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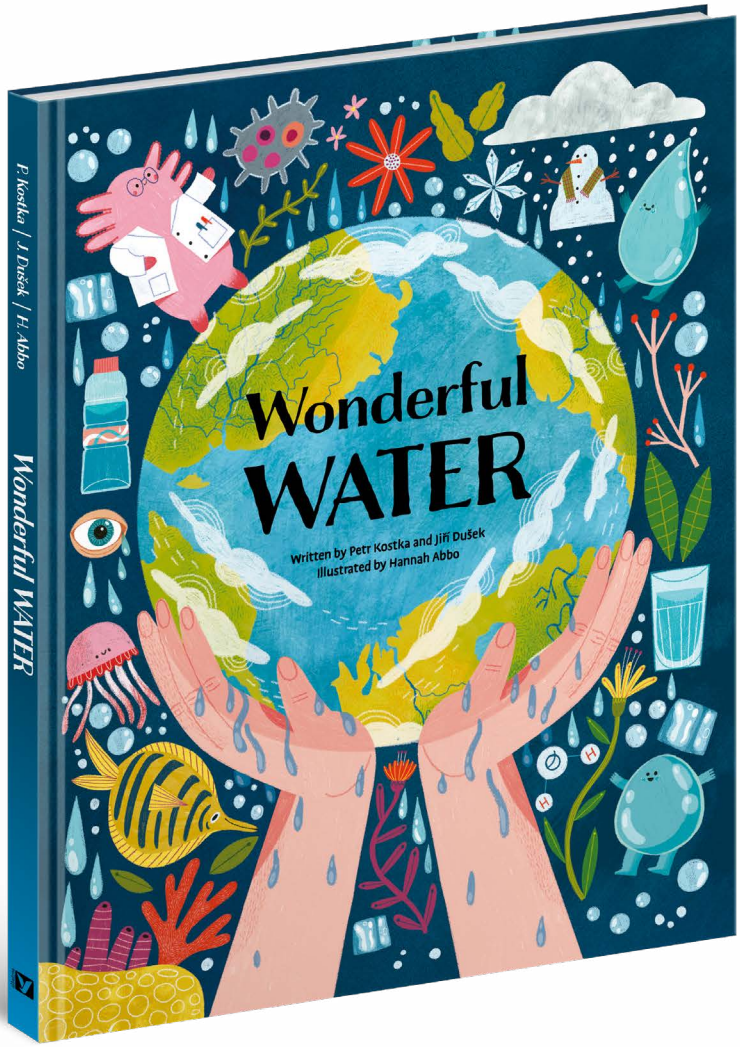
WONDERFUL WATER



GUIDE FOR TEACHERS

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Curriculum: Water Cycle; Weather Patterns; Bodies of Water; Climate Education; Development, Movement, and Interaction of Cultures; Reading Informational Texts

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BEFORE READING

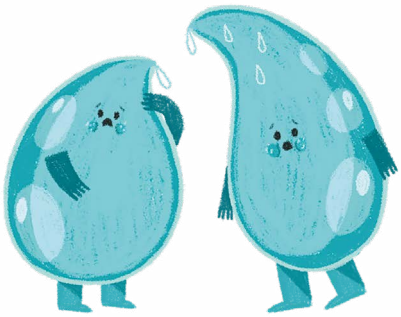
Essential Questions

1. Where does water come from?
2. Why is water essential for life?
3. Where is water found on Earth and beyond Earth?
4. How does water change from one form to another?
5. How do people, plants, and animals depend on water?
6. Why is clean fresh water a limited and valuable resource?
7. How can people conserve and protect water?



Discussion Questions

- Read the blurb in the back of the book. Do you know the answer to any of the questions presented in the blurb? What information do you already know about water?
- What do you already know about water? With your classmates, create a list of places where you see water.
- Where do you see or use water every day?
- Take a look at the table of contents. Which topic are you most interested in exploring?
- Look through the Glossary in the back of the text. Are there any words that you already know? Are there any words you don't know?



DURING READING

Key Vocabulary and Discussion Questions

What is Water?

The Big Bang	atoms	element	molecule
atmosphere	cells	nutrients	energy



- Which of these activities have you engaged in before?
- According to the author, where did water come from?
- What is the Big Bang?
- Describe what the author tells us about water in space.
- Where is water found in the solar system?
- When did life begin?
- Why is it important to take care of the fresh water?
- How is water vital for our bodies?
- Which of the foods on the page have the most percentage of water?
- What would happen to living things if Earth did not have water?

