

Great Adventure ...



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Ken Vinton - Illustrator

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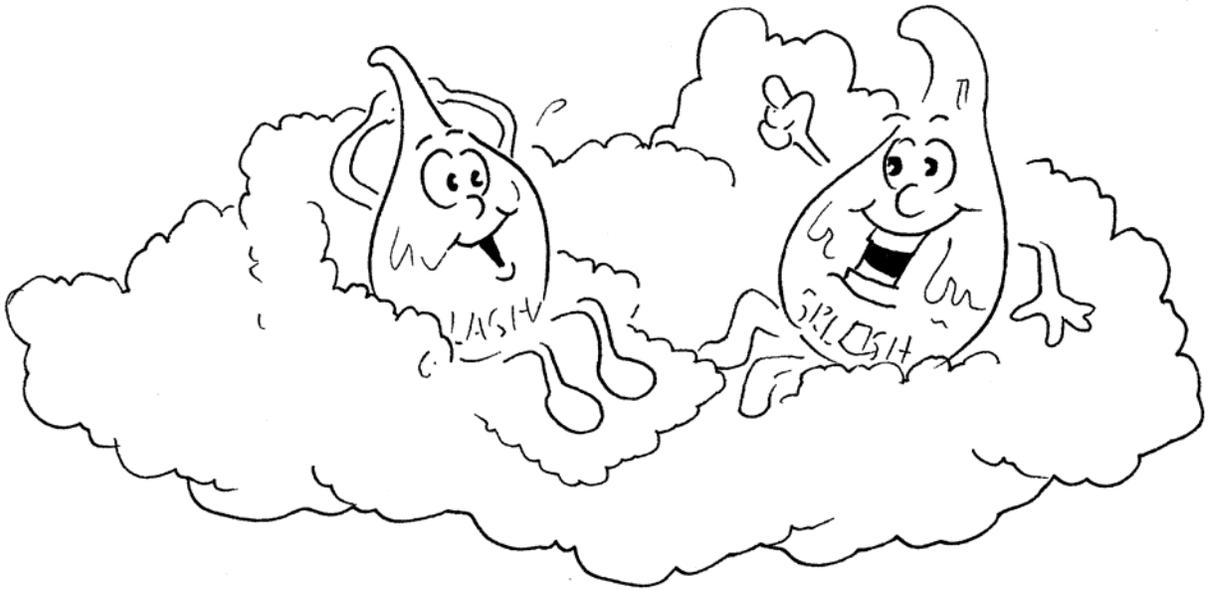
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- Martinsburg Municipal Authority
- Shenango River Watchers
- Susquehanna River Basin Commission

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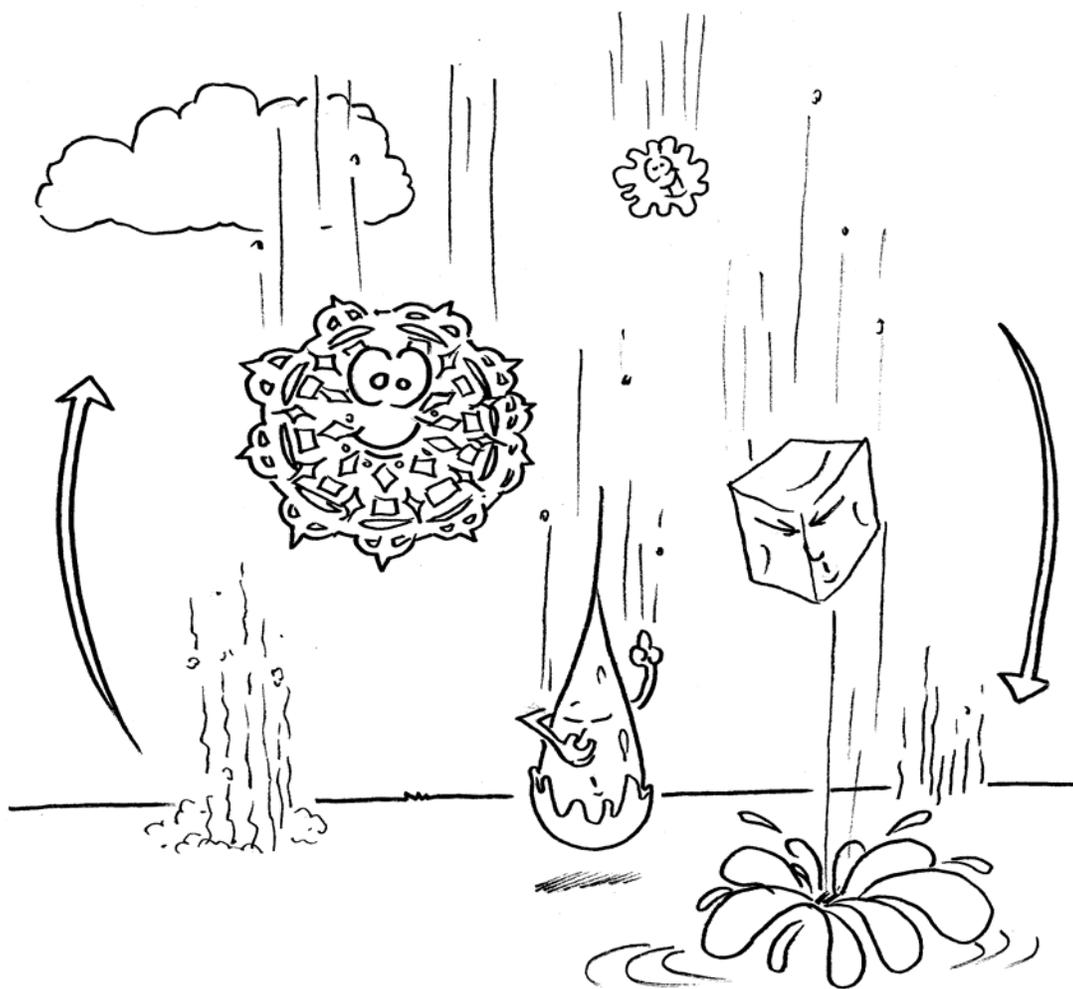
Once upon a time there were two raindrops named Splish and Splash. Even though there were times when they did not see each other for many years, they were very good friends. Recently was one of those occasions when Splash, after several years in the clouds, came upon his old friend Splish.

"My old friend, where have you been?" cried Splash.

