

Water Warriors Activity Book



**SAVE WATER
WITH DEWEY**

(suggested for ages 6 and up)

Water Warrior Pledge



SAVE WATER

I pledge to take the following actions:
(check all that you can do)

- Turn off the water while I brush my teeth or wash my hands.
- Scrape instead of rinse my dishes before putting them in the dishwasher.
- Turn off the lights because it takes a lot of water to make electricity.
- Only put my clothes in the laundry if they are dirty.
- Shorten my shower time to 5 minutes or fill the tub only 1/2 full.
- Bring a bag to scoop the pet waste when I walk my dog.
- Pick up litter when I see it and tell others not to litter.

Signed: _____

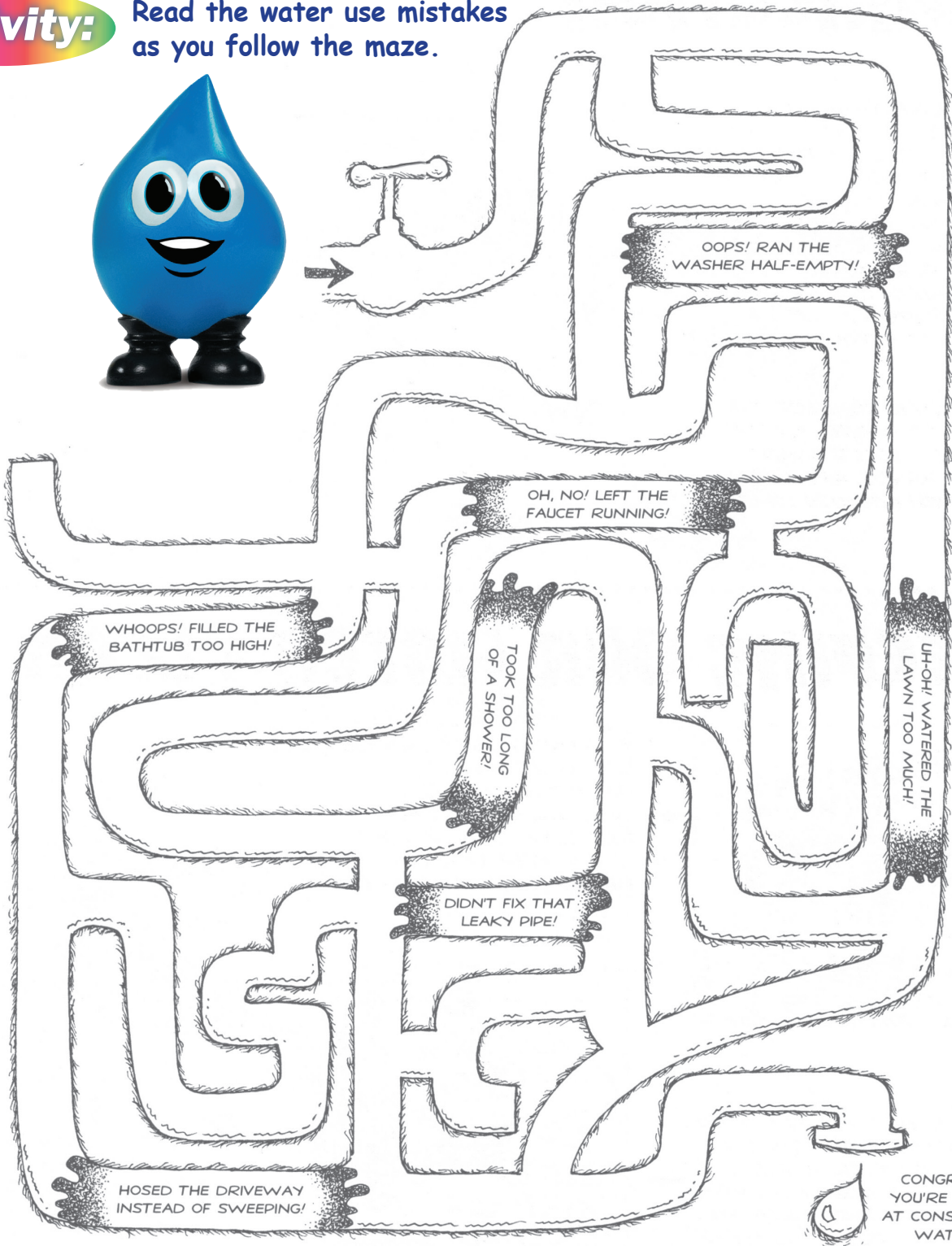
- 💧 Your water ranks among the best in the USA.
- 💧 You use an average of 80 gallons of water a day.
- 💧 Your water is mostly snowmelt that comes from the Rocky Mountains as far as 100 miles away.
- 💧 Colorado Springs only gets 16 inches of precipitation a year. Use it wisely!

YOU CAN MAKE A DIFFERENCE - BE A WATER WARRIOR TODAY.

Help Dewey Conserve Water

Activity:

Read the water use mistakes as you follow the maze.



Action:

Follow the water-wise rules by only watering your grass 3 days a week during the summer. Water before 10am or after 6pm to reduce evaporation.

