

THE ADVENTURES OF THE **WATER - SAVING** **PUPS**



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COLOR THE WATER-SAVING PUPS SO THEY CAN GET TO WORK.



Maddy

Hydro



Bobbi

Yin Dee



Willow

Duke

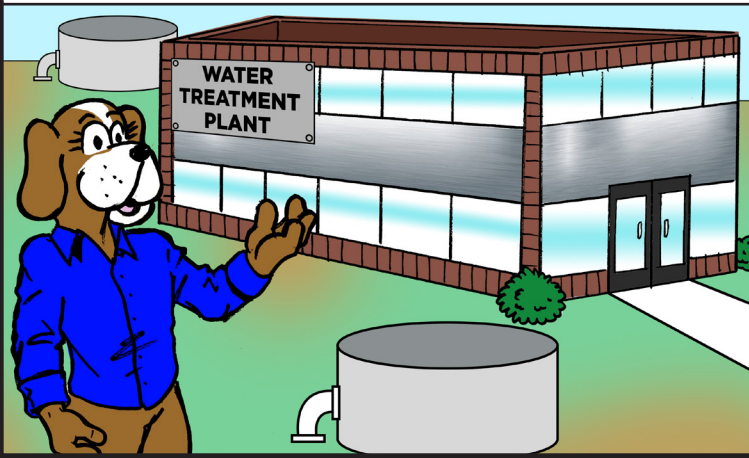
Hi! I'm Yin Dee, a Hydrologist. My job is to study how water moves over and through the soil. I determine how much and when water is going to be available in our reservoirs and how fast it will flow. I analyze the data and make recommendations to the water managers so they can prepare for a flood or plan for a drought. I also work closely with other scientists and engineers to solve problems like erosion and pollution. My job is very important to your quality of life because water means life.



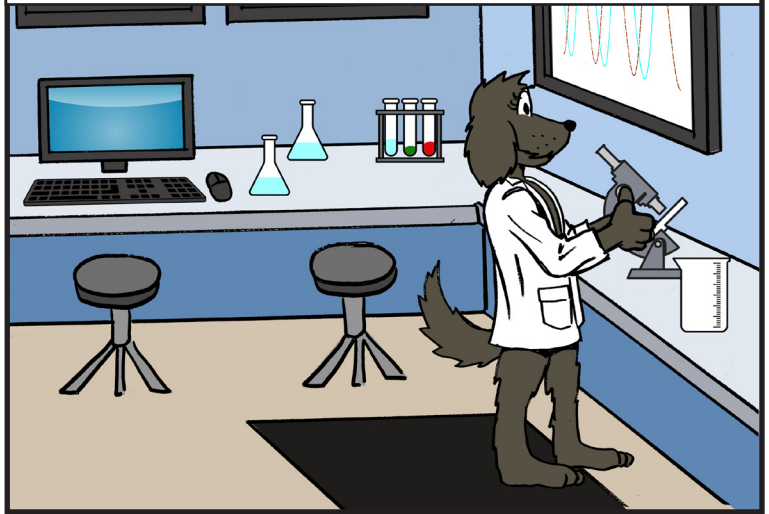
Hi! I'm Duke, a Dam Maintenance Worker. My job is to make sure that all the equipment at the dams is working properly. Every day I inspect everything in order to avoid equipment problems. I work with blueprints and repair manuals. Sometimes I need to replace a part of the flood control operating system. My job is essential for the safety of the people and animals below the dam.



Hi, I'm Bobbi, a Water Treatment Plant Operator. I love my job at the Water Treatment Plant. It's exciting to watch the surface water change into drinking water. The water is treated so that small particles can stick together and make bigger particles that can then be removed. The water treatment process is essential to bring safe, reliable, affordable and sustainable drinking water to your homes and schools!



Hi, I'm Maddy, a Water Quality Lab Technician. My job is to test the water at the Water Treatment Plant to make sure it meets the necessary guidelines and is safe for you to drink. I do this by adding testing agents and measuring the reaction. Sometimes I also make slides and use a microscope to make sure contaminants don't slip through.