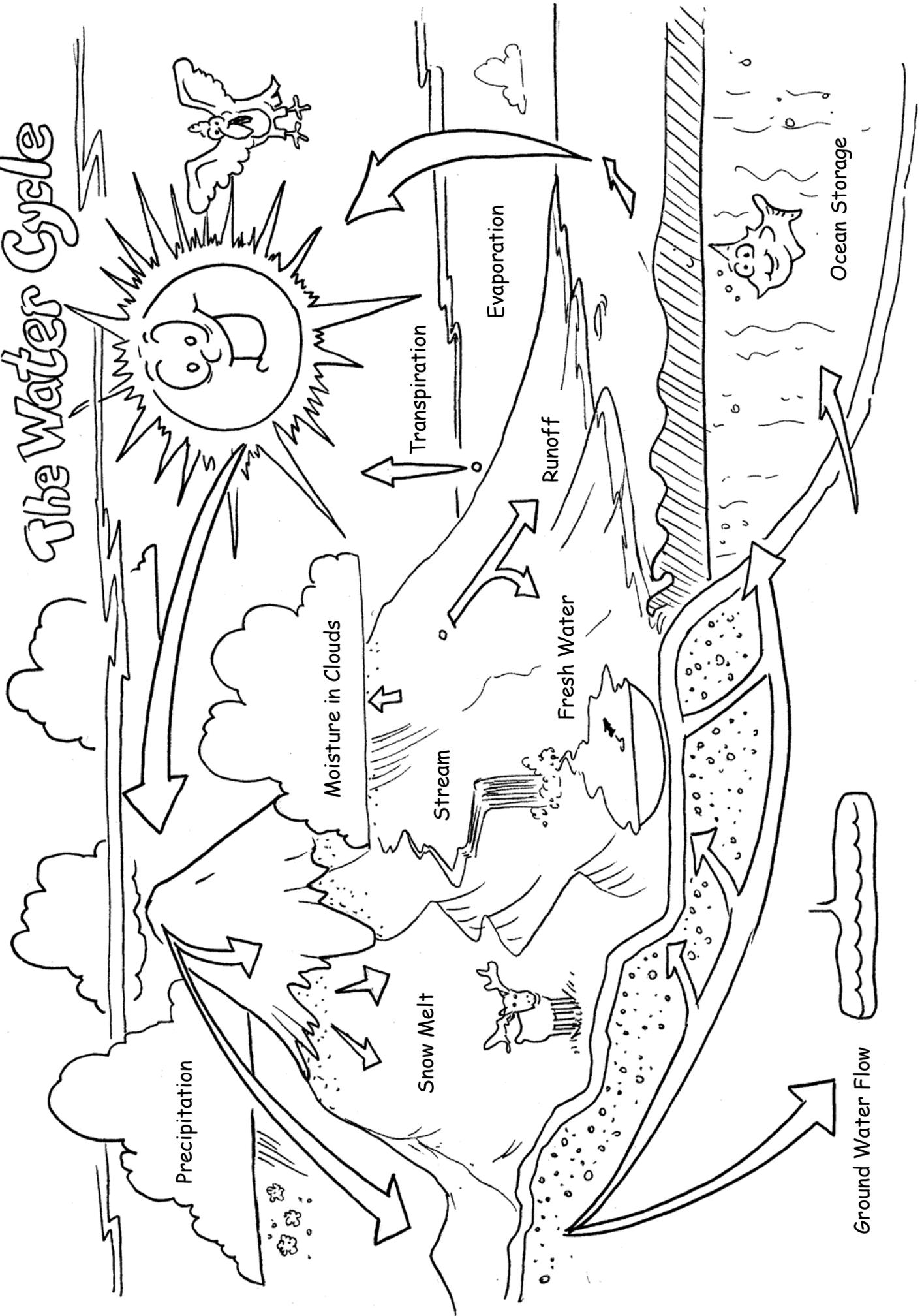


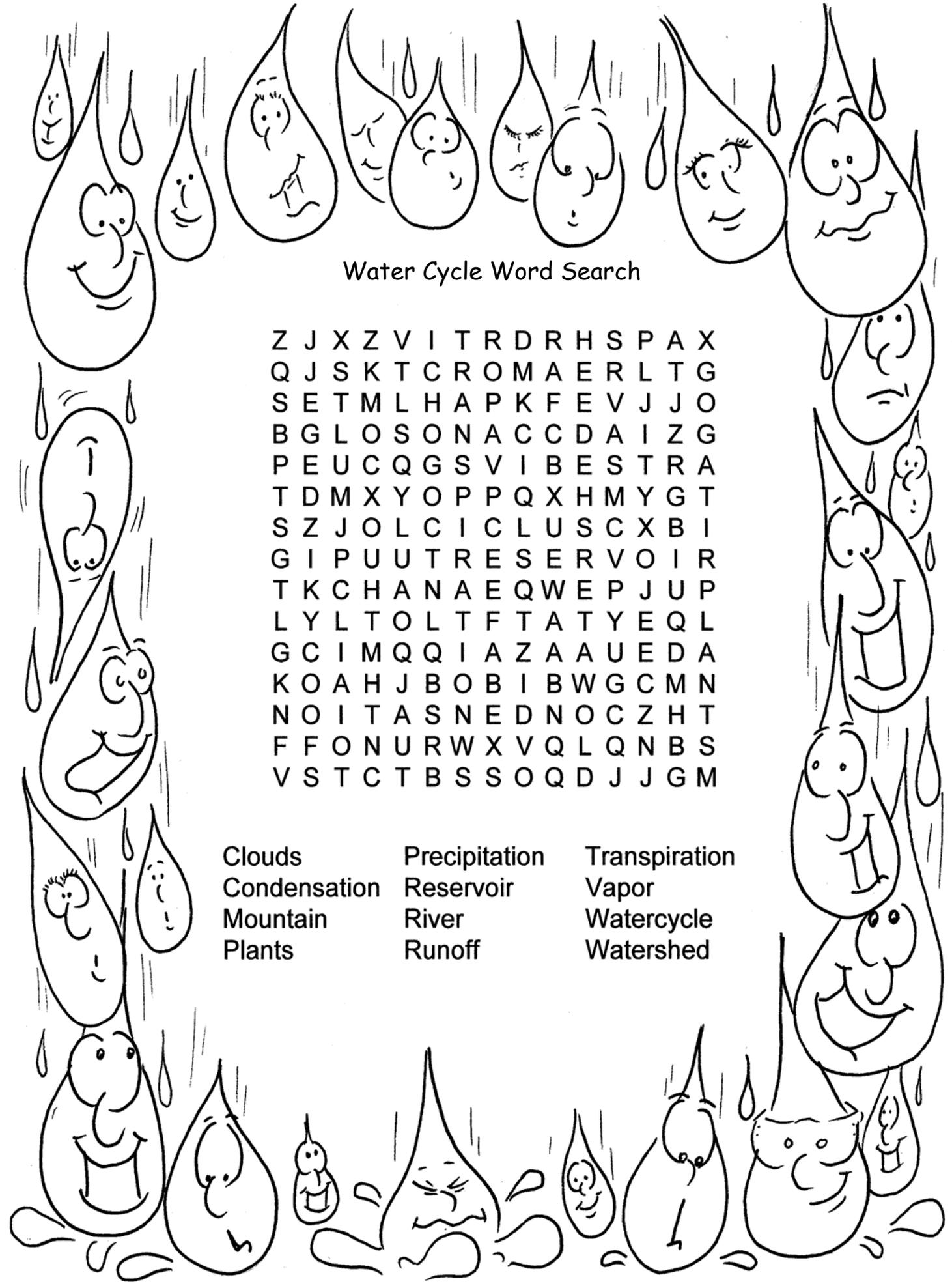
"I have just returned to the clouds from Earth" explained Splish. "I have been gone since the time you and I fell to Earth together."

Splish and Splash knew that water was always in motion. Water vapor in the clouds condenses and falls to earth in the form of rain or snow. Some of the snow melts and like rain, either flows to a nearby stream or lake or soaks into the ground. Some of the water in the ground soaks deep into the ground while some stays close to the surface supplying plants, reappearing on the surface as springs or seeps back into the streams and lakes. The plants give off water vapor in a process called *transpiration*. Some water in the lakes and streams evaporates back into water vapor. The water vapor forms clouds that cool condensing the vapor back into rain and snow which falls to Earth and the "water cycle" begins again.



