

# DRI!R!

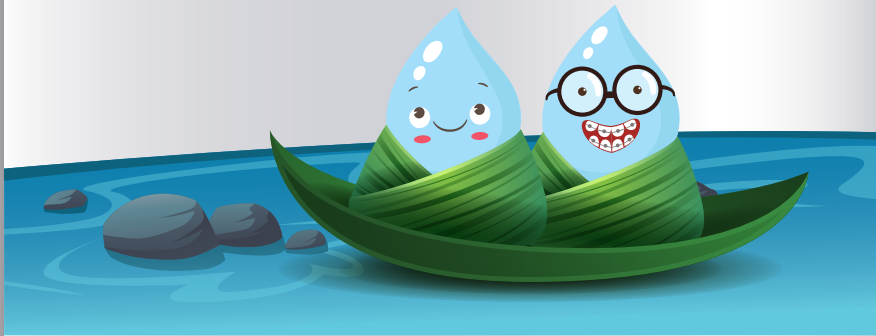
activity  
book



For Grades K-3



Today was a lazy day on the Potomac River for Drip and Drop. After years of sailing the river, our pair of water adventurers thought they had seen it all. Narrowly missing the thirsty paws of a bear cub, getting tossed back and forth during thunderstorms and tickling the toes of people dipping their feet in the water were a few of their favorite exploits! But today was just a quiet day drifting on the water. The duo sat in their leaf boat, floating over gentle rapids and taking turns sharing dreams about their next watery adventure.



“You know what I have always wondered?” asked Drip, turning to face Drop. “How do people get the water they drink? I know they need water, but I have certainly never seen anyone bring a cup to the river!”

While Drip and Drop took a moment to consider the answer, neither noticed that the water was picking up speed. “Well,” Drop said, “I think people must have some kind of vacuum to collect water from the river! It would take a long time to scoop up all that water by hand.”

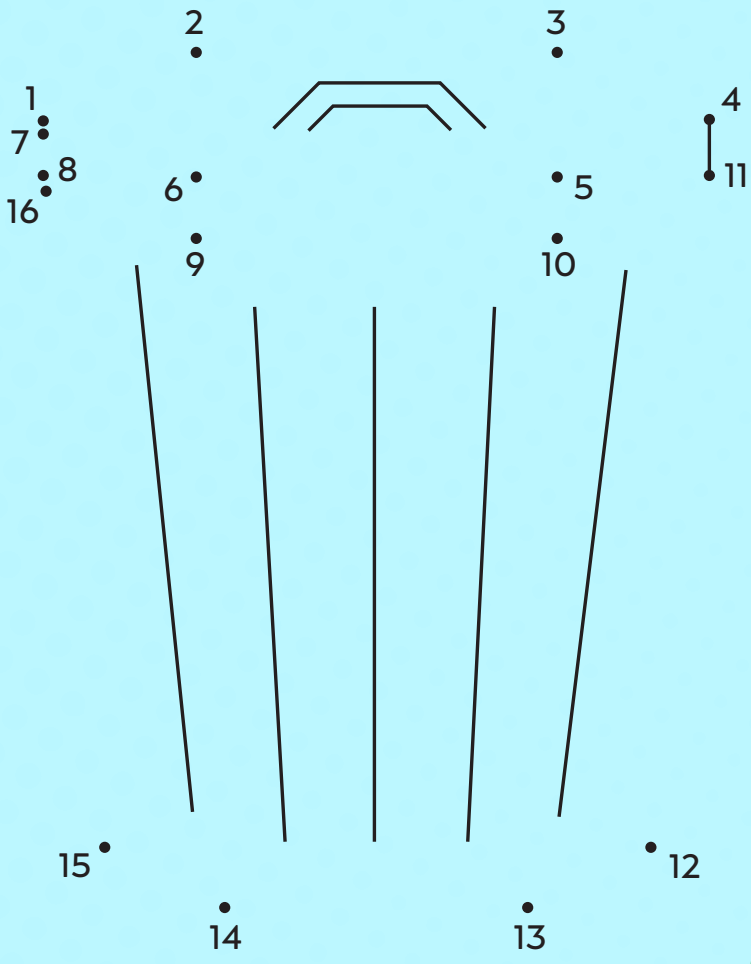
The two shared a laugh at that thought when, suddenly, their little boat zoomed toward a whirlpool! They spun round and round watching as a hole appeared in the water beneath them. Drip and Drop clasped hands, shouting “WAHOO!” as they dropped into a large pipe labeled “Drinking Water Treatment”. They were finally off on a new adventure to somewhere they had never been before, and they are taking YOU along!