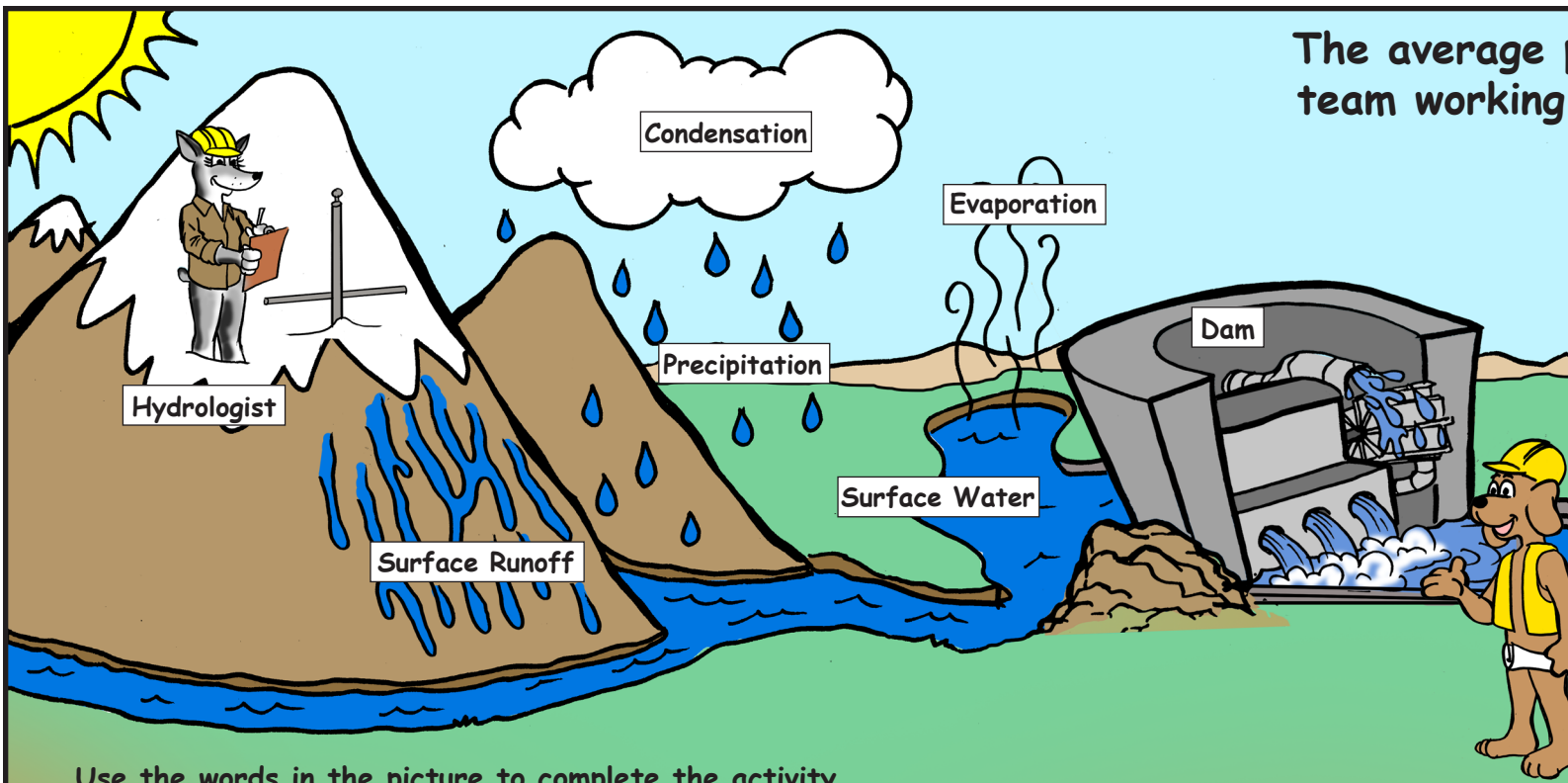
There are many important jobs that are essential to bring drinking water to your home or school. We will meet the other team members later.

Draw a line from the job to its definition.