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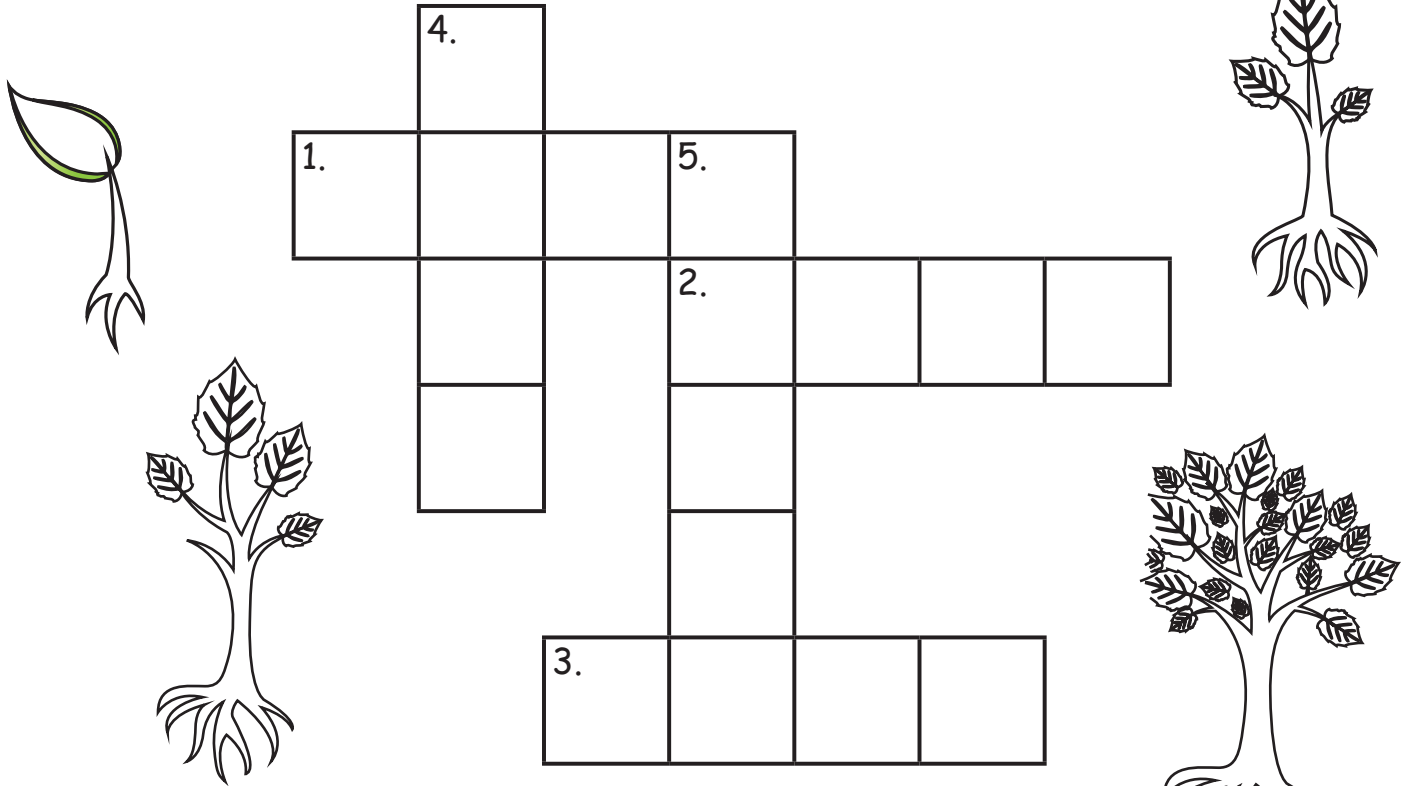


csu.org

Way to Grow! Crossword Puzzle

People and animals need plants to survive. The basic ingredients of everything we eat come from soil and water.

Activity: Use the word bank to complete the puzzle.



Across

- I make food for the plant.
- I take in food and water from the soil.
- I hold the plant up.

Down

- Inside me is a baby plant and all the food it needs to sprout.
- I have seeds inside.