Water on Planet Earth

water cycle	evaporation	condensation	precipitation
collection	axis	nutrients	digestion
water vapor	groundwater	hemisphere	desalination

- What are some living things that require water to survive?
- Have you ever heard of the number sextillion?
- What are some creatures you know that live in the water?
- Which sea animals come up for air?
- What is the water cycle? Why is it called a cycle?
- How much of the Earth's water is salty?
- What are the different ways we see water in weather conditions?
- What are the 3 forms of water?
- How do people make water drinkable?

DURING READING

You Can't Make Anything Without Water

industry	agriculture	raw materials
hydroelectric power	resource	sanitation
reservoir	dam	turbine

- What are some everyday objects that require water to make?
- Why do factories need water?
- How does farming depend on water?
- What are some ways your family uses water every day?
- Why have rivers, oceans, and canals been important for transportation?
- What does it mean to call water a precious resource?
- Why is access to safe water not the same for everyone around the world?
- What is one way you could reduce the amount of water you use each day?

Further Details About Water

scarce	irrigation	ecosystem
glacier	states of matter	flow rate
evaporation	condensation	conservation
deposition	sublimation	triple point

- What does it mean for water to be scarce?
- Why might different groups of people compete over the same water source?
- In what ways is water important in religions and traditions around the world?
- How can shrinking glaciers affect people, animals, and ecosystems?
- Explain the different types of water.
- How does water change between a solid, liquid, and gas?
- What does it mean to conserve water?



AFTER READING

Discussion Questions

- Was there anything surprising about this text?
- What are three things you did not know about water?
- Why do you think the author decided to title this book Wonderful Water?
- Who is responsible for protecting water?
- What would change in your life if you did not have clean water for one day?
- What is one water problem you would like scientists or engineers to solve?
- Which water-saving idea from the book would be easiest for you to start doing?

Guess My Water Word

Give students vocabulary cards without letting them show the class or a small group. The student gives clues without saying the word and the guessers try to guess what the word is.

States of Water Freeze Game

Assign specific actions for each stage of the water cycle. When the teacher calls out one of the stages, the students should act out that stage with their bodies.

Solid: students freeze tightly together
Liquid: move slowly and stay fairly close
Gas: spread out and move quickly

AFTER READING

Water Cycle Craft

Materials:

- Two paper circles or two paper plates
- Brass fastener
- Pencil/pen
- Markers or crayons

Use two paper plates or two paper circles to create a "Water Cycle in a Wheel" craft. The first circle should be divided into four sections: Evaporation, Condensation, Precipitation, and Collection. They can label and illustrate these sections with information from the text.

The second circle should be placed on top of the first, fastened with a brass fastener so the top wheel spins. Cut out 1/4th of the circle as a window to reveal a portion of the bottom circle. As the students rotate it, the window reveals each stage of the cycle in order.

Where is Water Hiding?

Provide students with sticky notes or paper for notetaking. Have them walk around and explore the classroom for places where water might be "hiding." They should search the room for places and objects that either contain water, need water, or were made with the help of water.

