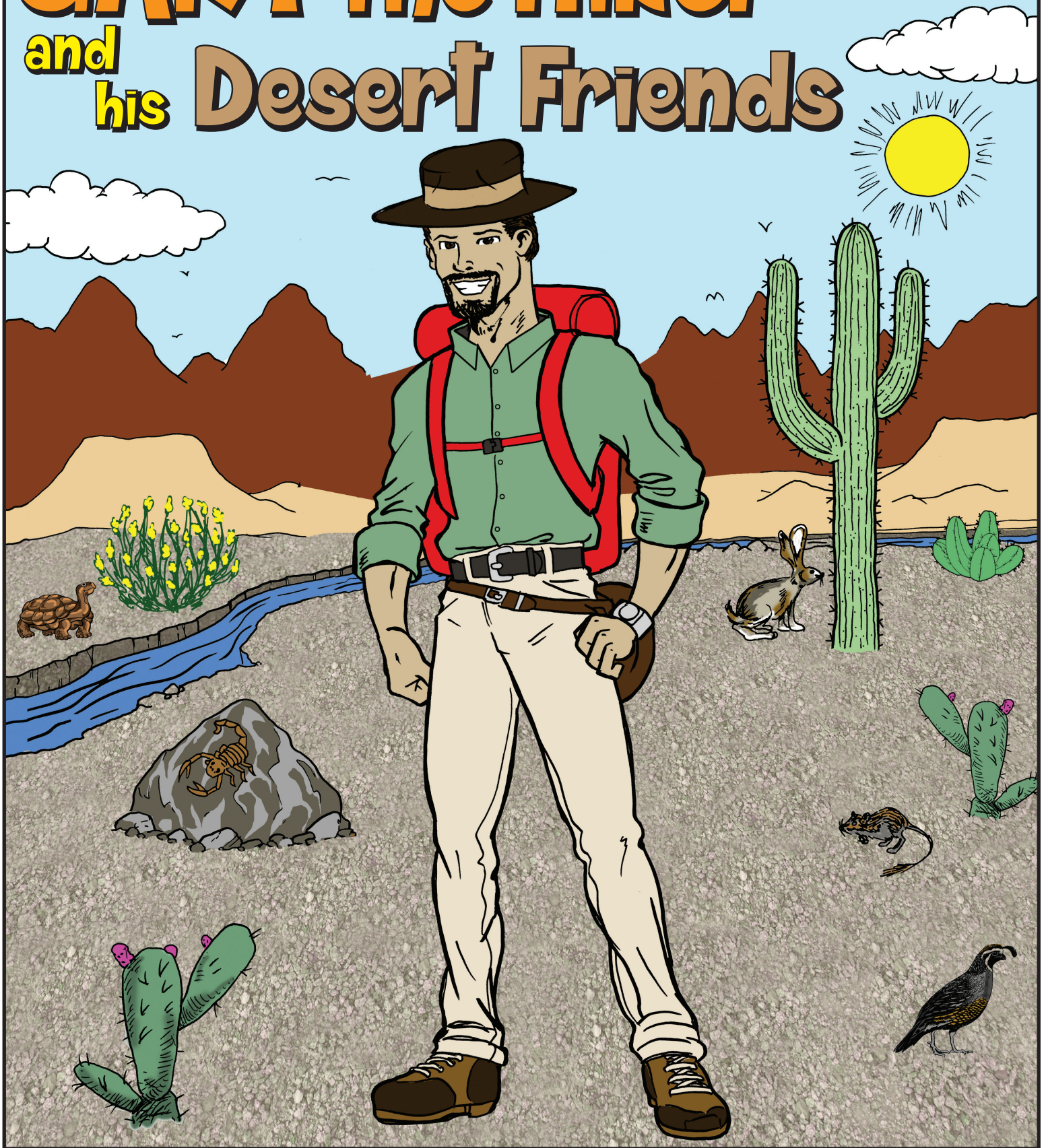