Native plants need less water. Find some at waterwiseplants.org



Word Bank: stem seed leaf root fruit

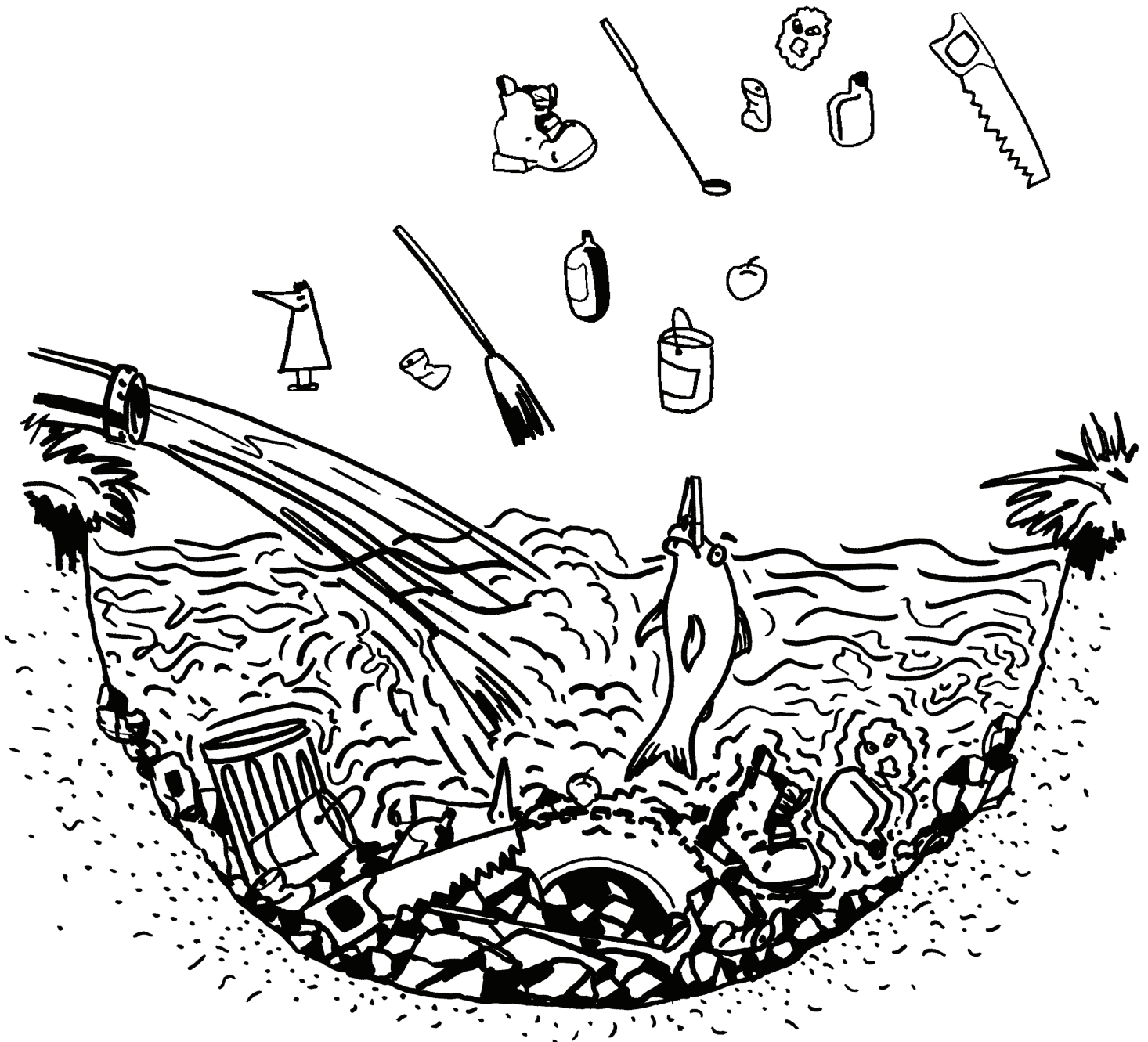
Action:

Pick up a free packet of native flower seeds at the Conservation & Environmental Center at 2855 Mesa Road and plant them.

Clean Our Streams

What doesn't belong? Find all the hidden trash pictured here.

Activity: Circle or color the trash.



Action: "Only rain down the drain!" Never put anything down a storm drain.

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coloradosprings.gov

Water in Action

Erosion occurs when weather changes the shape of the land. Rocks that are exposed to weather and all forms of water are constantly changing their shapes. Ancient mountains were eroded away over many years. Rocks, sand, and dirt from these old mountains became the famous rock formations in Garden of the Gods Park.

Activity: Unscramble the words.

t w e r a

a n i r

k r o c

o d l f o

c i e

n s e o o r i

Balanced Rock



Siamese Twins

Before Colorado Springs was built, American Indians lived in Garden of the Gods and used water from Camp Creek. Today, water rarely flows in Camp Creek because the water is piped out or diverted before reaching Garden of the Gods.



Action:

Visit Garden of the Gods to see erosion in action. Get a free "Leave No Trace" activity guide and do the Junior Ranger program. Visitor Center - 1805 N. 30th Street

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ColoradoSprings.gov/GOG

Wildlife Needs Water Too!

Activity: Color the Western Painted Turtle.

