



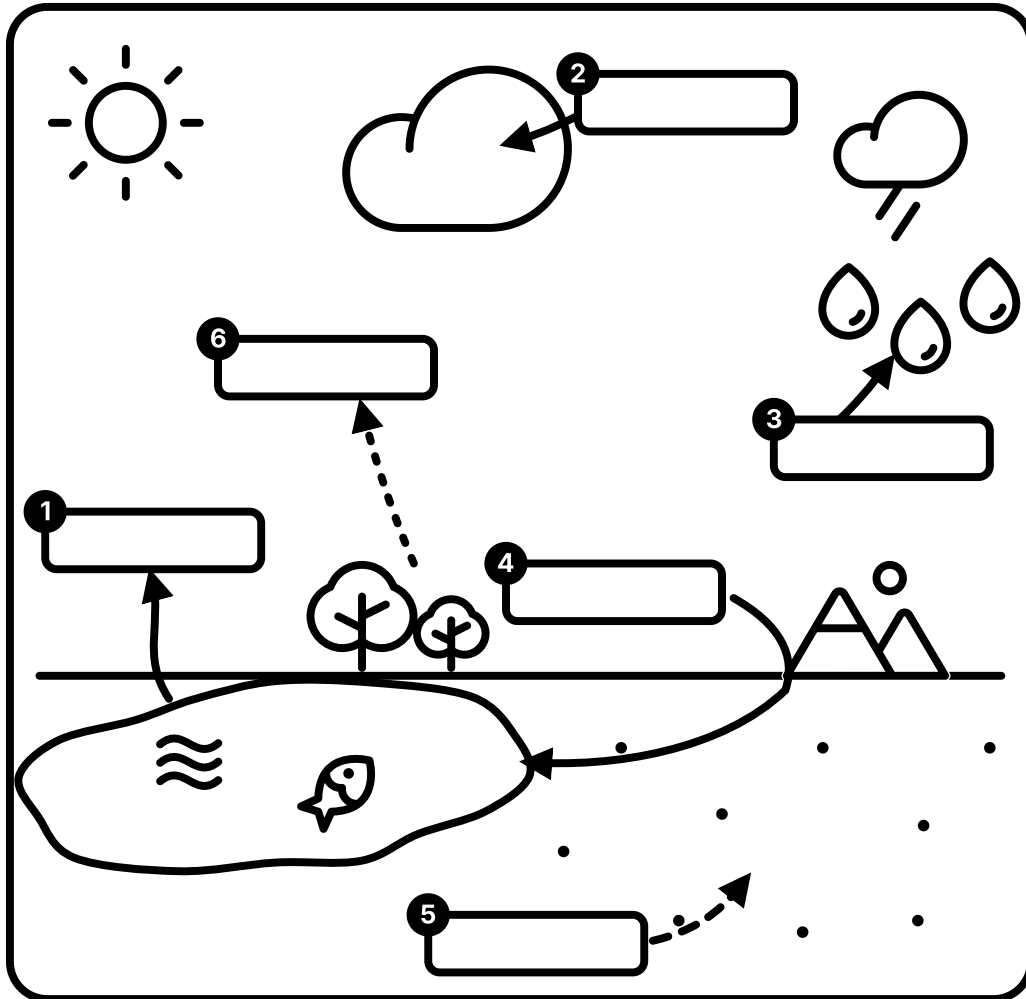
Grade 5

The Water Cycle

Grade 5

Write each word from the word bank in the numbered box where it happens. Then color the picture.

Name _____ Date _____



Word bank evaporation condensation precipitation runoff groundwater
transpiration

Explain what happens to rain after it falls on a mountain.



Where Is Earth's Water?

Each square stands for 1 out of every 100 drops of water on Earth. Follow the color code.

Name _____ Date _____

- ☐ **97 squares** blue: salt water in oceans
- ☐ **2 squares** white with stripes: fresh water frozen in ice and glaciers
- ☐ **1 square** green: fresh water in the ground, lakes, and rivers

1. How many squares show fresh water in all?

2. Most of Earth's fresh water is frozen. Where is it?

3. St. Louis gets its drinking water from the Mississippi and Missouri Rivers. Why is it important to protect this water?

4. Write a fraction for the fresh water in the ground, lakes, and rivers.



Grade 5

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Journey of a Drop in St. Louis

Number the steps from 1 to 7 to show how river water becomes tap water.

Name _____ Date _____

- ☐ Water flows through pipes under the streets to homes and schools.
- ☐ Big pumps pull water from the Mississippi or Missouri River into the treatment plant.
- ☐ Chemicals help tiny bits of dirt stick together into clumps.
- ☐ The heavy clumps sink to the bottom of big basins.
- ☐ Water trickles through filters that trap tiny particles.
- ☐ A disinfectant is added to kill germs you can't see.
- ☐ You turn on the faucet and get clean, safe water.



Did you know? St. Louis has two water treatment plants. Chain of Rocks takes water from the Mississippi River. Howard Bend takes water from the Missouri River.

Draw the step you think is most important. Tell why.



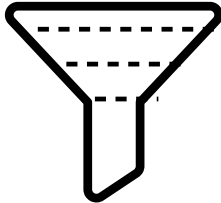
Grade 5

Grade 5

Clean Water Design Challenge

Design a filter that makes muddy water as clear as possible. Your budget is \$10.

Name _____ Date _____

1
2
3

dirty water goes in at the top

Write a material on each numbered layer.

Price list

Material	Price
gravel (1 cup)	\$2
sand (1 cup)	\$2
cotton balls (5)	\$1
coffee filter	\$1
activated charcoal (1 scoop)	\$3
cloth square	\$1

Clarity scale



1 2 3 4 5

1 = very cloudy, 5 = very clear

Trial	Layers 1 to 3 (top to bottom)	Cost	Time to filter (sec)	Clarity (1-5)
1				
2				
3				

Safety: Never drink your filtered water. Real treatment plants also disinfect water to kill germs you can't see.

Our best design and why we recommend it



For teachers

Grade 5 Answer Key

Accept reasonable answers that are supported by evidence.

The Water Cycle

1. evaporation
2. condensation
3. precipitation
4. runoff
5. groundwater (water soaking into the ground)
6. transpiration

Where Is Earth's Water?

1. 3 squares
2. In ice caps and glaciers
3. Answers vary: it is our drinking water, and whatever goes into the river upstream reaches the treatment plant.
4. 1/100

Journey of a Drop in St. Louis

Order: 1 = pumps pull river water in; 2 = dirt clumps together; 3 = clumps sink; 4 = filters; 5 = disinfectant; 6 = pipes to homes; 7 = faucet.