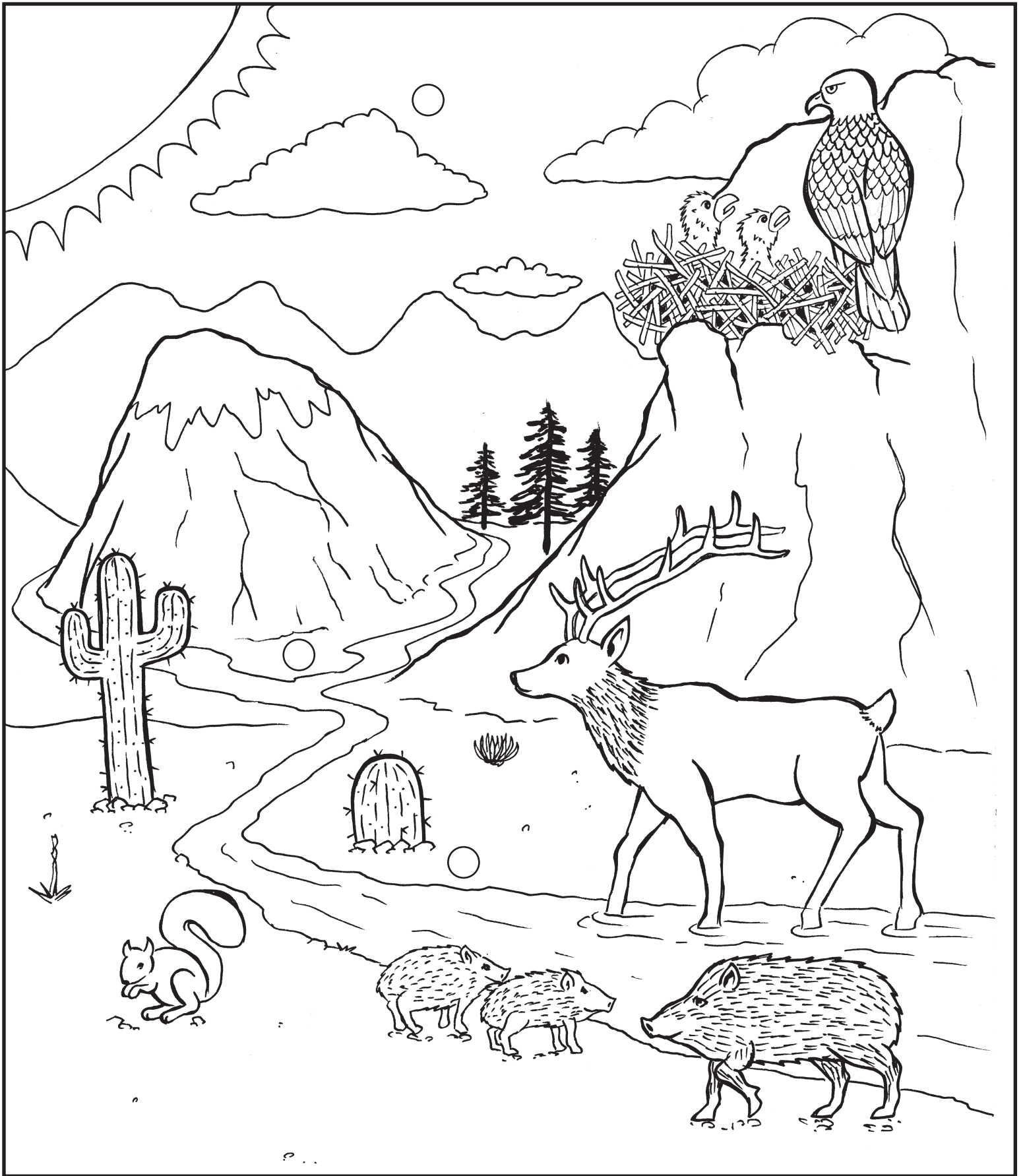