- a. Hydrologist
- b. Dam Maintenance Worker
- c. Water Treatment Plant Operator
- d. Water Quality Lab Technician
- e. Water Conservation Specialist
- f. Water Distribution Technician

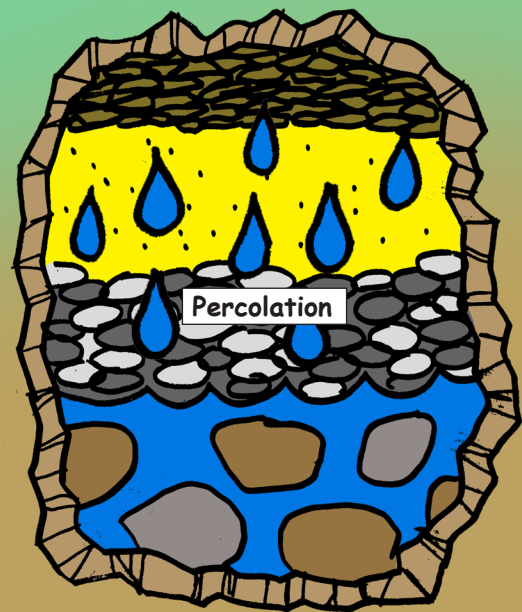
- 1. I help you find ways to conserve water.
- 2. I take surface water and turn it into drinking water.
- 3. I make sure all the equipment is working properly.
- 4. I check the distribution lines and fire hydrants for leaks.
- 5. I test all drinking water before it is sent to you.
- 6. I measure how much water will be available.

The average team working



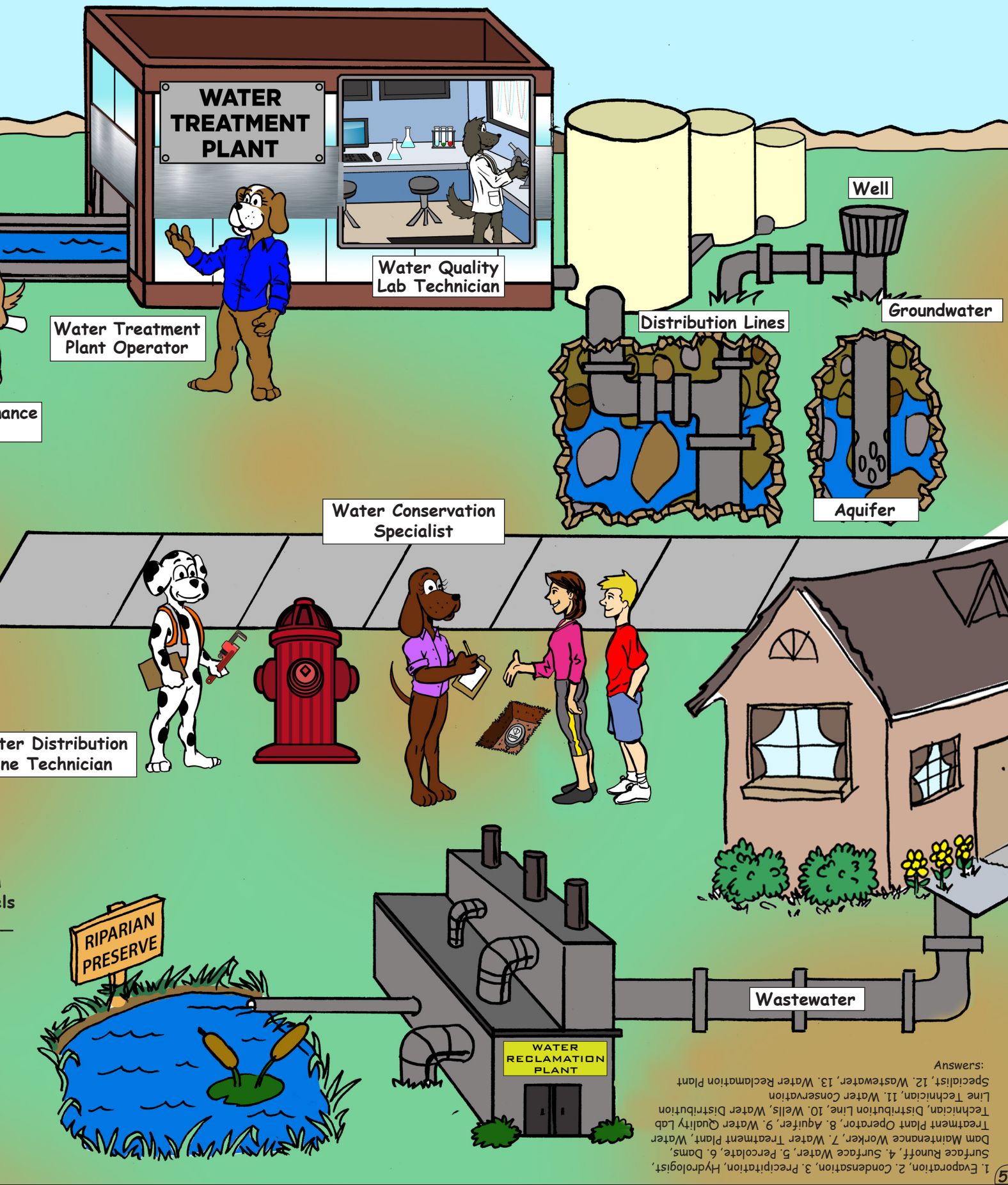
Use the words in the picture to complete the activity.