# Don't let FOG cause a clog!



**F**at  
**O**il &  
**G**rease

Connect the dots

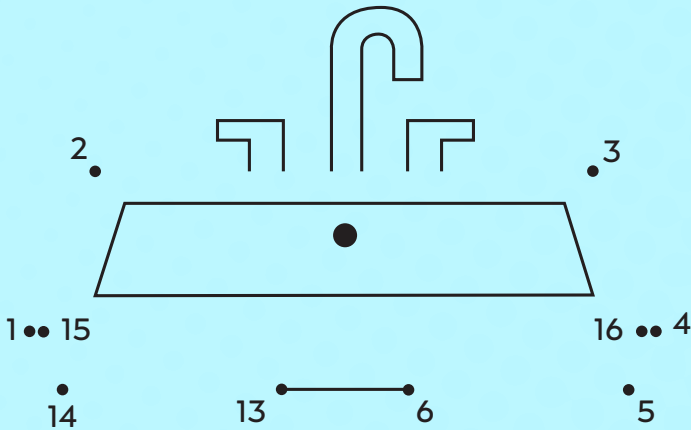




## Never pour FOG down the drain!

As fats, oils and grease (FOG) cool down in sewer pipes, they can get stuck and create clogs in your pipes. Can you and your family think of a type of FOG used in your home?

Write your answer in the box below.



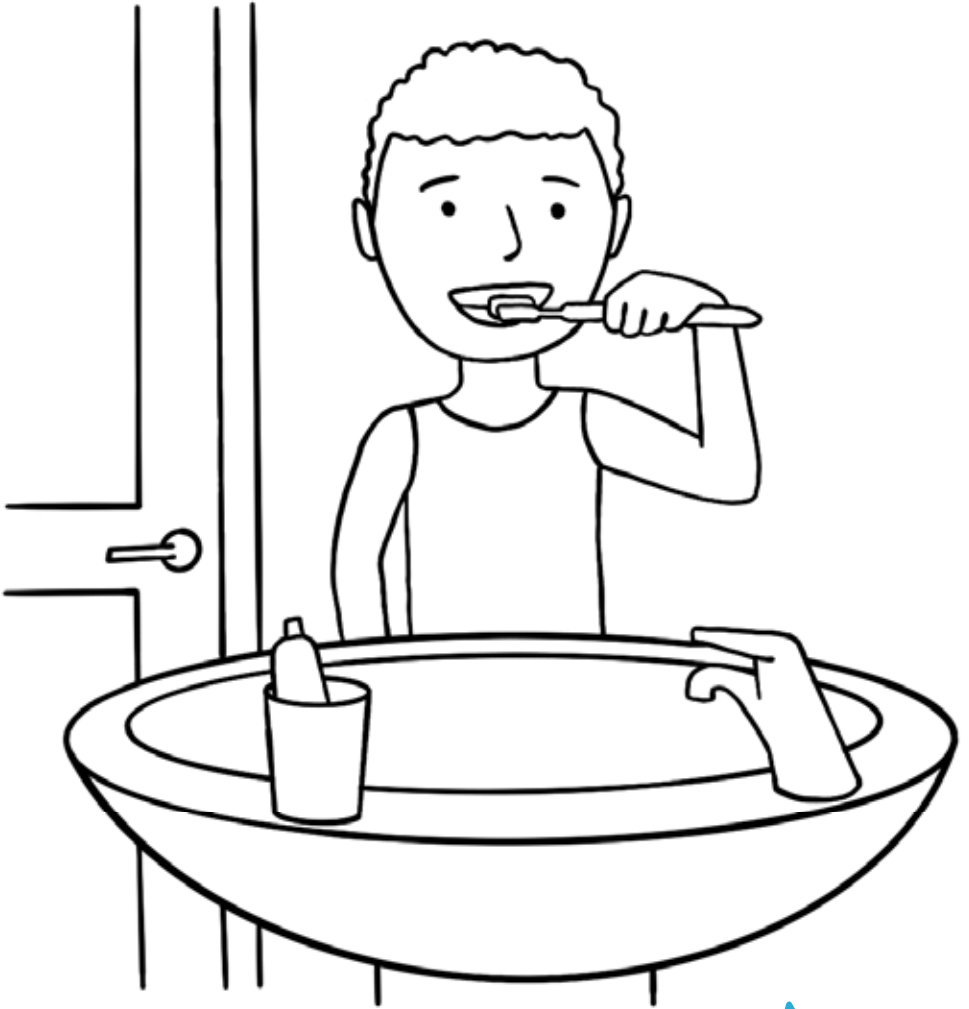
12 •  
11 •  
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9 •