The Water Cycle





Water Cycle Word Search

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

Clouds

Condensation

Mountain

Plants

Precipitation

Reservoir

River

Runoff

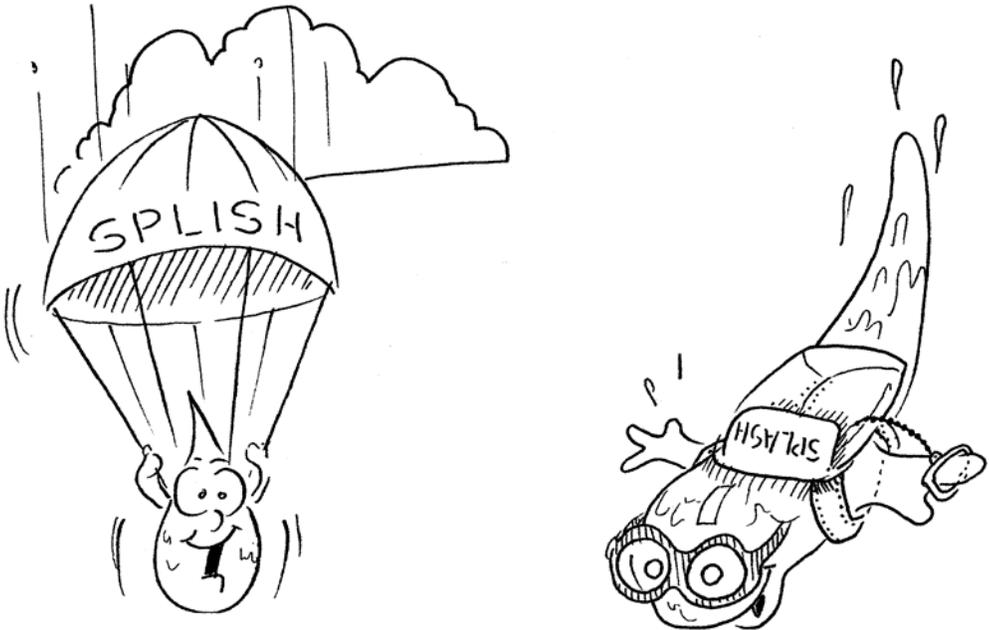
Transpiration

Vapor

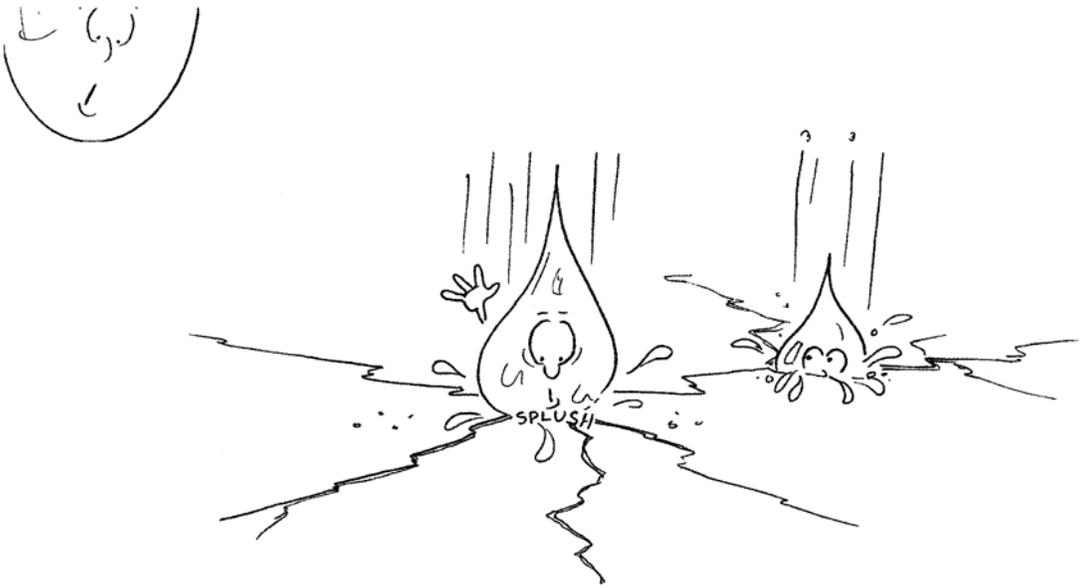
Watercycle

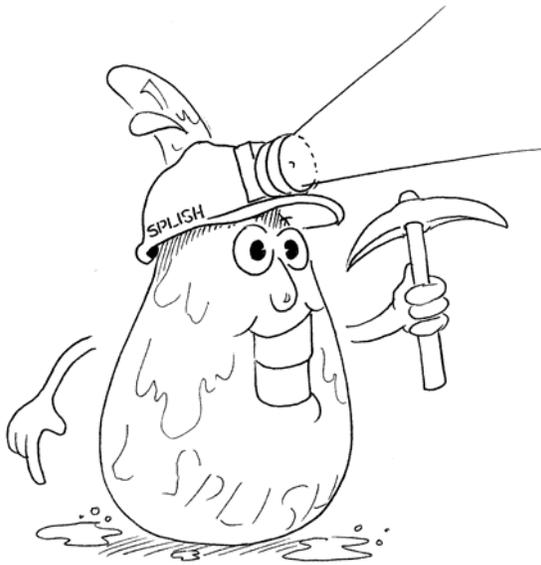
Watershed

"Ah yes, I remember. I had an incredible trip myself. I saw and learned so much" exclaimed Splash.



"But where did you go Splish? We hit the ground together and you disappeared?"



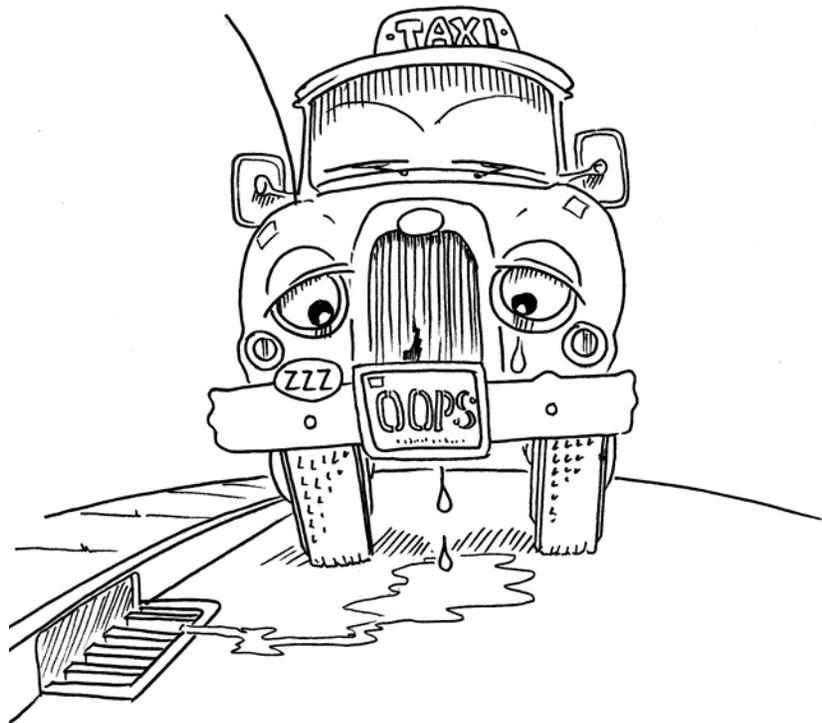


"I took an amazing trip" said Splish. "I soaked through the dirt deep into the cracks in the rocks underneath. People count on us for drinking water but there are many things that can contaminate us. I felt protected underground. I didn't think anything could hurt me."

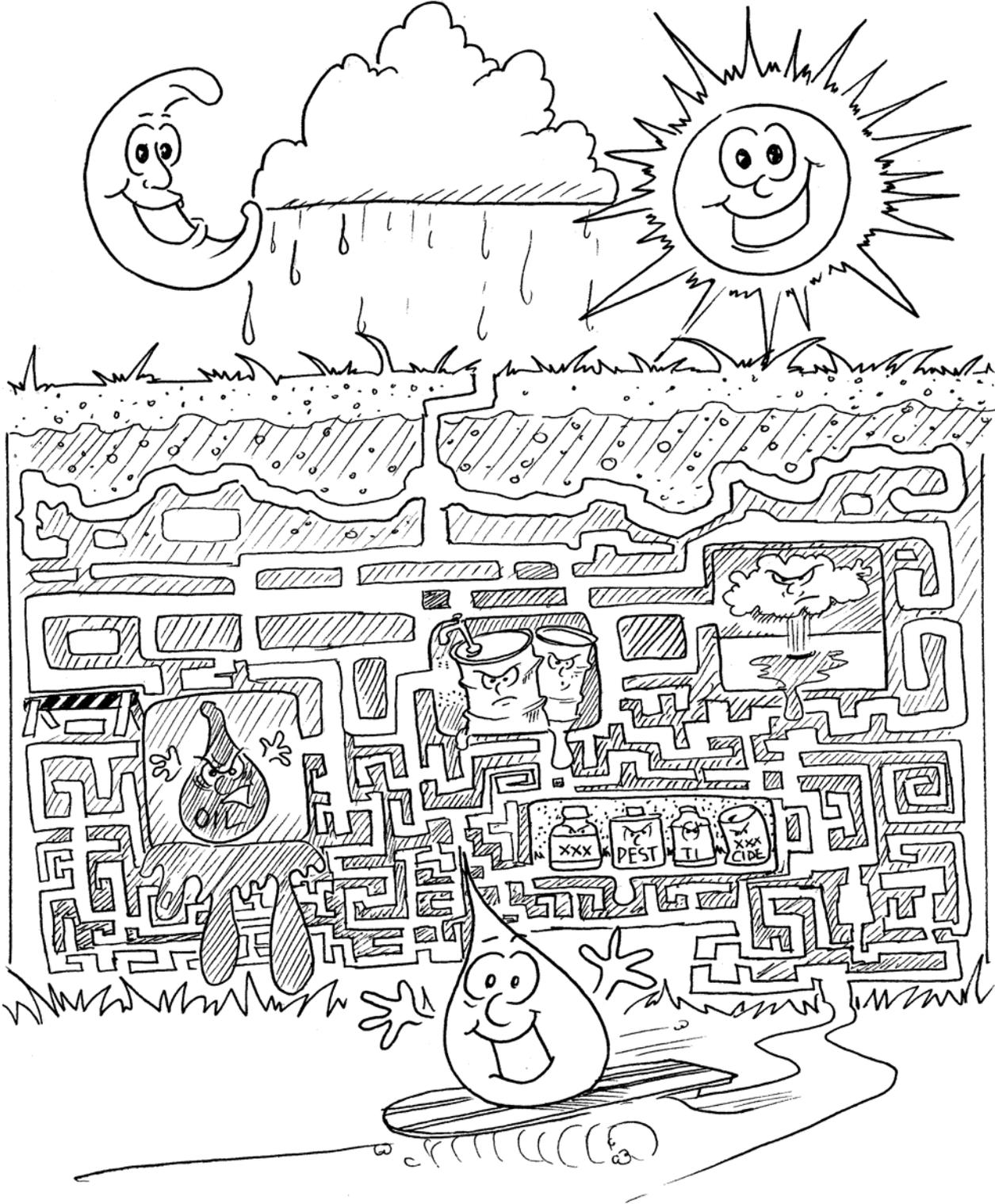
"There were still things that can contaminate you" said Splash.