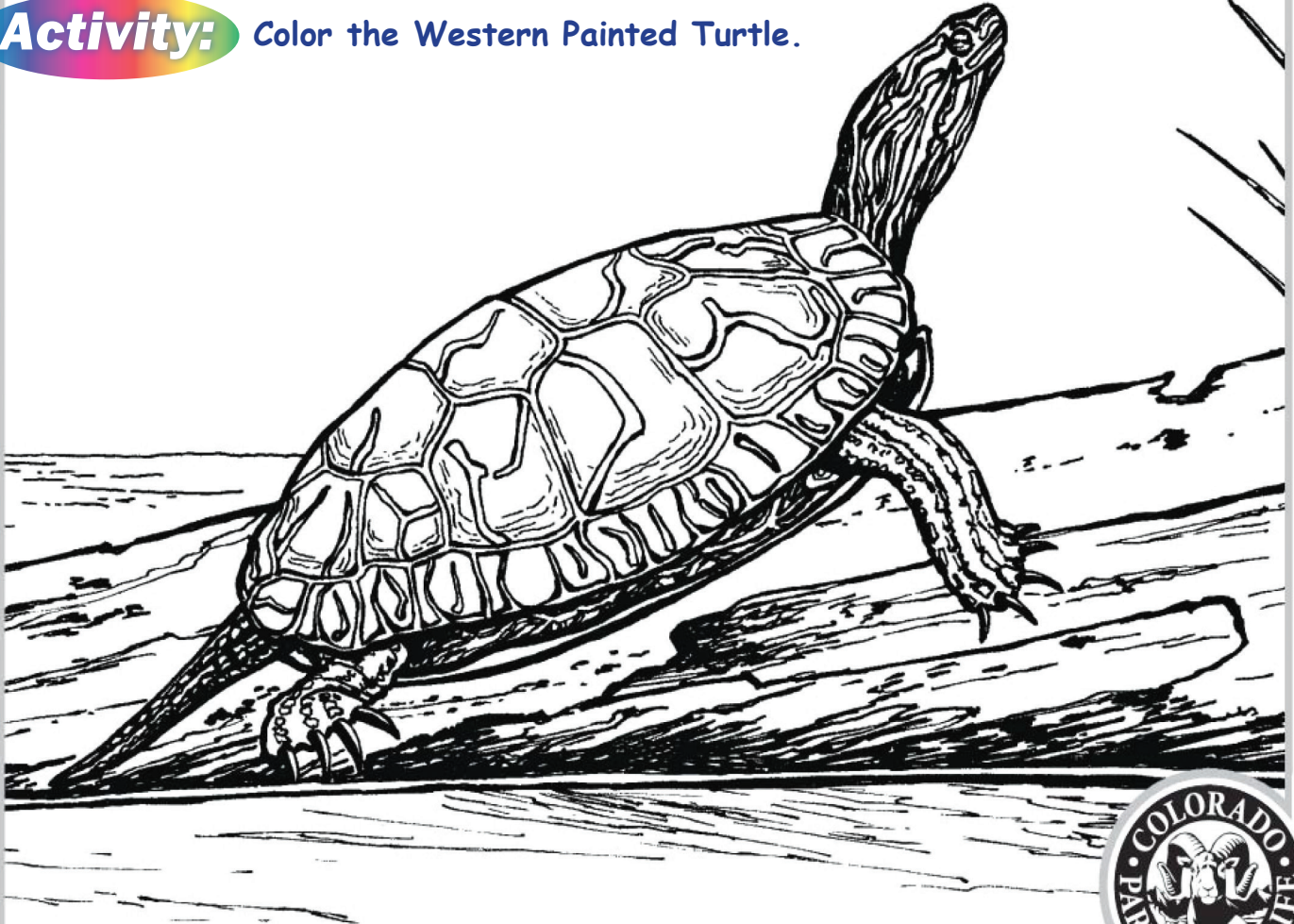


Illustration by Helen Zane Jensen ©2008

Wildlife Discovery Page- Painted Turtle/Primary

<http://cpw.state.co.us/learn/Pages/TR-WildlifeDiscovery.aspx>



Western Painted Turtles don't have teeth, so they rely on the sharp edges of their jaws to eat aquatic insects, fish, and crustaceans. Painted turtles like to bask in the sun on fallen logs, but will dive under water and swim away when threatened.

The Western Painted Turtle is Colorado's state reptile.



Action:

Visit ponds, reservoirs, marshes, and slow moving streams all over Colorado to search for turtles.

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cpw.state.co.us/learn

Exploring Your Watershed

A watershed is an area of land and water that drains to a common point. We all live in a watershed!

Activity:

Help Dewey's friends find the words below in the word search. You'll find them forwards, backwards, diagonally, down, and across.

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

SAVE	RAIN	AIR
WATER	SNOW	DROPLETS
RIVER	DRINK	FILTER
SINK	CYCLE	LAKE
WASH	VAPOR	DEWEY
LAWN	EARTH	

Action:

Pick up pet waste so it doesn't go in the stream and volunteer for a "Creek Week Cleanup" (see back page).

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fountain-crk.org

Protect Greenback Cutthroat Trout

Colorado's state fish, the Greenback Cutthroat Trout, is found in the waters of Bear Creek!

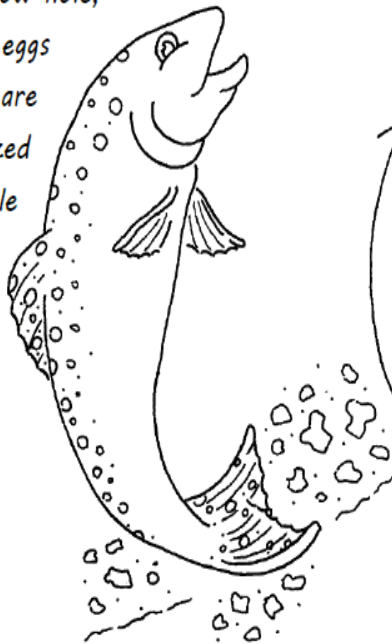
Activity:

Read the steps of the life cycle, color each phase, and answer the question.