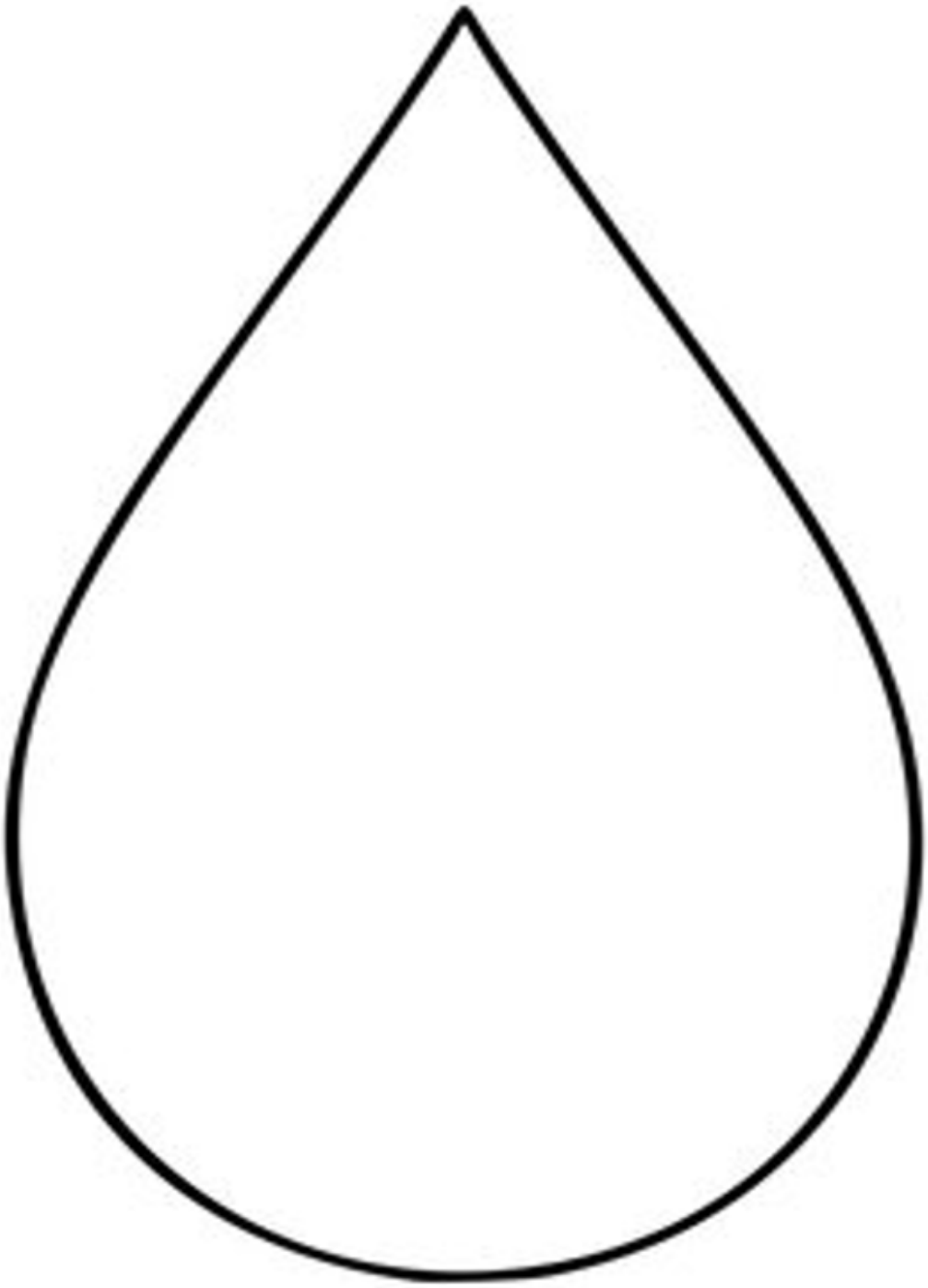
Persuasive Writing

In the text, the author teaches us that water is an important resource that people, plants, and animals need to live. Have students write an opinion piece explaining why saving water is important. Encourage them to use information that they learned from the text about water conservation. They should include at least three different ways people can conserve water and explain how those actions can make a difference.

AFTER READING

Water Wordfall

In the water droplet below, write a vocabulary word that you learned through the text at the top. Use the space below to write the definition and include an illustration for the word. Cut out the droplet and add it to the "Water Wordfall" in the classroom.



AFTER READING

Glossary Detective

Use the glossary at the back of the text to complete each challenge.

Find a word connected to the water cycle.	
Word:	What does it mean?

Find a word connected to weather.	
Word:	What does it mean?

Find a word connected to oceans, rivers, or lakes.	
Word:	What does it mean?

Find a word connected to protecting or saving water.	
Word:	What does it mean?

Find a word you did not know before reading this book.	
Word:	What does it mean?