"Any chemical spilled or poured onto the ground can soak into the ground and hurt me."

"Like motor oil or anti-freeze from a car " added Splash



Help Splish find his way past the dangers



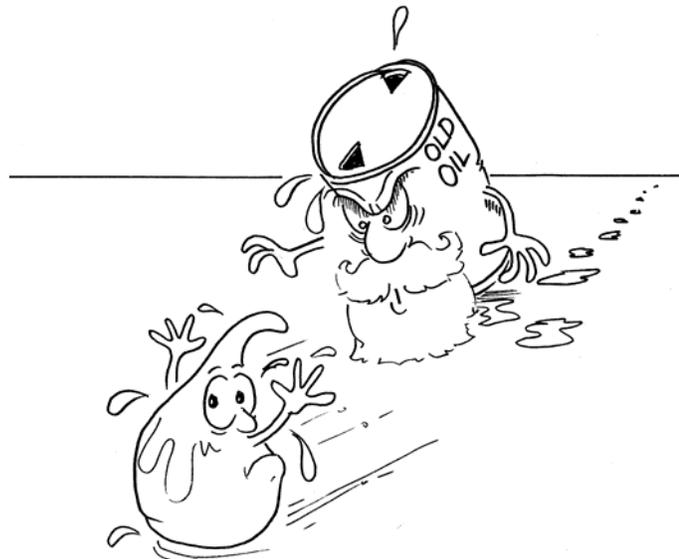
"You were more protected than if you were in a stream or lake but there are still things that can contaminate you" said Splash.

"People must be so careful" agreed Splish. Any chemical spilled or poured onto the ground can soak into the ground and hurt me."



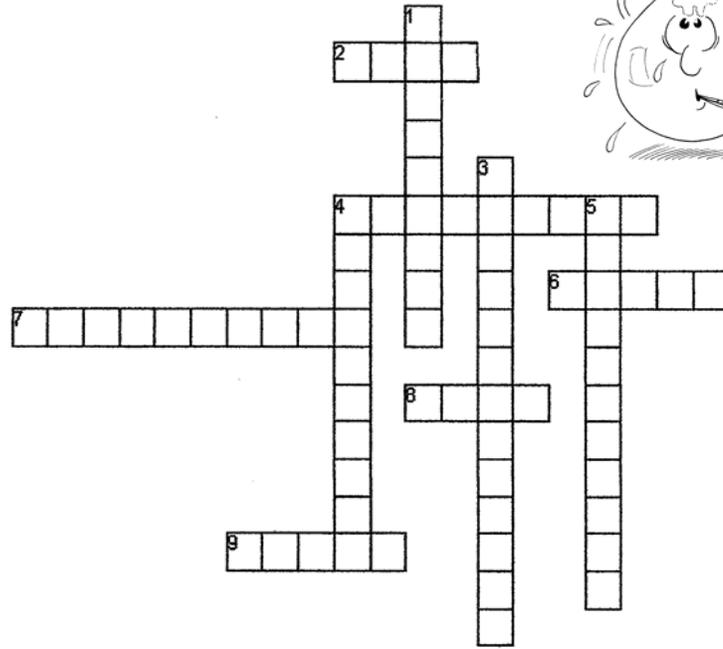
"They should be careful not to spill gasoline when cutting grass "

"And they shouldn't pour used oil from their car on the ground either" added Splash



Water Pollution Crossword

Complete the puzzle using the words below



Across

2. Frozen water falling from the sky
4. The area of ground supplying water to a stream or lake
6. The planet we live on
7. A contaminant that comes from a car
8. Water falling in drops from the sky
9. What we all need to survive

Down

1. Something that makes water unsafe to drink
3. Process of plants giving off moisture
4. Process of water and snow falling from clouds, evaporating and returning to the clouds
5. Changing water to a gas

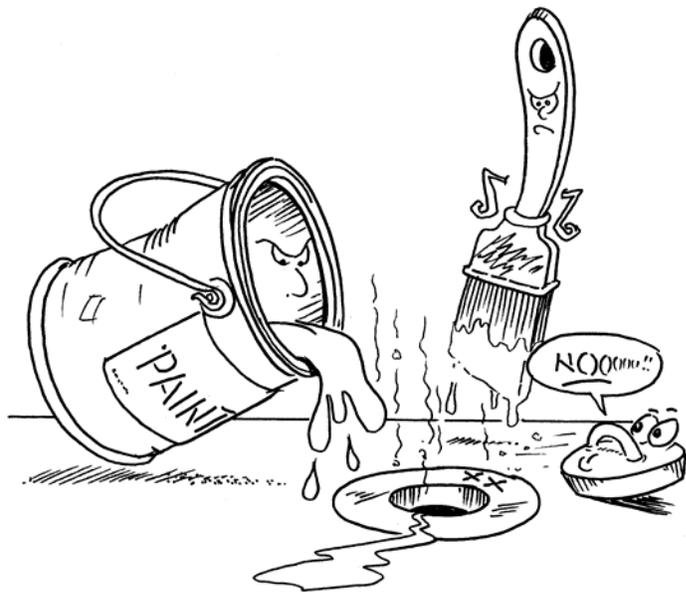
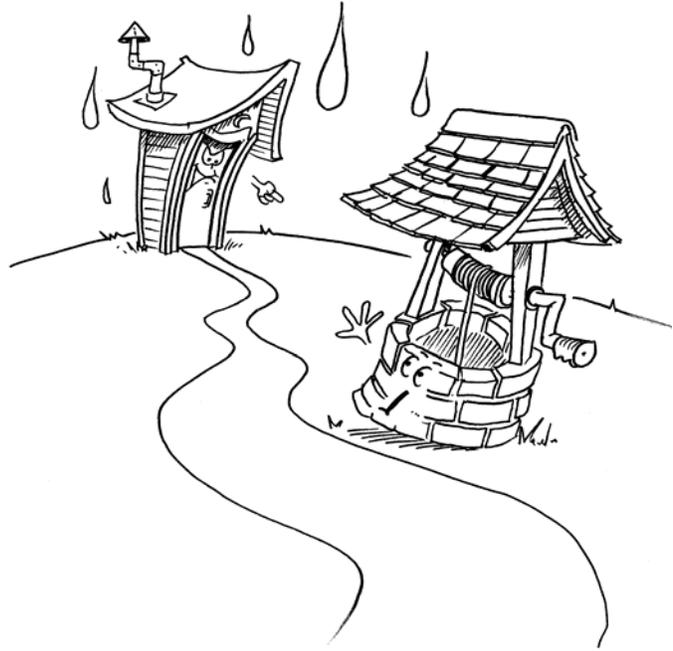


Earth
Antifreeze
Water
Pollution

Water Cycle
Rain
Snow
Watershed

Transpiration
Evaporation

"That's right, and I fell to Earth in the country where people may not have a city sewer and might have their own well too. Their private septic systems can really be dangerous if not built and used correctly. They need to be sure their well is built the right way also.