How many years does it take for the trout to be fully mature? _____

1.

The female digs a shallow hole, laying eggs which are fertilized by male trout.



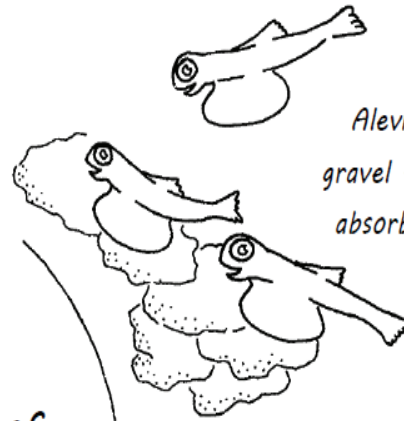
2.

After a month in the gravel, the eggs hatch, becoming alevins.



3.

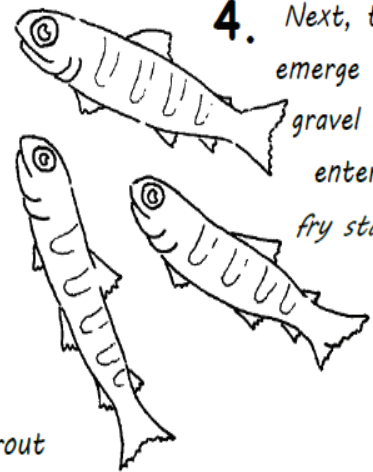
Alevins remain in gravel for two weeks, absorbing their yolk sacks.



The Life Cycle of
Greenback Cutthroat
Trout

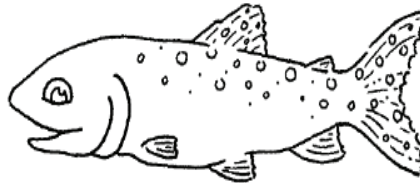
4.

Next, they emerge from gravel and enter fry stage.



5.

After a period of growth, fry become juvenile trout or fingerlings. It will take 3-5 years to fully mature.



Action:

Visit the Greenback Cutthroat Trout tank at the Bear Creek Nature Center located at 245 Bear Creek Road.

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communityservices.elpasoco.com

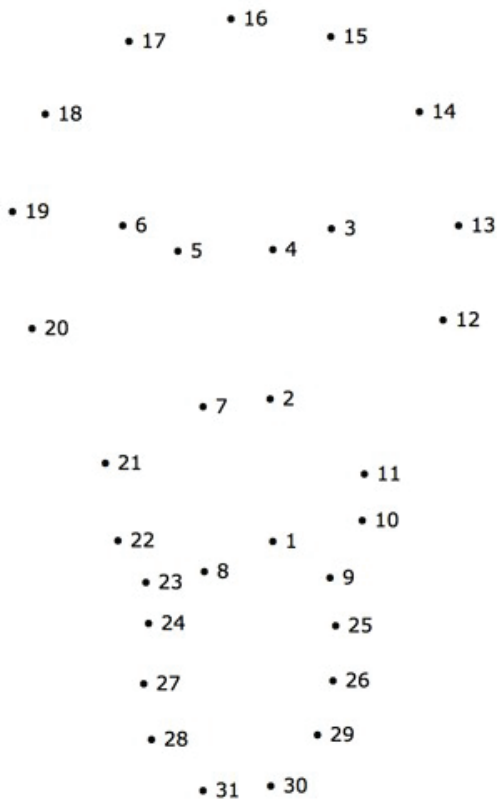
What is Hydropower?

Hydropower, also known as water energy, is generated by moving water. The kinetic energy in moving water can be transferred into electricity. Here's how electricity is made at a hydroelectric power plant.

Activity:

Connect the dots.

Hydroelectric power creates energy to turn on this _____.



STEP 1

A dam is built to collect water (usually on a large river).



STEP 2

A gate is opened in the dam to allow water to rush into a large pipe. The pipe is sloped so that the water moves quickly, creating large amounts of kinetic energy.



STEP 3

The rushing water moves the blades, which sends power to a generator.



THINK AND RESPOND

Could a hydroelectric power plant be built on a lake? Explain why or why not.

Colorado Springs uses 6 hydroelectric plants that create enough electricity to power 20,000 homes!



Action:

Turn off your lights because it takes water to make electricity.

Sediment Bottle Experiment

Sediment is material such as soil and rock that can be found in water after being eroded from the land. Heavy pieces will sink to the bottom quickly, while light pieces will stay floating for longer. Sediment is something we remove from our drinking water to clean it.

Activity:

Create a sediment bottle! This activity will let you see how much sediment is in a creek or lake.

Materials needed:

- 3 empty plastic water bottles or more
- A creek or lake
- A faucet

Procedure:

1. Fill one bottle from your faucet and label it "clean".
2. Go to a creek or lake and fill one bottle. Label it "cloudy".*
3. Take a stick and stir up the creek or lake water. Fill the third bottle and label it "dirty" water.
4. Let the bottles sit without moving them for one full day. (No touching!)
5. Record your observations throughout the day. Compare the changes in color and clarity. Notice how the different sediment layers change and shift over time.

