\_\_

ilpunimca \_\_\_\_\_ municipal \_\_\_\_\_ uttoiibrinds \_\_\_\_\_ distribution \_\_\_\_\_

pecrniotoot \_\_\_\_\_ Protection \_\_\_\_\_ rluteadeg \_\_\_\_\_ regulated \_\_\_\_\_

ageroundtwr \_\_\_\_\_ Groundwater \_\_\_\_\_ blteodt \_\_\_\_\_ bottled \_\_\_\_\_

rolfnaitt \_\_\_\_\_ filtration \_\_\_\_\_ etrnintsg \_\_\_\_\_ stringent \_\_\_\_\_

## Answer Key

# Word Search: The Safety of Drinking Water

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BARRIER

PROTECTED

STANDARDS

CONTROL

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TREATMENT

PREVENTION

SAMPLES

VIRUSES

PROCESSES

SOURCE

# Answer Key

## Word Scramble II: Water Treatment Processes

### Messages

1. Water in lakes, rivers, and swamps often contain **impurities** that make it look and smell bad. The water may also contain bacteria and other **microbiological** organisms that can cause disease. Water treatment plants typically clean water through the 5 different processes before it is consumed by people.
2. **Aeration** is the process of circulating air through water to remove dissolved gases and dissolved metals as well as other **contaminants**. The air and the contaminants released from the water are vented.
3. **Coagulation** is the process of adding iron or **aluminum** salts to water to **coagulate** particles together. Large particles are heavy and quickly settle to the bottom. This is called sedimentation.
4. In the **sedimentation** process, the large particles settle to the bottom of the basin, leaving “clear” water to pass out of the basin over a barrier called a “water **baffle**” to control and improve water quality .
5. **Filtration** is the process of passing the water directly through **porous** material often made up of sand, gravel and **charcoal**, to remove impurities and smaller particles.
6. After filtration, a **disinfectant** like chlorine, **chloramine** may be added to kill any remaining **parasites**, bacteria and viruses, and to protect the water from germs when it is piped to homes and businesses.

### Scrambled Words

iiipmerust \_\_\_\_\_ impurities \_\_\_\_\_ beffla \_\_\_\_\_ baffle \_\_\_\_\_

lorialgiciobcmo \_\_\_\_\_ microbiological \_\_\_\_\_ naliottfir \_\_\_\_\_ Filtration \_\_\_\_\_

taranioe \_\_\_\_\_ Aeration \_\_\_\_\_ rspuoo \_\_\_\_\_ porous \_\_\_\_\_

acnomtasinnt \_\_\_\_\_ contaminants \_\_\_\_\_ ohrcaacl \_\_\_\_\_ charcoal \_\_\_\_\_

anumumil \_\_\_\_\_ aluminum \_\_\_\_\_ stcfieiindat \_\_\_\_\_ disinfectant \_\_\_\_\_

aoceugtla \_\_\_\_\_ coagulate \_\_\_\_\_ ionmhracel \_\_\_\_\_ chloramine \_\_\_\_\_

ieomninedsda \_\_\_\_\_ sedimentation \_\_\_\_\_ eitaasspr \_\_\_\_\_ parasites \_\_\_\_\_

# Answer Key

## Water Treatment Crossword

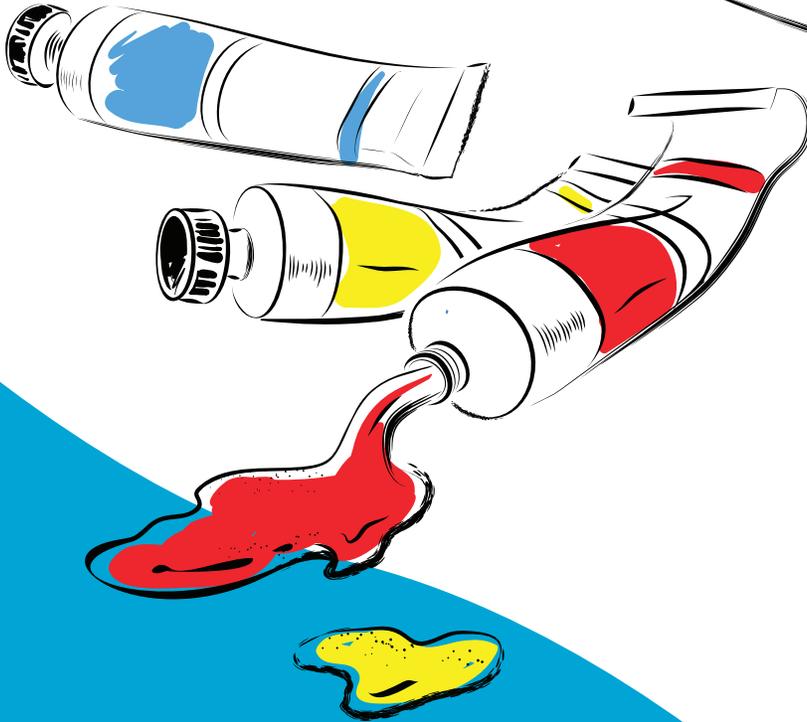


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6. A porous black substance used for barbecuing
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