They shouldn't pour chemicals or paint down the drain. The chemicals can flow right into the ground and the water they drink. That's why it's important to recycle. People need to take the time to get rid of unwanted chemicals the right way.



Break The Code



Replace the symbols with the letters to learn Splish and Splash's important message.

A	B	C	D	E	F	G	H	I	J	K	L	M

N	O	P	Q	R	S	T	U	V	W	X	Y	Z

.

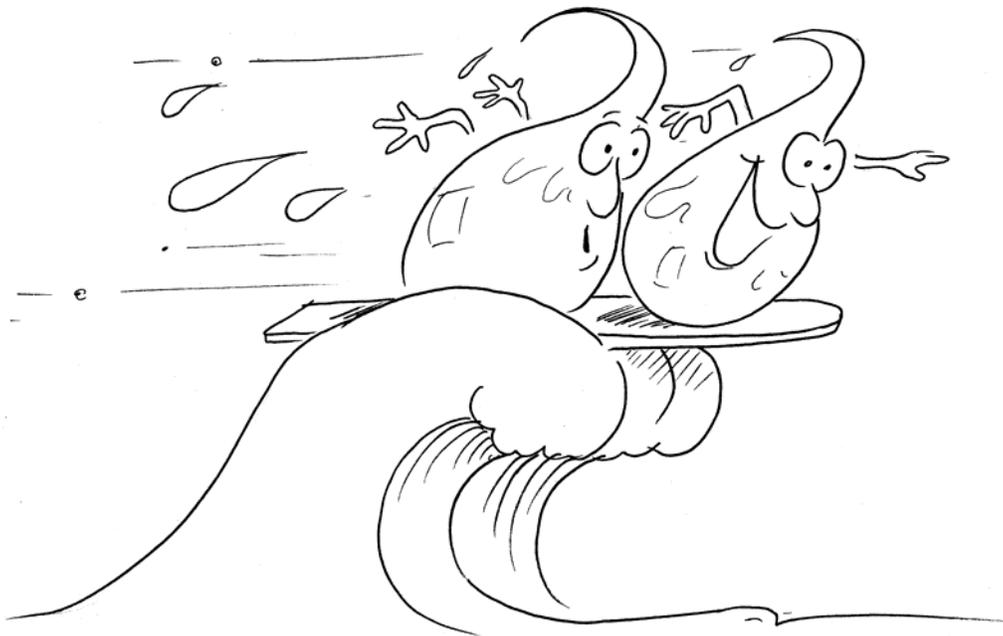
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"Luckily water moves very slowly through the ground. It may take years for ground water to return to the clouds. And it may take years for contamination to reach a water well."

"But where did you go Splash?"

"Splish old pal, you know I like to go fast, I became surface water."



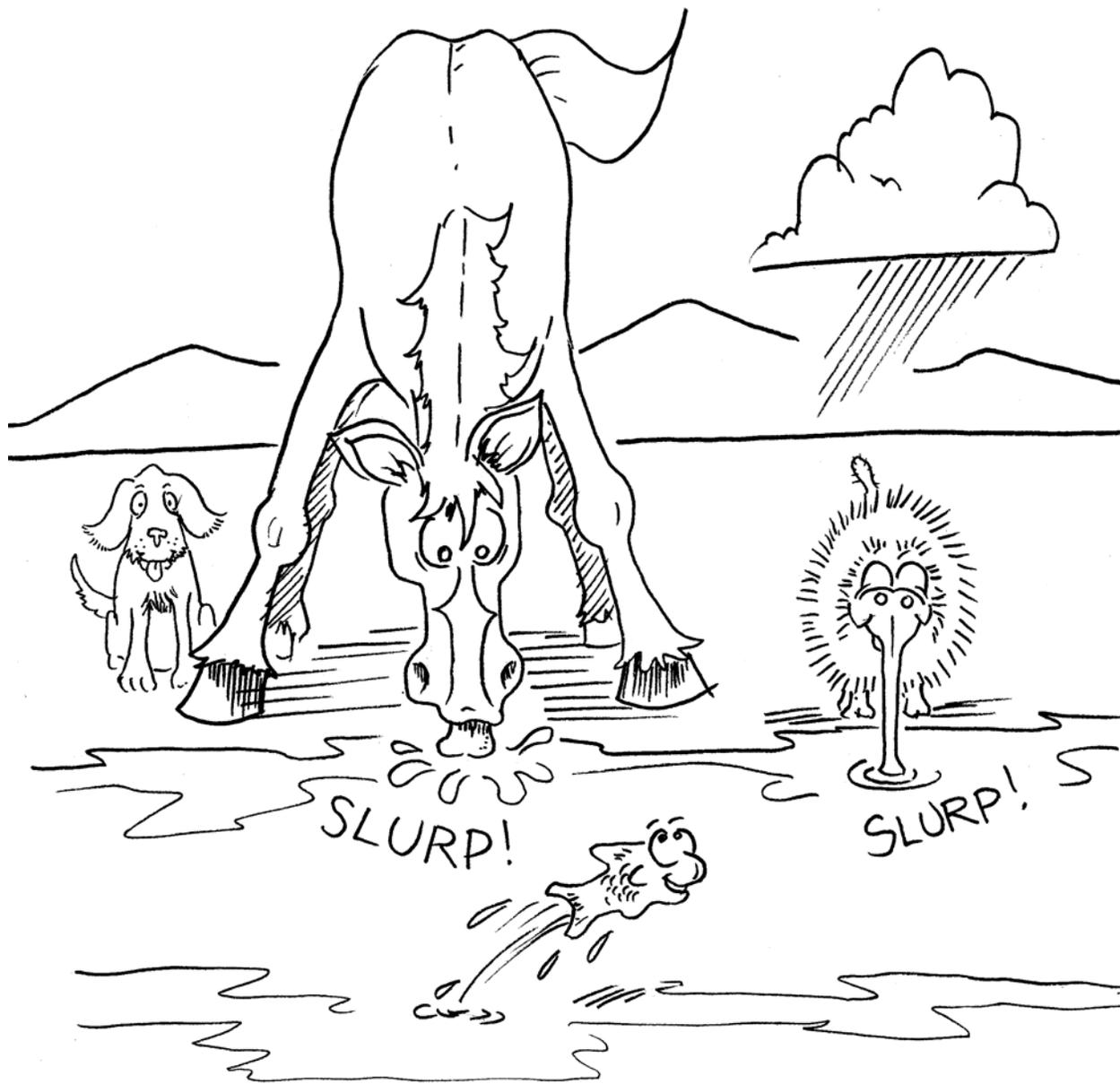


"I wanted to see all that I could. I knew if I became surface water and flowed over the surface of the ground, I would meet many other water drops that were flowing down the mountain."

"All the mountain streams in this area flow to the river in the valley. This whole area supplying the river is called a watershed" explained Splash.