# GARY the Hiker

and his Desert Friends





We get some of our water from the watershed. The SUN melts the snow and turns it into water.

*Place the number 1 in the circle near the sun.*

The place where the water begins to flow is called the HEADWATERS.

*Place the number 2 in the circle where the headwaters flow into the river.*

Gravity pulls the water downhill and creates RIVERS.

*Place the number 3 in the circle near the river and color the picture of our watershed.*



Hiking in Arizona can be dangerous. I always wear good boots to protect my feet and take plenty of water.



I always watch where I am going to step. I don't want to step on any of my desert friends.



I always pick up trash left by others. Whatever is left can get into our rivers and affect our drinking water.

It's amazing how desert plants and animals have adapted to living in a desert. Draw a line to match the desert plant or animal with the definition of how it survives in our hot, dry climate.

a. desert rat

b. gila monster

c. mesquite tree

d. desert tortoise

e. saguaro cactus

f. sidewinder rattlesnake

1. I grow deep roots that can search for and find water.

2. I dig a burrow underground and stay in it to keep cool during the day.

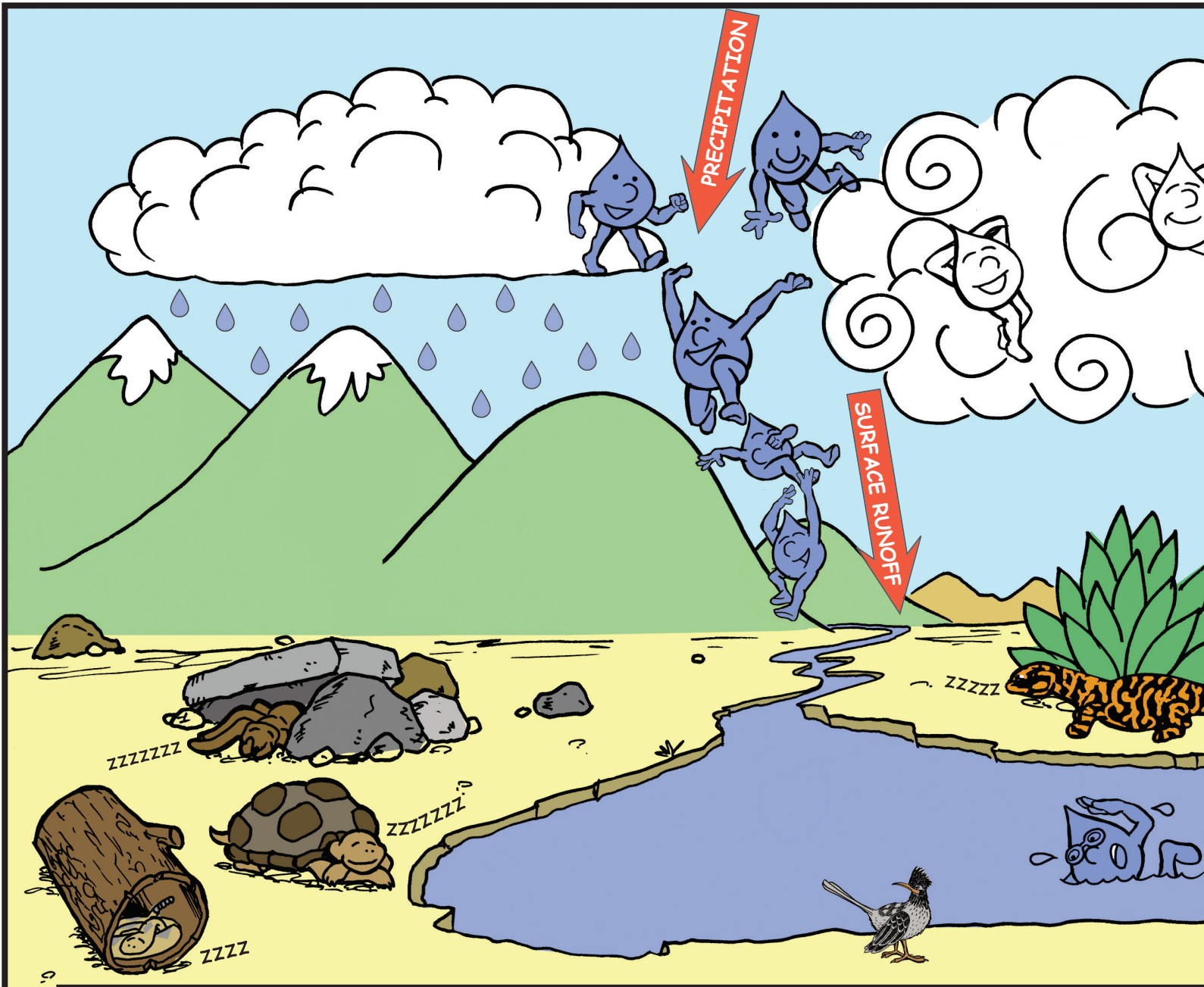
3. I save water in my tail and eat juicy bugs.