use water  
wisely!



Using a reusable water bottle helps keep plastic trash out of the environment where it can take 450 years to decompose!



Always turn off the water while brushing your teeth.



# Did you know...

the Service Authority cleans **10 billion gallons** of wastewater each year?

That's a lot of flushing, bathing and laundry!  
Follow the maze to uncover how we take your dirty water and make it clean enough to return it to the environment.



Start Here!

Wastewater is the dirty water that leaves homes and schools after you use it.

## waste to water



### 1. SCREENING

After wastewater moves through sewage pipes, it goes through a screen that captures things that should NOT have been flushed, like wipes and cotton swabs.



### 4. FILTRATION

Here, the wastewater moves through six feet of special sand to trap small particles.



### 2. SETTLING

A good chemical is added to the wastewater to make pieces of dirt stick together and get heavy. The scum that floats to the top and the clumps that fall to the bottom are removed.



### 3. BIOLOGICAL TREATMENT

Tiny living things called microbes swim in the wastewater and remove extra elements that can harm plants and animals that live in streams and rivers.



### 5. DISINFECTION

Next, the water is zapped with ultraviolet light to kill any germs and viruses.



### 6. AERATION

Now clean, the water tumbles down a special staircase, fizzes up with oxygen and flows into the creek below.



### 7. BACK TO NATURE

# Did you know...

the average person uses about **100 gallons** of water each day?

That's 36,500 gallons a year! Follow the maze to discover the journey drinking water takes from the source to your home.

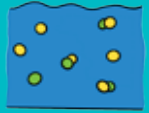


## 1. INTAKE

Water for Prince William County Service Authority customers comes from three sources: the Potomac River, the Occoquan Reservoir and Lake Manassas.

Start Here!

source to tap



## 2. COAGULATION

Alum is added to help the gunk in the water stick together.



## 3. SEDIMENTATION

Once the dirty pieces are stuck together, they get heavy, sink to the bottom and are removed.



## 5. FILTRATION

Water passes through charcoal filters to remove any small pieces of dirt left in the water.



## 4. OZONATION

A special kind of air called ozone is added to the water to help clean out germs.



## 6. CHLORINATION

Chlorine is added to the water to make sure it stays clean and fresh.



## 7. DISTRIBUTION

Clean water arrives at your home and school.

why we  
need water



We use water each day to wash our clothes, grow our food and stay healthy.



# water word search

Can you find all of the water and wastewater words?  
If you don't know what these words mean, ask your parents  
to help you research and learn more about your water!