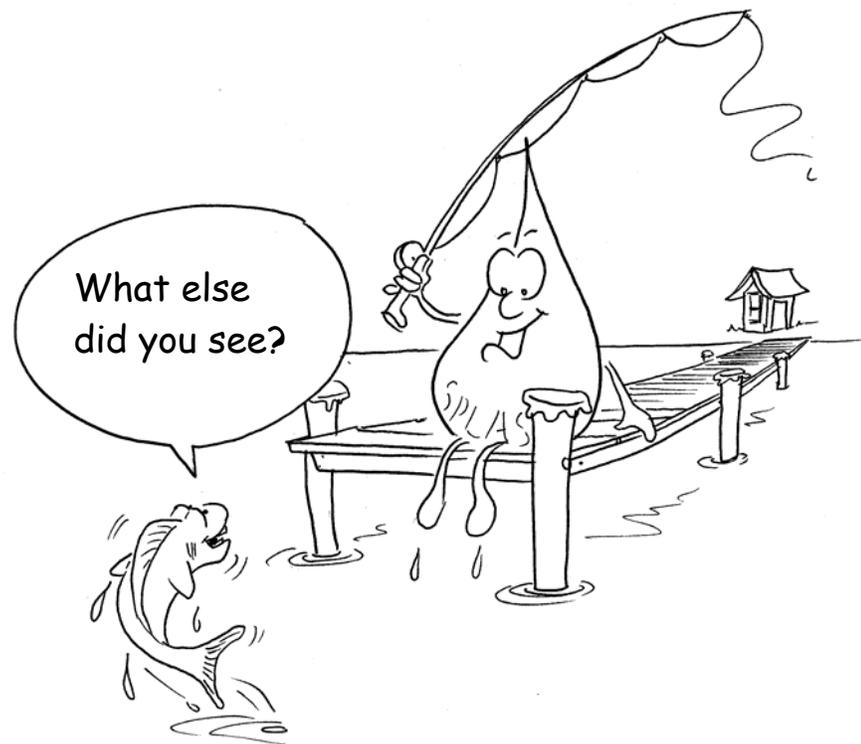


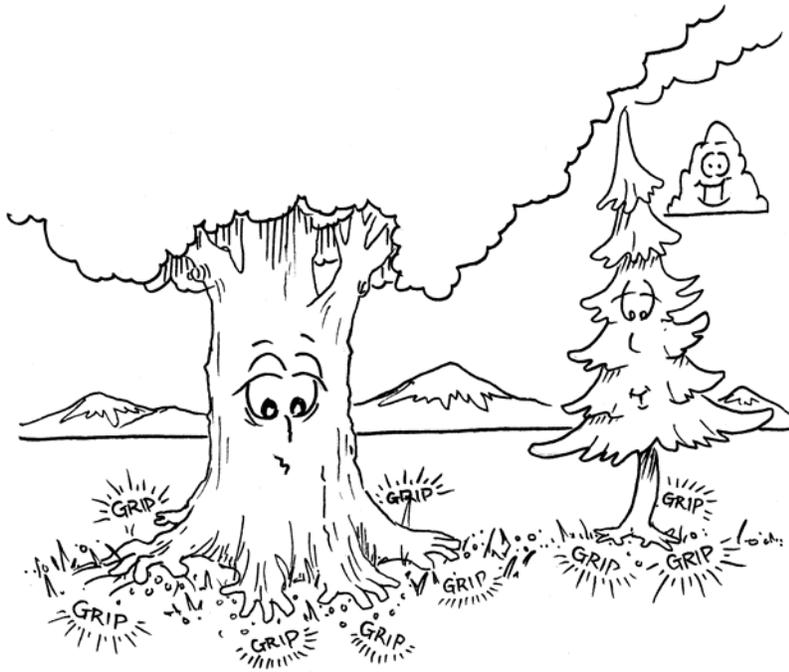
"Just like with groundwater, it's important to keep out surface water clean also. Not only can surface water be used for drinking and industry, it's used to nourish the plants and animals."





"Surface water can also be used for fun things. I saw people boating and fishing and swimming."





"I saw men cutting down trees. I knew that timbering, the cutting of logs could be a threat. Trees hold the soil in place and without them, loose soil, called sediment could flow into the stream and contaminate it."

"But these men were taking steps to prevent this and only cutting down the trees they needed. They were also planting new trees to replace the ones they cut down"

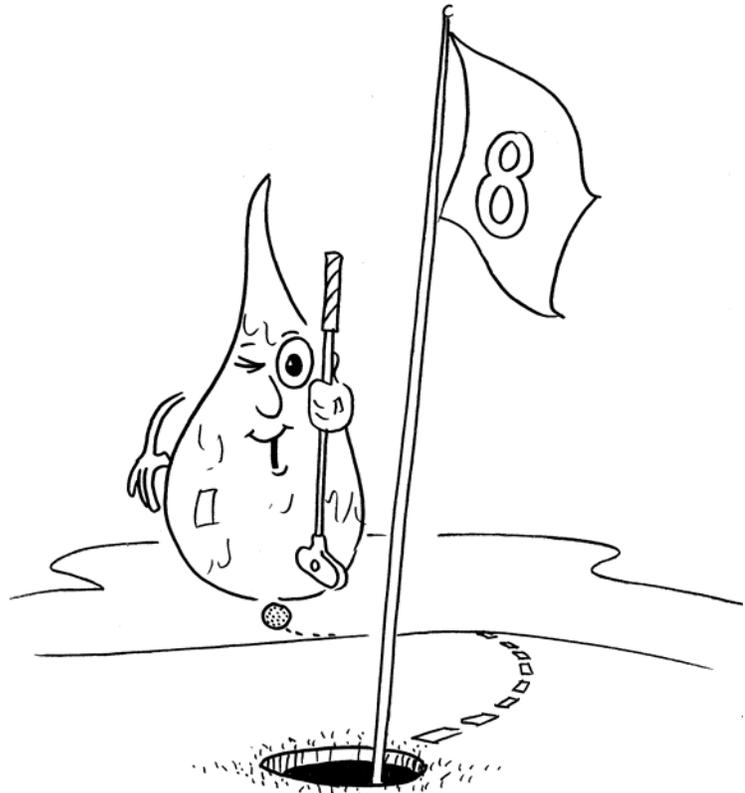




"You know Splish, we need farms for food but there are many things on the farm that can pollute the water. Fertilizers to help the plants grow and pesticides to kill the bugs can flow over the ground and into the stream if not used the right way. Rain can wash soil sediment into the water and manure from the animals if not stored the right way can also pollute the water."

Splish had to ask, "What about a golf course? They use chemicals to grow their grass?"

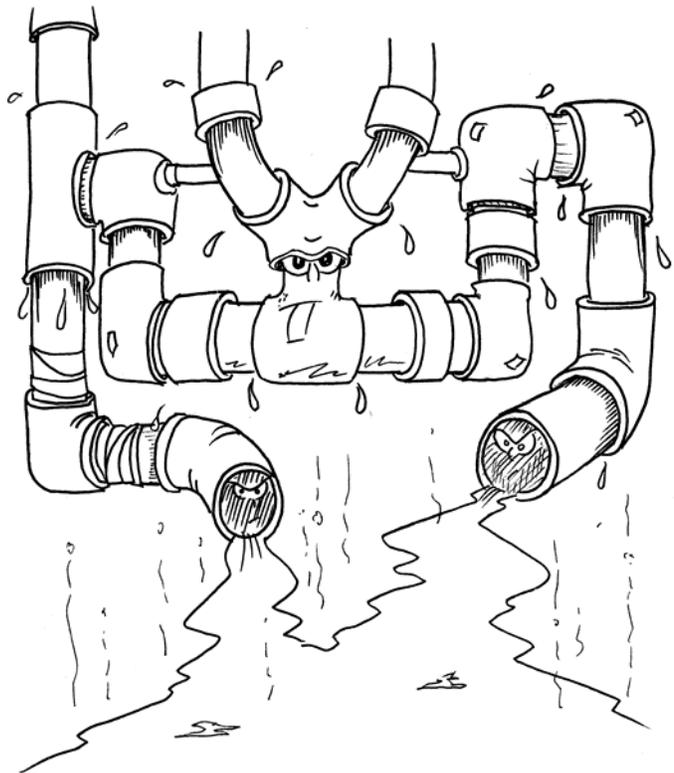
"That's very true" said Splish. "They have to be careful when and where they put chemicals on the grass to keep it from polluting the water, both surface water and ground water"