4. I have thick pads on my belly to keep me cool and help me travel sideways.

5. My sharp spines protect the water in my spongy center.

6. I get water from eating seeds and stay in the shade to keep cool.

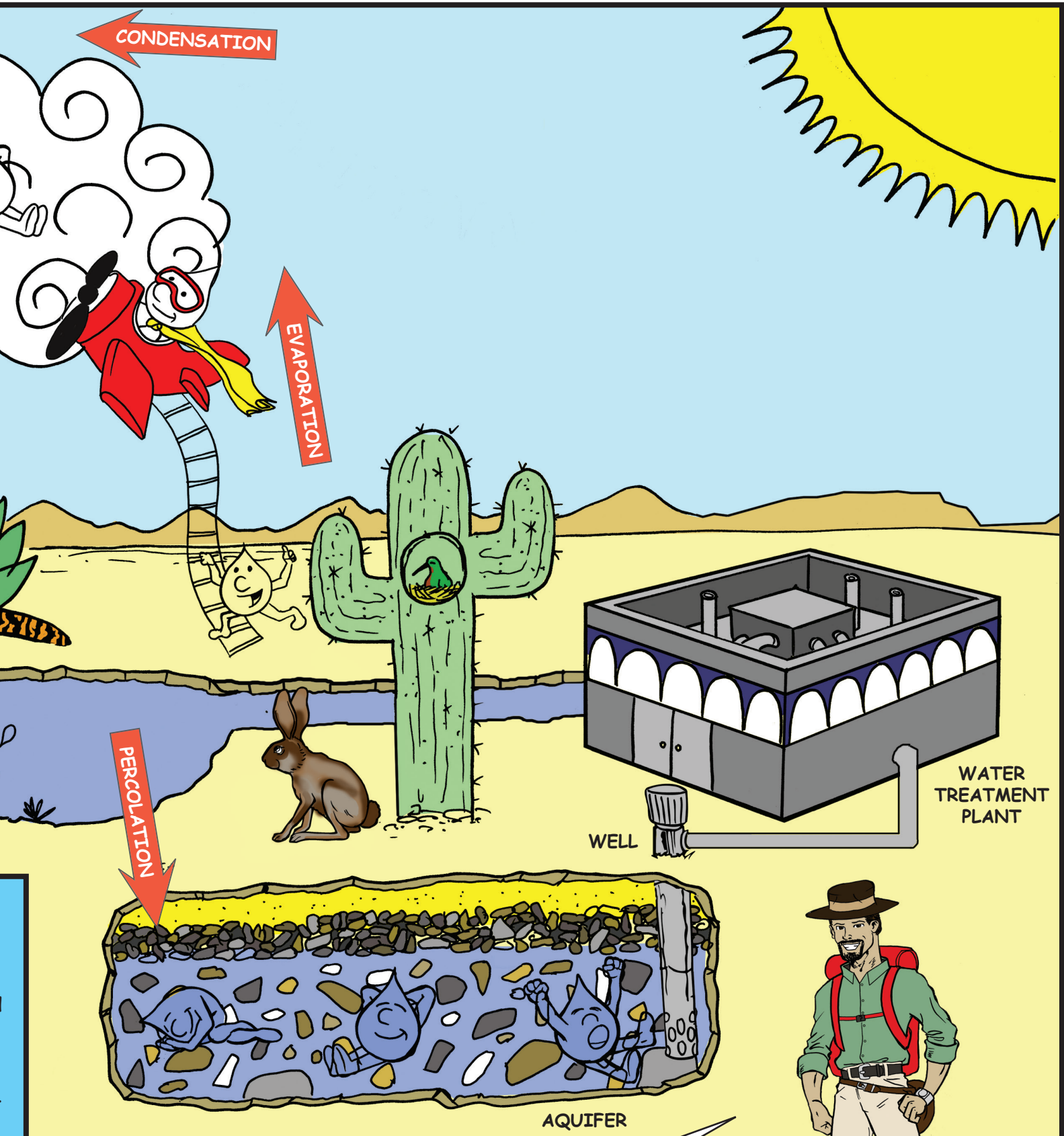
answers: a.) 6, b.) 5, c.) 1, d.) 2, e.) 5, f.) 4



The Water Cycle - A never-ending journey for water. Depending upon the temperature, water molecules can change into three different forms: liquid, solid, and gas.