1. The heat from the sun causes water to change from a liquid to a gas. This is _____.
2. The gas rises and cools and forms clouds. This is _____.
3. When rain and snow fall, it's _____. A _____ measures the snowpack and predicts how much water will melt and become _____.
4. The rain will also become surface runoff. Together they will flow downhill and create rivers, streams and lakes. This is _____.
5. Some surface water will _____ into the ground and become groundwater. Groundwater is cleaned naturally as it drips through underground layers of sand and gravel.
6. _____ are built to control surface water so we can save it for when we need it. The _____ makes sure the dam equipment is working properly.
7. When it is needed, the dam maintenance worker releases the water into the canals. All surface water must be cleaned at the _____ before it is safe to drink. The _____ makes sure that the treatment plant is working properly.
8. Groundwater does not need to go to the water treatment plant. It is filtered by sand and gravel and is stored in the _____.
9. At the water treatment plant, a _____ will test the water to be sure it is safe to drink before it is sent through the underground pipes called the _____.



10. Groundwater is pumped from the aquifer through _____. Chlorine is added to keep it clean as it travels through the distribution lines. A _____ will take samples from various locations and send it to the lab to be tested.
11. A _____ will help Arizonans learn how to save water.
12. After water is used, it goes down the drain into the sewer. This dirty water is called _____.
13. The wastewater will be cleaned and recycled at the _____.

person in the Valley uses about 120 gallons of water per day. It takes a with Mother Nature to bring clean and safe drinking water to your tap.



Answers:
 1. Evaporation, 2. Condensation, 3. Precipitation, Hydrologist,
 Surface Runoff, 4. Surface Water, 5. Percolate, 6. Dams,
 Dam Maintenance Worker, 7. Water Treatment Plant, Water
 Treatment Plant Operator, 8. Aquifer, 9. Water Quality Lab
 Technician, Distribution Line, 10. Wells, Water Distribution
 Line Technician, 11. Water Conservation
 Specialist, 12. Wastewater, 13. Water Reclamation Plant



Hi! I'm Hydro, the Water Distribution Technician. My job is to make sure the clean drinking water travels safely through underground pipes.

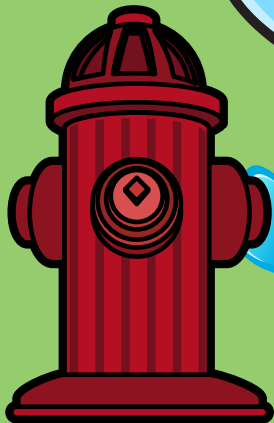
I check the distribution lines and fire hydrants for leaks.

If there is a leak, I fix it as quickly as I can.

A leaking pipe can cause major damage to streets and buildings. I also take water samples from different locations and bring them to the water quality lab to ensure our water is safe.