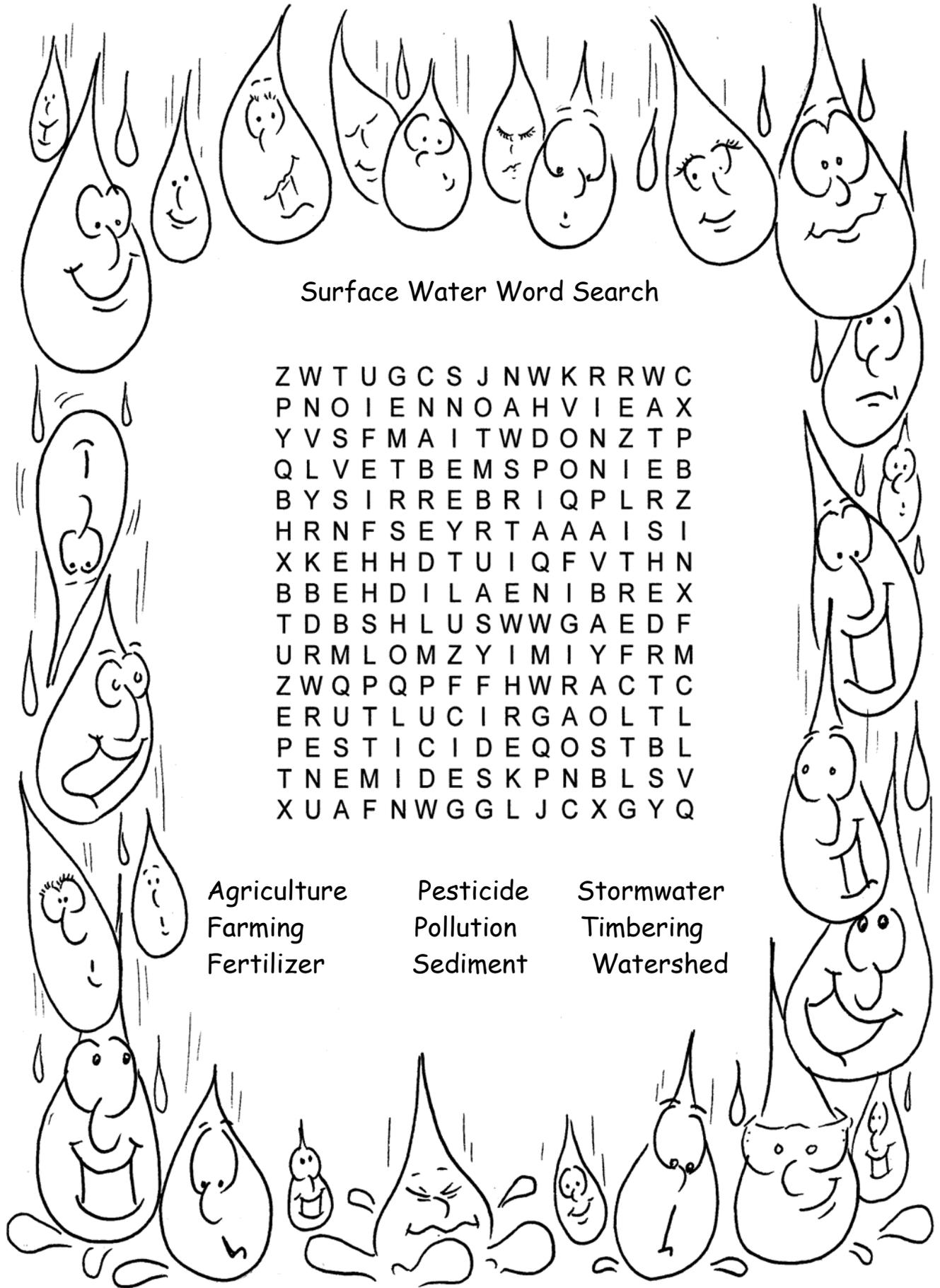




"As I got closer to the city I saw a lot of drain pipes. They carried rainwater off the streets to the stream. Can you imagine how many nasty things could be in that water?"

"Yeah, oil and anti-freeze from leaky cars and trucks, chemicals from yards and factories that aren't used correctly and even pet waste. Anything put on the road or ground could get washed into the stream." said Splish





Surface Water Word Search

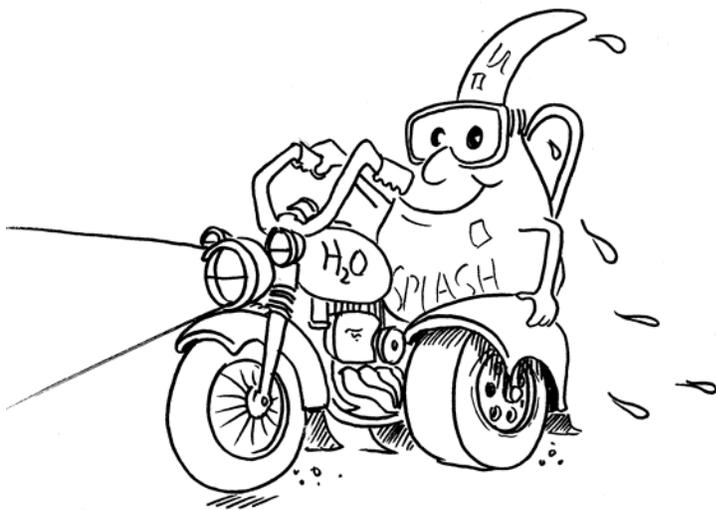
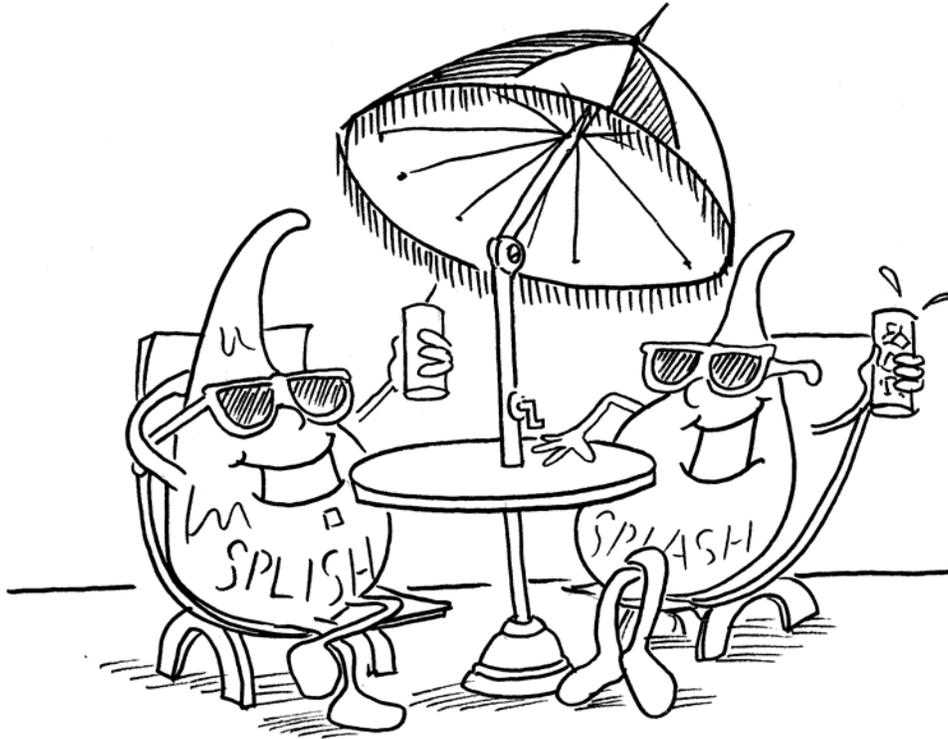
ZWTUGCSJNWKRRWC
PNOIENNOAHVIEAX
YVSFMAITWDONZTP
QLVETBEMSPONIEB
BYSIRREBRIQPLRZ
HRNFSEYRTAAASIS
XKEHHD TUIQFVTHN
BBEHDILAENIBREX
TDBSHLUSWWGAEDF
URMLOMZYIMIYFRM
ZWQPQPFHWRACTC
ERUTLUCIRGAOLTL
PESTICIDEQOSTBL
TNEMIDESKPNBLSV
XUAFNWGGLJ CXGYQ

Agriculture
Farming
Fertilizer

Pesticide
Pollution
Sediment

Stormwater
Timbering
Watershed

"The good thing is that many of the sources of pollution can be eliminated or the amount of pollution reduced.



"Yeah, people can fix their cars and pick up after their animals. Farmers can change things to reduce the amount of stuff coming off their land. People need to know that what they do can affect everyone's drinking water.