Read each step of the water cycle. Write the correct name found in the **red arrows** above.

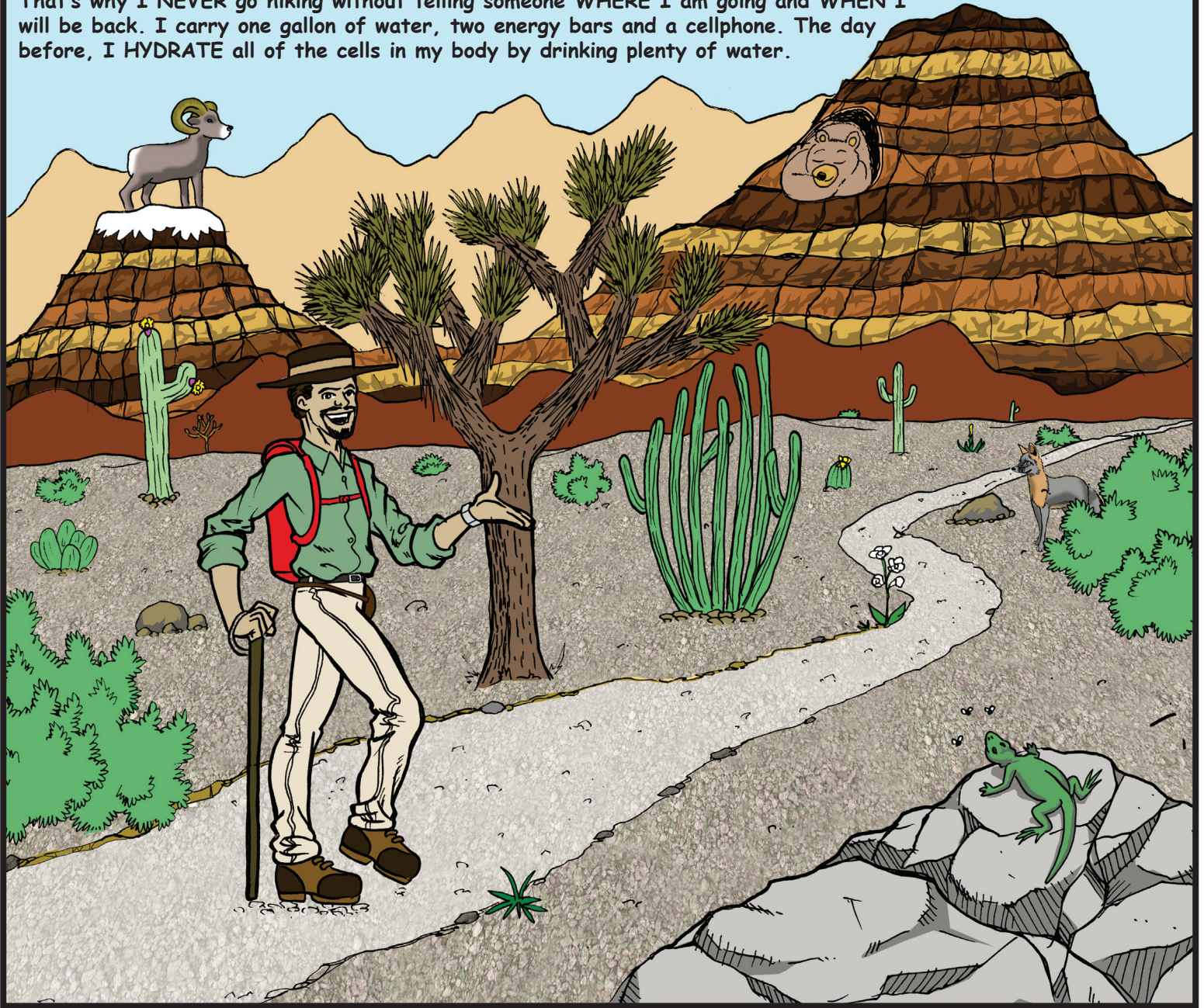
1. \_\_\_\_\_ The heat from the sun changes the water from a liquid to a gas called water vapor. The water vapor floats into the sky leaving behind salt and impurities.
2. \_\_\_\_\_ As the water vapor rises, it becomes cooler and condenses around dust particles high in the sky. This creates a water droplet. It takes many droplets to form a cloud.
3. \_\_\_\_\_ In the cloud, the small droplets stick together and become drops. When the drops are big enough, they will fall as rain or snow.
4. \_\_\_\_\_ The water from rain and melted snow runs off hard surfaces and forms rivers and lakes.
5. \_\_\_\_\_ As the water soaks slowly into the ground, it becomes groundwater. Groundwater is cleaned naturally as it filters through layers of sand and gravel. It is stored in the rocky layer called the aquifer until it is pumped through wells.