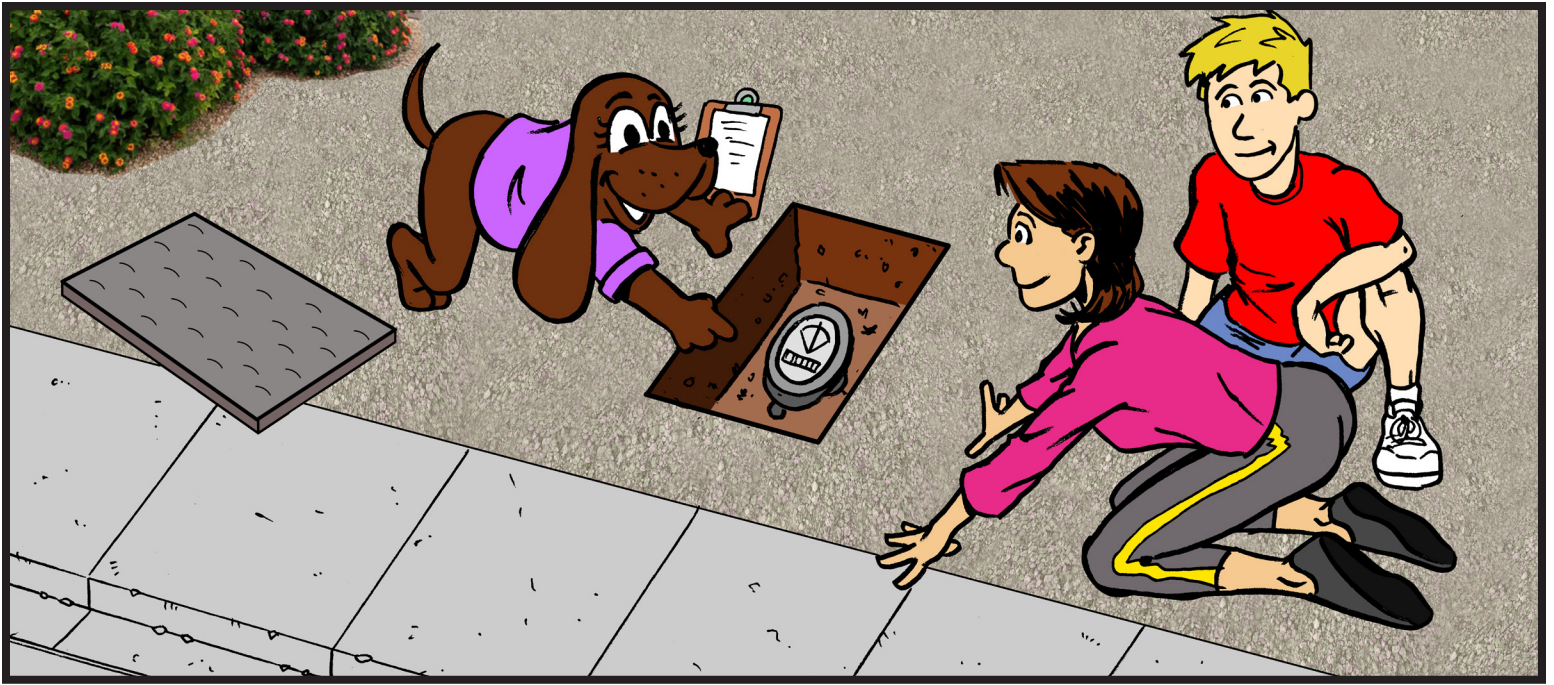
Find and circle these words

CONSERVE WATER, FIX LEAKS, FULL LOADS, SHORTEN SHOWERS, DAMS, CONDENSATION, PRECIPITATION, WELLS, HYDRANTS, GROUNDWATER, SURFACE WATER, HYDROLOGIST, EVAPORATION, CONSERVATIONIST, DISTRIBUTION, WATER QUALITY, TECHNICIANS



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

Find the bolded letters above and write them on the lines below to read the secret message.



Hi! I'm Willow, the Water Conservation Specialist. I have a lot of things that I do in my job, like teaching you how to use your meter to find leaks, helping you understand your water usage, and showing you how to program your irrigation controller.