*If you can't find a natural water source with murky water, just add some dirt, rocks, and sediment to another sample of clean water and shake.



BONUS Riddle:

My step is slow
The snow's my breath
I give the ground a grinding death
My marching makes an end of me
Slain by sun
Or drowned in sea
...what am I?



Action:

Choose the right path! Stay on the trail when you hike or bike ride. This reduces erosion and prevents extra soil from entering our water.

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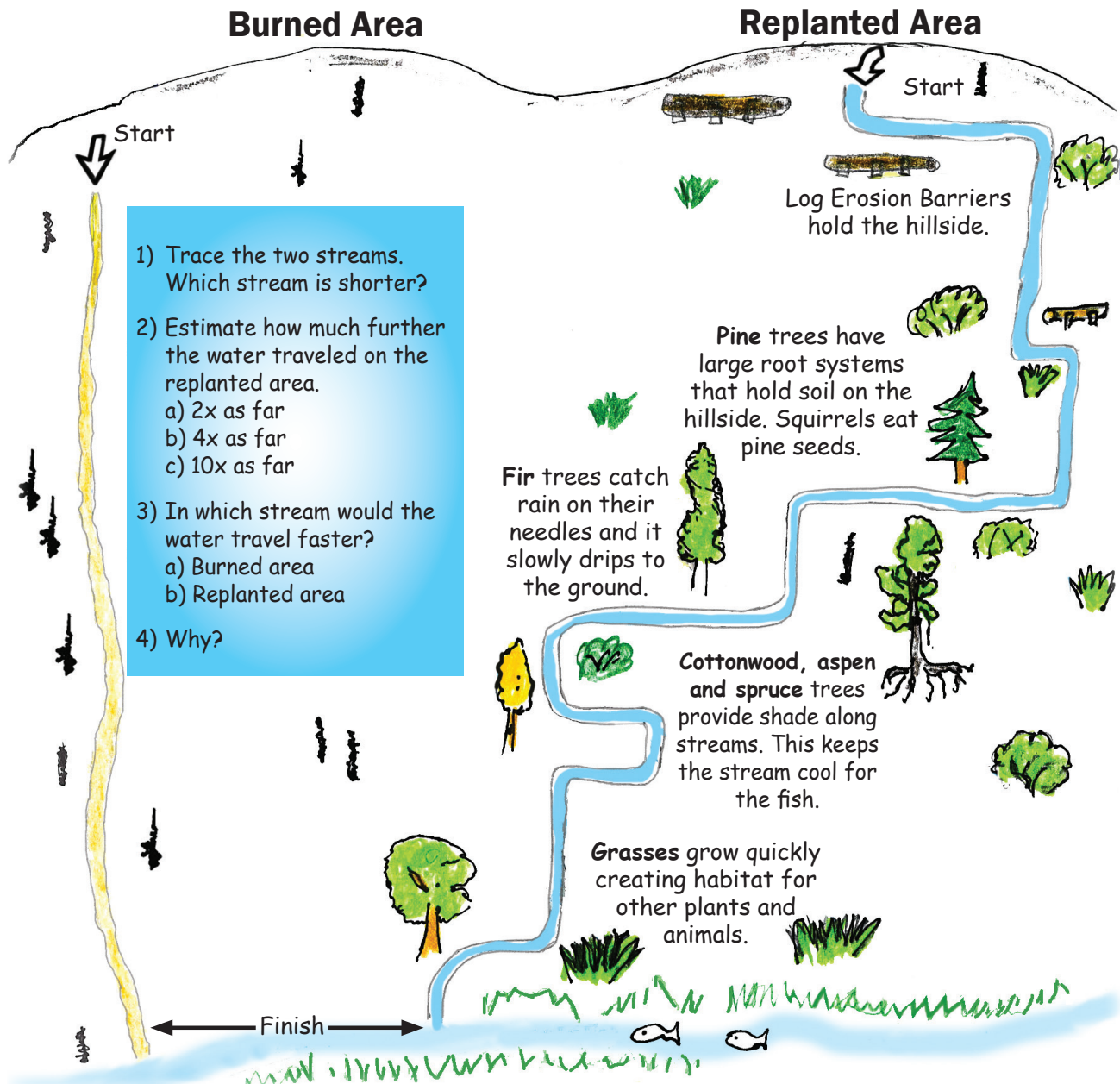
www.coloradosprings.gov/tops

rePLANTing a Forest!!

When a fire burns a hillside, very few plants remain to prevent **EROSION**. Erosion can fill the streams and rivers with sand, mud, and debris. When this happens, conservation volunteers go into action, replanting the burned area. This keeps water from rushing down the hillside.

Activity:

Compare the yellow and blue streams below and answer the questions in the box.



Action:

Volunteer with RMFI to plant trees and restore habitat.

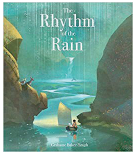
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RMFI.org

Water Books

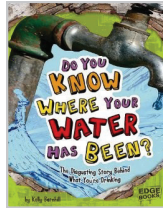
Resources for Students and Their Teachers



Baker-Smith, Grahame. *The Rhythm of the Rain.* A breathtaking picture book about the water cycle. Ages 5 & up.