The watershed is part of the water cycle. Read how this amazing process has been cleaning and recycling the same water over and over since the Earth was formed.

answers: 1. Evaporation, 2. Condensation, 3. Precipitation, 4. Surface Runoff, 5. Percolation

Watching animals using and conserving water, reminds me of how much I NEED water every day. That's why I NEVER go hiking without telling someone WHERE I am going and WHEN I will be back. I carry one gallon of water, two energy bars and a cellphone. The day before, I HYDRATE all of the cells in my body by drinking plenty of water.

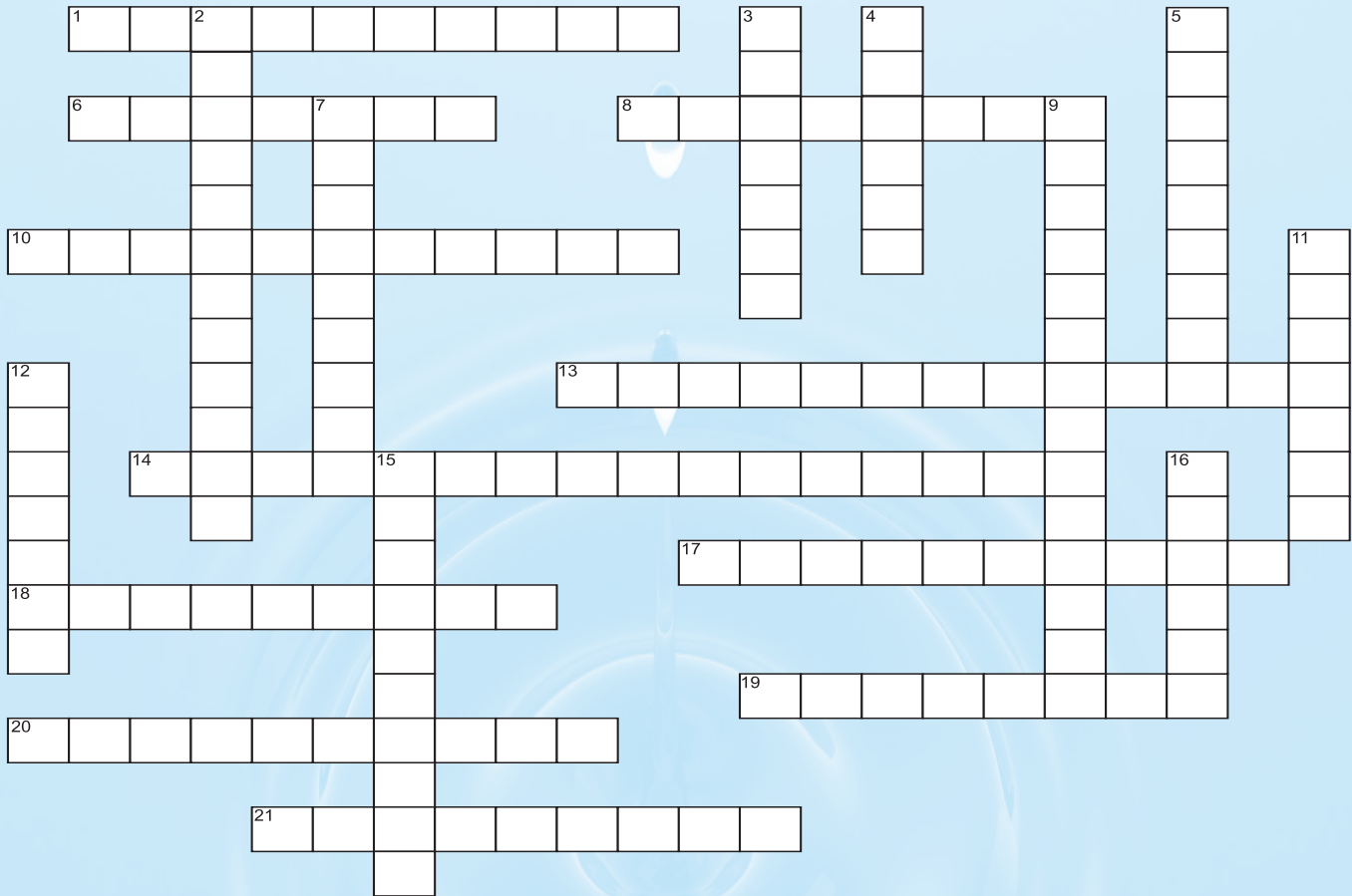


1. If water weighs 8.34 pounds per gallon, how much does 2 pints weigh? \_\_\_\_\_
2. Up to 60% of your body is made of water. If you use 1 cup of water, it must be replaced or you will get DEHYDRATED. How much does 1 cup of water weigh? \_\_\_\_\_
3. You can also get water into your body by eating juicy fruits. If an apple has 1/2 cup of water in it, how many apples would you have to eat to get 1 pint of water into your body? \_\_\_\_\_
4. Wearing a hat creates shade which also cools the body. If Gary's hat is 14 inches in diameter, what is the circumference of the brim? \_\_\_\_\_

Facts: 1 gallon = 4 quarts / 1 quart = 2 pints / 1 pint = 2 cups / pi = 3.14

# WATER CAREERS

## CROSSWORD PUZZLE



### Across

1. A water audit \_\_\_\_\_ checks for water leaks
6. A water resource \_\_\_\_\_ monitors available water
8. A water treatment \_\_\_\_\_ works with water and sewer systems
10. Measures flows and volumes in bodies of water
13. An \_\_\_\_\_ specialist teaches people how to protect the Earth
14. Someone who studies the art and science of growing plants
17. Calculates the cost of water and water systems
18. Studies environment and the relationships that affect it
19. Designs water delivery and sewer systems
20. A water \_\_\_\_\_ analyst ensures that a water provider complies with environmental requirements