RIVER  
DRINK  
TAP  
HYDRANT

FAUCET  
HEALTH  
LAKE

METER  
LIFE  
PIPES

SEWER  
WATER  
STREAM

CLEAN  
WELLS  
PUMPS  
FILTER

# water wisdom

## Word Scramble

Unscramble these water-related words below to decode the hidden message!



rniad

tewar

ipsep

nleac

knis

but

thlaeh

upmp



# h2go heroes

Keep track of how many times you and your family do each common water task below. Add the numbers up at the end of the day to see how many gallons you used.

## Water is a precious resource!



Flushing the toilet  
5 gallons each flush

$x5 =$  \_\_\_\_\_  
TOTAL



Taking a shower  
18 gallons each time

$x18 =$  \_\_\_\_\_  
TOTAL



Brushing your teeth  
4 gallons each time

$x4 =$  \_\_\_\_\_  
TOTAL



Drinking water  
.5 gallon every day

$x.5 =$  \_\_\_\_\_  
TOTAL



Washing your hands  
.5 gallon each time

$x.5 =$  \_\_\_\_\_  
TOTAL



Washing your face  
4 gallons each time

$x4 =$  \_\_\_\_\_  
TOTAL



Running the  
dishwasher  
6 gallons each time

$x6 =$  \_\_\_\_\_  
TOTAL



Watering outdoor  
plants  
4 gallons each time

$x4 =$  \_\_\_\_\_  
TOTAL



DRIP WANTS TO KNOW  
HOW MANY GALLONS  
OF WATER YOU USED  
THIS WEEK.