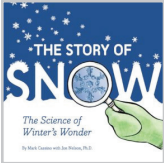
Barnhill, Kelly. *Do You Know Where Your Water Has Been?*

Describes the history of water treatment and current water treatment systems. Book level 4.3.

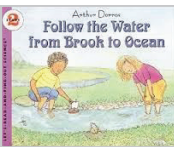
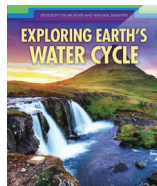


Cassino, Mark with Jon Nelson, Ph.D. *The Story of Snow: The Science of Winter's Wonder.*

Tells the story of snow. Features snow crystals in their beautiful diversity and explains snow crystal formation. Book level 4.8.



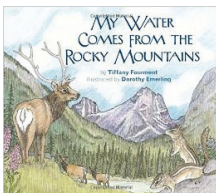
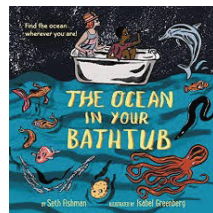
Donovan, Emily. *Exploring Earth's Water Cycle.* Explains the water cycle and also explains water on Earth. Grades 3-6.



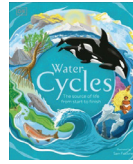
Dorros, Arthur. *Follow the Water from Brook to Ocean.*

Follows the flow of water to the ocean. Book level 3.6.

Fishman, Seth. *The Ocean in Your Bathtub.* See how we can make a difference in our ocean world. Reading Levels grades 2-3



Fourment, Tiffany. *My Water Comes from the Rocky Mountains.* Introduces children to our nation's watershed: the Continental Divide. Ages 6 & up.

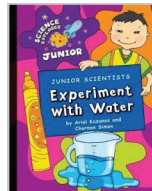
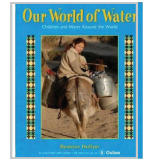


Harvey, Derek. *Water Cycles: The source of life from start to finish.*

Explore the Water Cycle and learn how it affects life on earth. Grades 2-6.

Hollyer, Beatrice. *Our World of Water.*

Details children around the world and what water means to them. Book level 4.9.

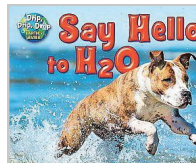
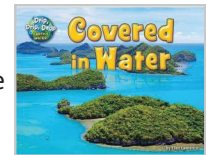


Kazunas, Ariel and Simon, Charnan. *Experiment with Water.*

Learn more about water's properties with these three experiments. Ages 7 & up.

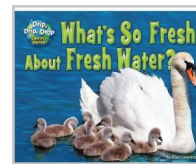
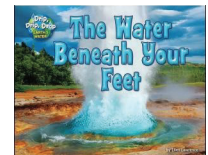
Lawrence, Ellen. *Covered in Water.*

Teaches about the water cycle and where water is found on Earth. Book level 3.9.



Lawrence, Ellen. *Say Hello to H2O.* Teaches about the properties of water. Book level 4.2.

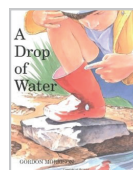
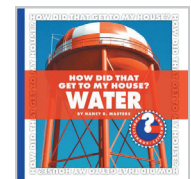
Lawrence, Ellen. *The Water Beneath Your Feet.* Teaches about groundwater and the water cycle. Book level 4.4.



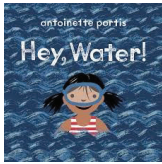
Lawrence, Ellen. *What's So Fresh About Fresh Water?*

Teaches about Earth's fresh water. Book level 3.9.

Masters, Nancy R. *How Did That Get to My House: Water.* Explains water supply and how it is delivered to homes. Book level 3.1.

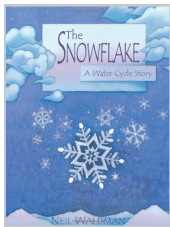
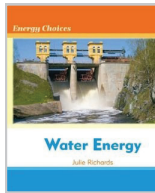


Morrison, Gordon. *A Drop of Water.* Encourages consideration about a drop of water on a child's finger and thoughts about where the drop came from. Book level 3.9.



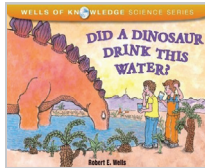
Portis, Antoinette. *Hey, Water!*
A simple celebration of water and its importance in our lives. Ages 5 & up.

Richards, Julie. *Water Energy.*
Explains water power. Ages 7 & up.

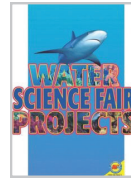


Waldman, Neil. *The Snowflake: A Water Cycle Story.* Follows the journey of a snowflake throughout the year. Ages 5 & up.

Wells, Robert E. *Did a Dinosaur Drink This Water?*
Introduces water's properties, uses, and conservation. Book level 5.1.



Mason, Paul. *How Big is Your Water Footprint?* Explains the water cycle, ways people use water, and ways to reduce your water footprint. Ages 9 & up.



McGill, Jordan. *Water Science Fair Projects.* Includes tips on a great science fair project and several experiment possibilities. Ages 9 & up.