21. A sustainability \_\_\_\_\_ teaches students how to conserve resources

### Down

2. A \_\_\_\_\_ specialist teaches people about saving water
3. Tests water in a lab to make sure it is safe to drink
4. A meter \_\_\_\_\_ records water use at homes and businesses
5. Type of scientist who studies life
7. A scientist who studies the Earth
9. A customer service \_\_\_\_\_ helps people understand water bills
11. Reviews data about water pumped and delivered
12. Finds and fixes leaks
15. An \_\_\_\_\_ specialist installs, maintains, and fixes landscape watering systems
16. A forest \_\_\_\_\_ protects and conserves natural resources and animals

Answers:  
 Across: 1. technician 6. manager 10. hydrolologist 13. environmental 14. horticulturalist  
 17. accountant 18. ecologist 19. engineer 20. regulator 21. professor  
 Down: 2. conservation 3. chemist 4. reader 5. biologist 7. geologist 9. representative  
 11. analyst 12. plumber 15. irrigation 16. ranger

# Arizona Water-Saving Tips

1. We live in a \_\_\_\_\_ and get water from surface water and groundwater. (reedst)
2. Don't litter on the ground. Groundwater can be polluted by your \_\_\_\_\_. (harts)
3. Saving water can help prevent \_\_\_\_\_ fires and preserve habitats. (etrofs)
4. Turning off lights saves water. It takes water to make \_\_\_\_\_. (cleeticryit)
5. Using water-efficient \_\_\_\_\_ can save up to 5 gallons per flush. (letitso)
6. Using water-efficient \_\_\_\_\_ and taking shorter showers saves water. (sadwehoerhs)
7. Water the lawn early in the morning or after sunset to reduce \_\_\_\_\_. (eoratvapiion)
8. Aim \_\_\_\_\_ carefully to avoid wasting water by watering the street. (srlekinprs)
9. Use a broom to clean the sidewalk instead of \_\_\_\_\_ from a hose. (rewat)
10. Place a pitcher of water in the \_\_\_\_\_ instead of running the faucet until it is cool. (eongfrrateir)

Answers: 1. desert, 2. trash, 3. forest, 4. electricity, 5. toilets, 6. showerheads, 7. evaporation, 8. sprinklers, 9. water, 10. refrigerator