AFTER READING

Water Waste Investigation

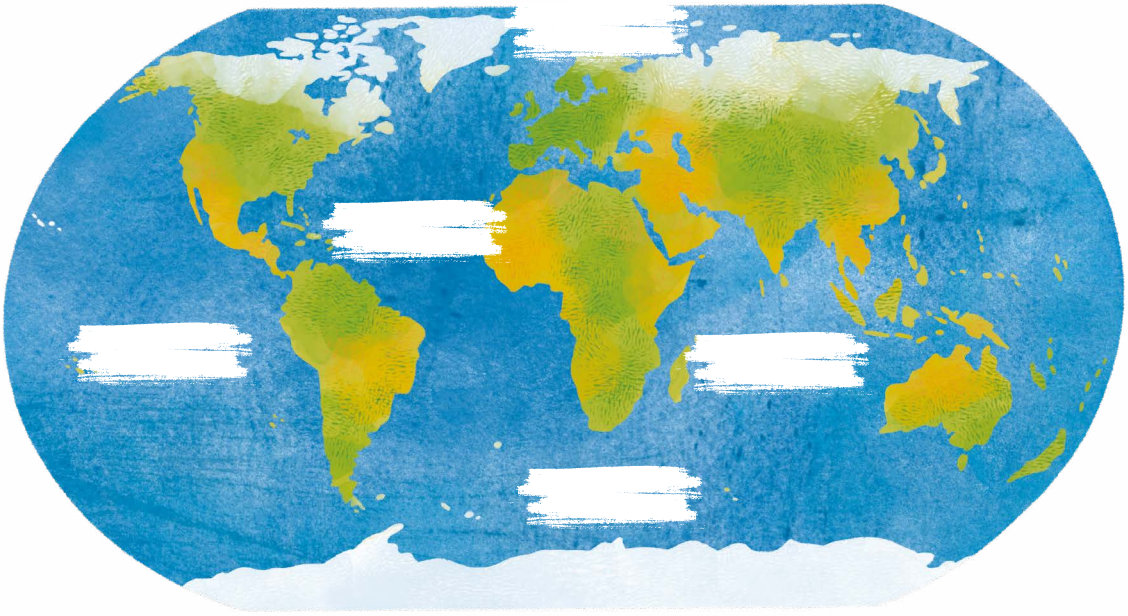
Directions: Investigate everyday water use by observing some activities at home.

Activity	How is water used?	Could less water be used?	One change my family can try

LET'S PLAY TOGETHER

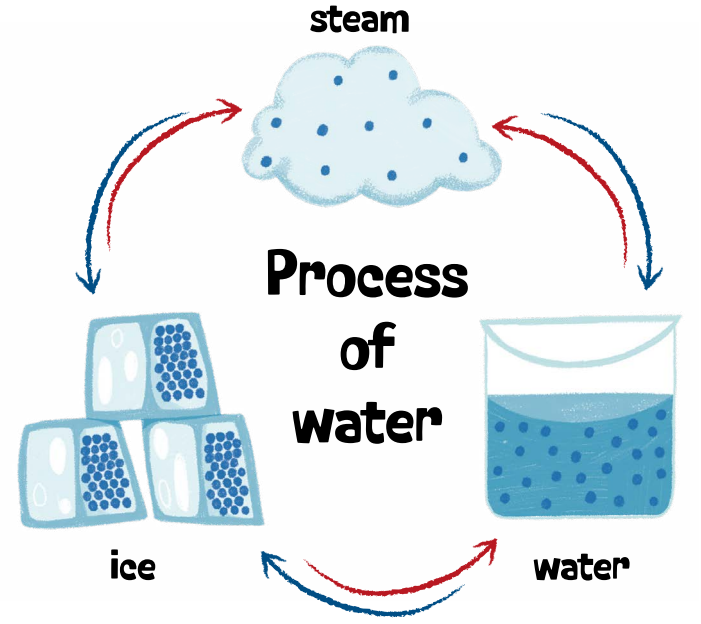
How much do you know about water? Test your knowledge with the following questions. If you get stuck, just pick up the book Wonderful Water. You'll find all the answers there!

1. Match the oceans with their names and areas.



Indian Ocean	8,734,015 mi²
Arctic Ocean	42,598,829 mi²
Atlantic Ocean	12,630,673 mi²
Pacific Ocean	47,697,814 mi²
Southern Ocean	96,658,878 mi²