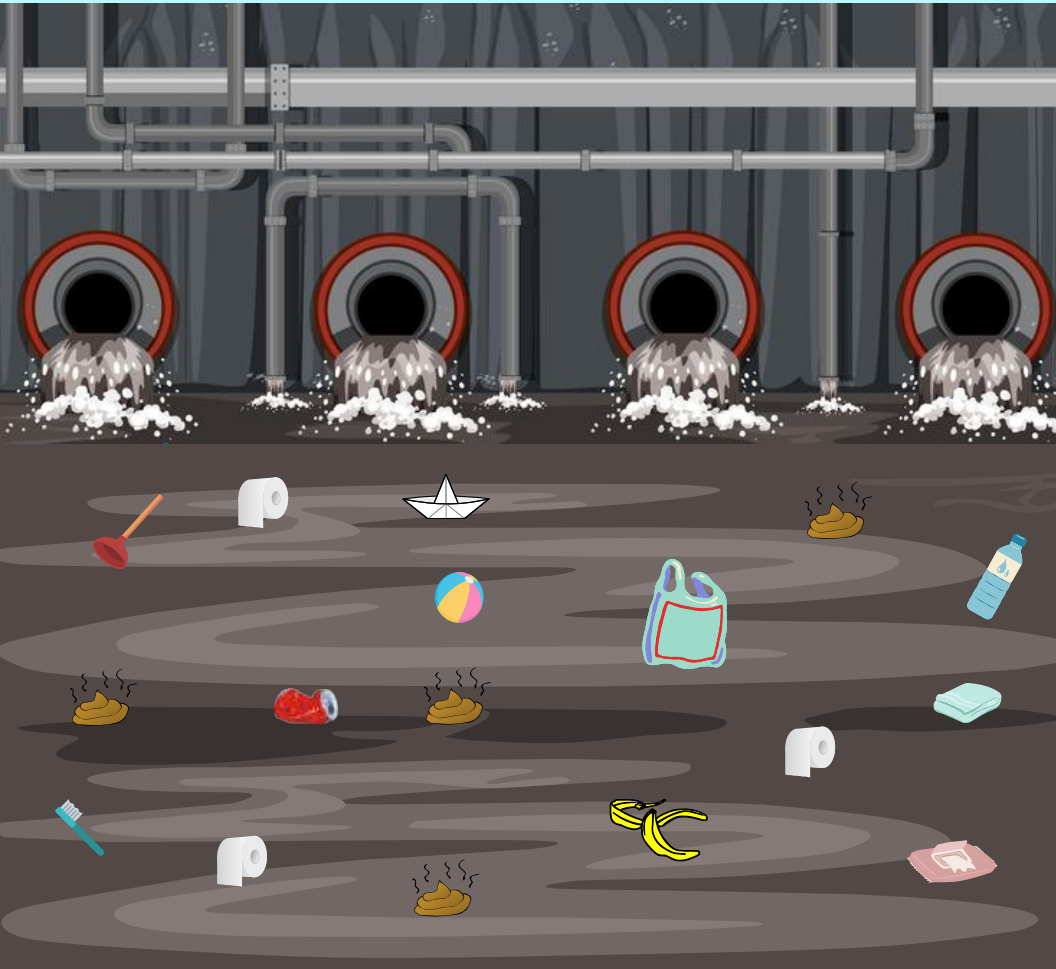


# Search & find

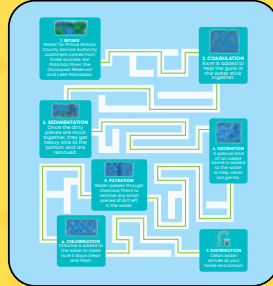
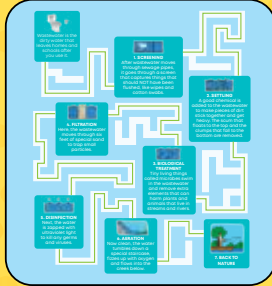
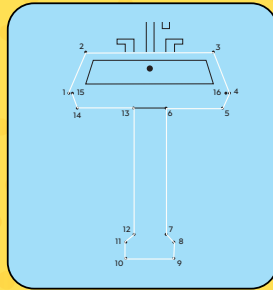
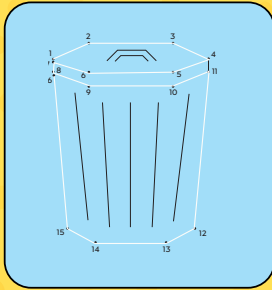


**Someone has been flushing things they shouldn't!**

Help the Service Authority search the sewer system by circling the 10 items that should never be flushed down a toilet!



# answer keys



rniad **d r a i n**  
 tewar **w a t e r**  
 ipsep **p i p e s**  
 nleac **c l e a n**  
 knis **s i n k**  
 but **t u b**  
 thlaeh **h e a l t h**  
 upmp **p u m p**

**d r i n k t a p**

Flushing the toilet  
 3 gallons each flush  
 $x5 = \frac{25}{1000}$

Taking a shower  
 20 gallons each time  
 $x18 = \frac{324}{1000}$

Brushing your teeth  
 4 gallons each time  
 $x4 = \frac{16}{1000}$

Drinking water  
 3 gallon every day  
 $x5 = \frac{25}{1000}$

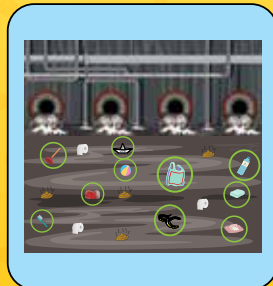
Washing your hands  
 3 gallons each time  
 $x5 = \frac{25}{1000}$

Washing your face  
 4 gallons each time  
 $x4 = \frac{16}{1000}$

Running the dishwasher  
 6 gallons each time  
 $x6 = \frac{36}{1000}$

Watering outdoor plants  
 4 gallons each time  
 $x4 = \frac{16}{1000}$

**DRIP WANTS TO KNOW HOW MANY GALLONS OF WATER DO YOU USE THIS WEEK?** **438**



For more information visit

[H2GOKIDS.ORG](http://H2GOKIDS.ORG)