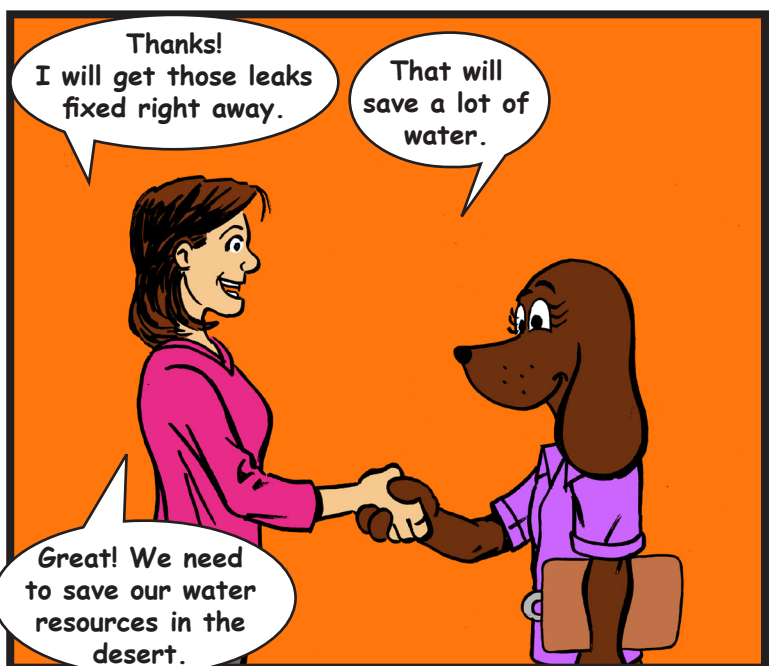
Your town or city offers classes on how to check your home for leaks, choose desert-adapted plants and trees, and many other water-saving classes. These classes are free and so are the materials you get to take home to reduce your water use. If you call me for an appointment, sometimes I can come to your home, school or business and conduct a free water efficiency checkup!

Here are examples of common water-wasting problems. Do you know the answers?

1. If a toilet is leaking at 1 gallon per minute, how many gallons are leaking...
 A. Per hour _____ B. Per day _____ C. Per month _____ D. Per year _____
2. If an irrigation valve is leaking at 0.5 gallons per minute, how many gallons are leaking...
 A. Per hour _____ B. Per day _____ C. Per month _____ D. Per year _____
3. If a meter is showing a leak of 2 gallons per minute, how many gallons are leaking...
 A. Per hour _____ B. Per day _____ C. Per month _____ D. Per year _____
4. If 12 homes in the neighborhood have the same leak as in question #3, how many gallons are leaking...
 A. Per hour _____ B. Per day _____ C. Per month _____ D. Per year _____

2. a.) 30 GPH, b.) 720 GPD, c.) 21,600 GPM, d.) 262,800 GPY,
 4. a.) 1,440 GPH, b.) 34,560 GPD, c.) 1,036,800 GPM, d.) 12,614,400 GPY.

Answers:
 1. a.) 60 GPH, b.) 1,440 GPD, c.) 43,200 GPM, d.) 525,600 GPY,
 3. a.) 120 GPH, b.) 2,880 GPD, c.) 86,400 GPM, d.) 1,051,200 GPY,



HERE'S HOW YOU CAN CALCULATE YOUR AVERAGE DAILY WATER USE.

		Gallons used this month	Number of people in household	Number of days in a month	Gallons used by each person each day
<i>Example:</i>	Measured in 1,000 gallon units	14 units $14 \times 1,000 = 14,000$	4 people $14,000 \div 4 = 3,500$	30 days $3,500 \div 30 = 116.6$	116.6 gallons per person/day
Your Numbers	Your water usage in gallons				

Water Use Rating:

Excellent: 30 – 80 gallons per person / day

Good: 81 – 120 gallons per person / day

Fair: 121 – 160 gallons per person / day

Greater than 160 gallons per person / day: Tell an adult to call your water provider for ways to reduce your water use.

Higher water use could be due to a large landscape area. Check for leaks periodically. Seasonal use may vary.

DIRECTIONS:

Ask your parents or guardians how much water your household used last month. This information can be found on the water bill.