2. Can you name the processes that change water?



Deposition
Sublimation
Freezing
Melting
Evaporation
Condensation

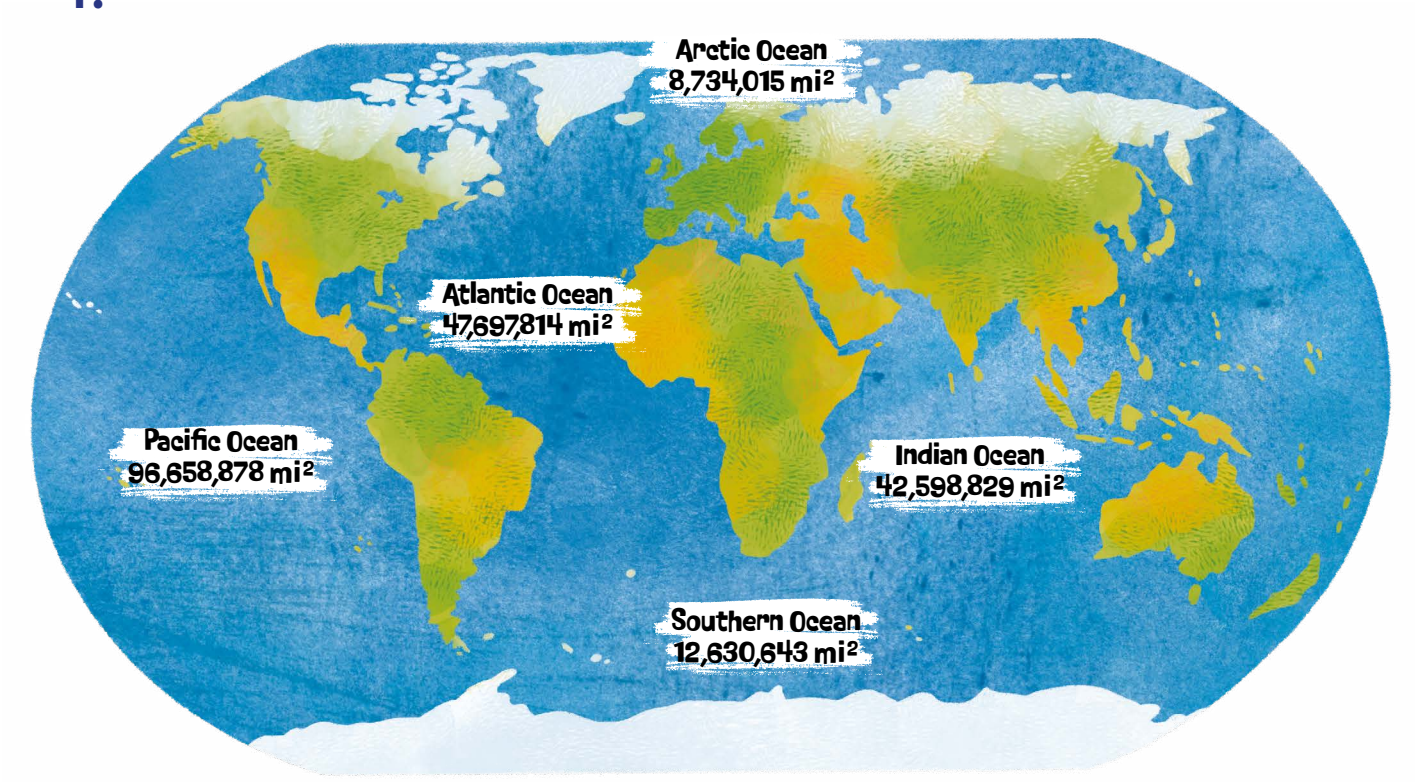
3. True or False?

1. Water can be a liquid, ice, or vapor.
2. Most of the water on Earth is found in rivers.
3. Without water, life would not exist.
4. Land covers most of the Earth.
5. Clouds are made of water.

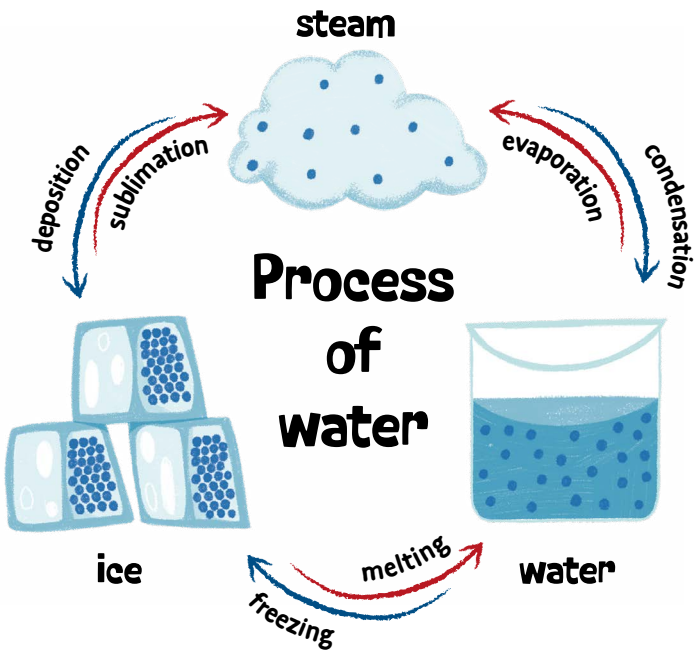
	TRUE	FALSE
1.		
2.		
3.		
4.		
5.		

LET'S PLAY TOGETHER -RESULTS

1.



2.



3.

	TRUE	FALSE
1.	X	
2.		X
3.	X	
4.		X
5.	X	