List 7 Things Wrong With This Picture:

1. _____

5. _____

2. _____

6. _____

3. _____

7. _____

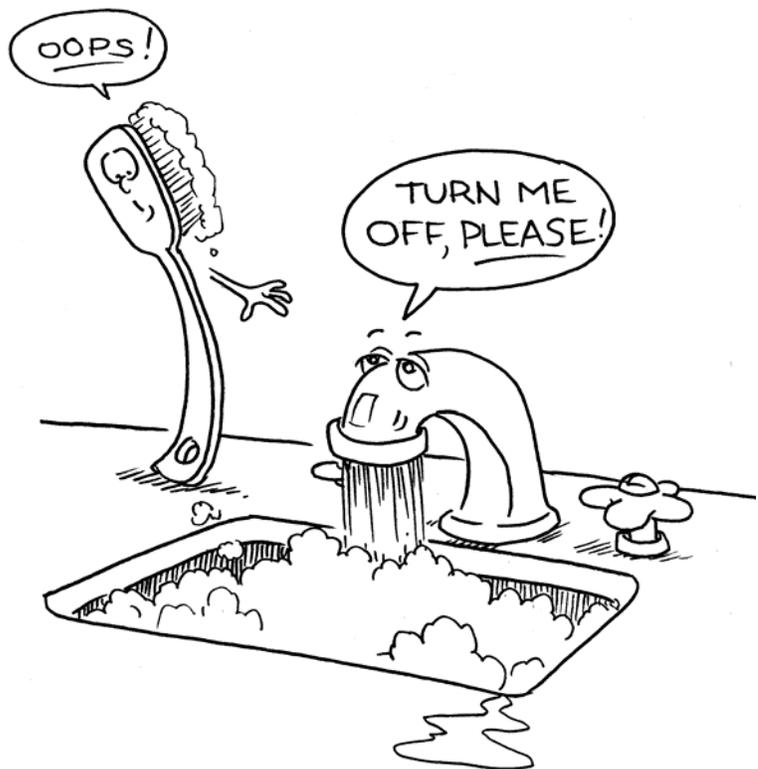
4. _____

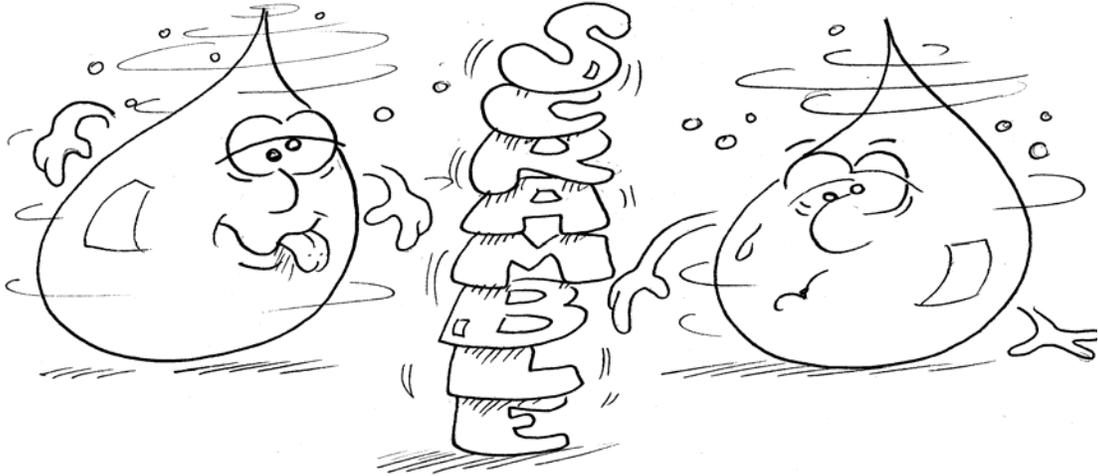


"Water is very precious. People should not waste it either."

"That's right. They should turn the water off while they brush their teeth and they should keep a bottle of water in the refrigerator for cold water instead of running the water till it gets cold."

"And they can shorten the time they're in the shower."



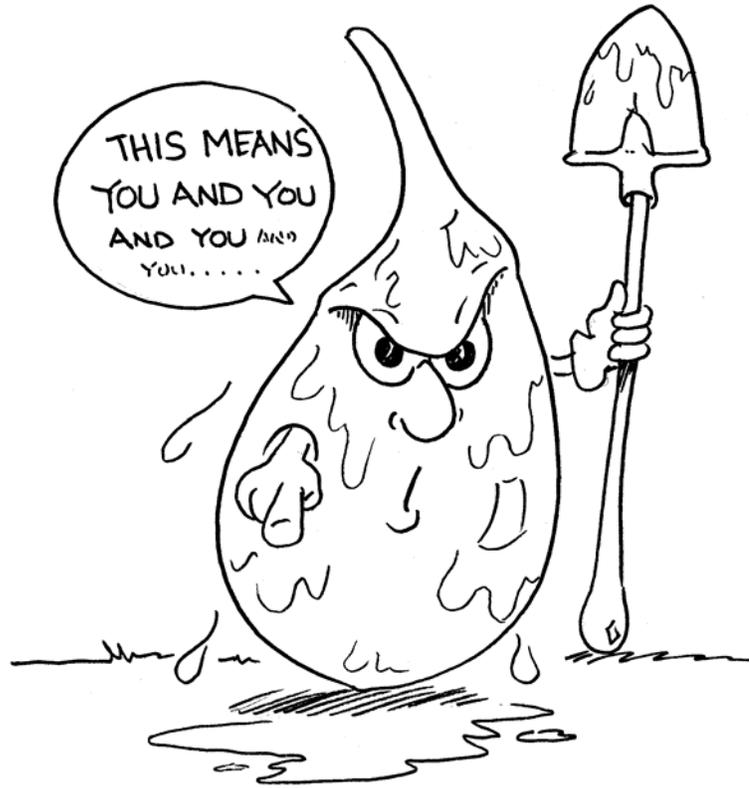


Water Conservation Word Scramble

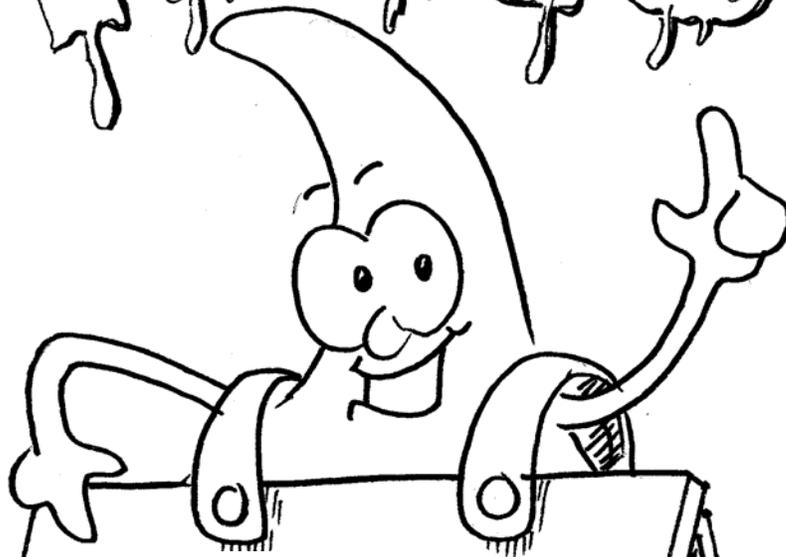
Unscramble the letters to learn how to save water

1. You should only run the _____
(isimhcnewhaga) when you have a few load of _____ (chtosel)
2. Repairing _____ (iiprndg) faucets can save thousands of gallons of water each year.
3. The most amount of water is used in this room of the house?
_____ (otharomb)
4. Turn off the water while you _____ (rbhus) your
_____ (ttehe)
5. Clean your sidewalks with a _____ (omobr) instead of a
_____. (esho)
6. Keep a _____ (tpechir) of water in the _____
(girfroterae) instead of running the faucet.

"That's true Splash.
It's everyone's job to
protect our water.
We need to conserve it
and we need to keep it
clean. It's a big job but
if we all work together
we can get the job
done.



FACTS



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Questions? Contact PA Rural Water Education Foundation at 800-653-7792