Mulder, Michelle. *Every Last Drop.* Celebrates water around the world and shows how to care for it. Ages 9 & up.

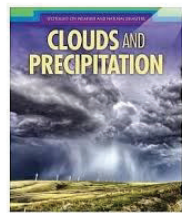


Simon, Charnan and Kazunas, Ariel. *Super Cool Science Experiments: Water.* Introduces the properties of water through six experiments. Learn about condensation, density, erosion, molecules, and more. Ages 9 & up.

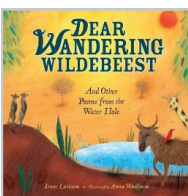


Strauss, Rochelle. *One Well: The Story of Water on Earth.* Provides a call to action to show how each of us can protect our water. Book level 6.0.

Teacher Resources



Krajnik, Elizabeth. *Clouds and Precipitation.* Explains about the water cycle and its effects using real world examples. Interest level grades



Latham, Irene. *Dear Wandering Wildebeest.* Includes poems from an African watering hole as well as facts about the animals and their environment. Book level 5.0.

Databases on ppld.org

Head to ppld.org, click on PPLD Kids (under Services), and hit the Homework button on the top. Then choose your category! Some databases may require your library card. Here are a few examples:

Explora for Primary Schools
Gale in Context Elementary
Science Reference Center



Attend a fun program at your library. Go to PPLD.org and click on "Programs".

VOLUNTEER for Colorado's largest, watershed-wide cleanup - **Creek Week!**

www.fountain-crk.org



ROCKY MOUNTAIN FIELD INSTITUTE

*Youth and Family
Volunteer Opportunities!*

Help with a variety of trail and restoration projects in your favorite park or open space. *Learn more at www.rmfi.org!*



RMFI
ROCKY MOUNTAIN FIELD INSTITUTE

FREE Dewey!

Visit our House Efficiency Exhibits and the Water Wise Gardens and receive a free **Dewey Squeeze Ball**.

FREE Showerhead

EXCHANGE up to 2 of your showerheads for a WaterSense® showerhead and save \$85 in water, wastewater, and energy costs a year.



SAVE WATER



Conservation & Environmental Center
2855 Mesa Road, 80904
Monday through Friday, 8am-5pm

Free Carabiner!

Come see us at Bear Creek Nature Center and visit the fish exhibit to learn about the "mysterious" fish that live in Bear Creek. Show this coupon and receive a free carabiner!

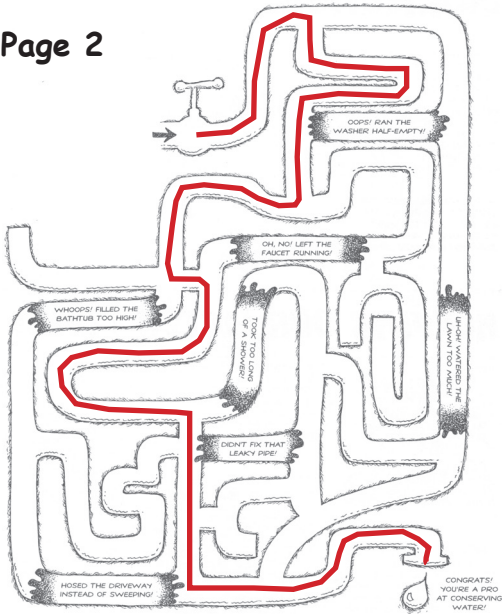
Nature Center hours:
Tuesday through Saturday, 9am-4pm

245 Bear Creek Road, Colorado Springs, CO 80906
719-520-6387



Answer Key

Page 2



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t w e r a water
a n i r rain
k r o c rock
o d l f o flood
c i e ice
n s e o o r i erosion

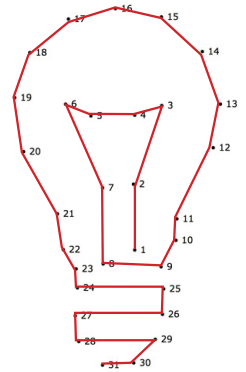
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3-5 years

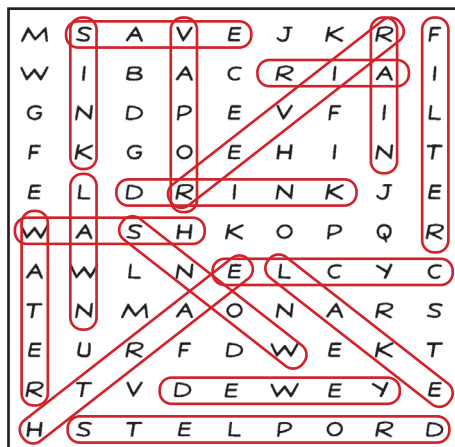
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Lightbulb

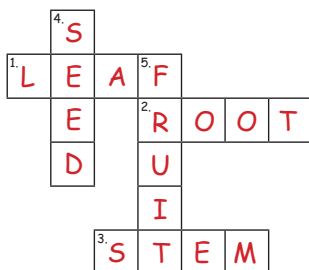
No, need moving water



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Glacier

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- 1) Burned area stream
- 2) a) 2x as far
- 3) a) Burned area
- 4) Why? No vegetation