Contents

TEACHER GUIDE

- Assessment Rubric 4
- How Is Our Resource Organized? 5
- Bloom's Taxonomy for Reading Comprehension 6
- Vocabulary 6

STUDENT HANDOUTS

- Reading Comprehension
  - *1. Conservation* .....
  - *2. Reduce and Reuse* .....
  - *3. Recycling* .....
  - *4. Composting* .....
  - *5. Fresh Water Resources* 7
  - *6. Conserving Fresh Water* .....
  - *7. Clean Air Resources* .....
  - *8. Sustainable Living* .....
- Hands-on Activities 11
- Crossword 15
- Word Search 16
- Comprehension Quiz 17

EASY MARKING™ ANSWER KEY 19

MINI POSTERS 21

Before You Read

NAME: _____

Fresh Water Resources

1. Think about your daily routine, from the time you get up until the time you go to bed. Describe ten ways that you use fresh water during the day.

1) _____
2) _____
3) _____
4) _____
5) _____
6) _____
7) _____
8) _____
9) _____
10) _____

2. Match word to its definition. You may use a dictionary to help you.

1	**reservoir**	when pollution or harmful substances get into an environment	A
2	**parasites**	human made substances that can harm humans and other living things	B
3	**pollution**	animals that live on other living things, often causing harm	C
4	**wastewater**	the water from rain storms that washes across land and into streams	D
5	**contaminate**	a natural or human made lake that is used as a source of drinking water for a city or town	E
6	**runoff**	water that goes down the drain	F

NAME: _____

Reading Passage

Fresh Water Resources

How do we get drinking water?

Turn on a tap and water flows out. You use water every day, for drinking, cooking, and washing. Do you know where your water comes from?

You might have a well that pumps ground water. Or, you might get water from a municipal, or shared, water source, like a stream or reservoir. Most water, especially municipal water, is treated before it gets to your tap. This treatment is called **water purification**. Water purification removes harmful substances in the water that can make people sick. These harmful substances can be natural, such as **parasites**, or from human pollution.

STOP

Describe why water purification is important.

_____

_____

What happens to waste water?

Water from dishwashing, clothes washers, toilets, showers, and tubs, all goes down the drain as waste, or **wastewater**. This wastewater must be treated again before it goes back into the environment. Wastewater from homes contains detergents, food scraps, and human waste. These substances can harm wildlife. Wastewater also includes runoff that goes down storm drains. Runoff contains **pollutants** from city streets. Factories also get rid of wastewater. Factory wastewater can contain all types of harmful chemicals.

Wastewater treatment, also called **sewage treatment**, is an important way to protect the environment. If untreated wastewater gets into streams, lakes, or oceans, it can harm wildlife. It can also contaminate fish that people eat.

Sewage treatment takes place in several steps. Usually, wastewater is first **filtered** to remove larger solids. Then, water is stirred so that air gets into the water. The **oxygen** in the air breaks down many types of harmful substances. Finally, the wastewater is usually passed through another set of smaller filters to remove any additional solids. Then, the water may be released back to the environment.

After You Read

NAME: _____

Fresh Water Resources

1. Fill in each blank with the correct word from the reading passage.

Where does your water come from? You might get water from a municipal source, like _____ (a). Before it gets to your house, your water is _____ (b). This Treatment is called water _____ (c). Water purification removes _____ (d) substances in water that can make people sick, such as _____ (e) and _____ (f). The water that goes down your drain is called _____ (g). It must be treated in order to protect the _____ (h). This process is called _____ (i). The first step is to remove larger _____ (j). Then, the water is _____ (k) so that _____ (l) gets into the water. The _____ (m) in _____ (n) breaks down many harmful substances. Then, the water is usually _____ (o) again. Then, the water can be released back into the _____ (p).

2. Number the events from 1 to 6 in the order they occur in sewage treatment

- ◯ **a)** The water travels into large holding containers where it is stirred so that air can mix with the water.
- ◯ **b)** As you wash your face and brush your teeth, some of the water goes back down the drain.
- ◯ **c)** The water is released back into streams, rivers, a lake, or the ocean.
- ◯ **d)** The water goes through a larger filter to remove some of the larger solid materials, such as tissue.
- ◯ **e)** The water flows through pipes from your house to a sewage treatment facility.
- ◯ **f)** The water passes through a smaller filter to remove any small materials that have not broken down.

NAME: _____

After You Read

Fresh Water Resources

3. Explain why water must be treated both **before** and **after** it goes to your home

_____

_____

_____

4. Describe **three** different sources of wastewater.

1) _____
2) _____
3) _____

Extension & Application

5. Research the **water purification** and **sewage treatment plants** in your area. Work with a group of students. Call your water company or district. Ask them to send you information about the water purification and sewage treatment facilities in your area. Ask them also for information about where your drinking water comes from.

Read through the information from your water company. Write a list of **questions** about things you don't understand, or things you want to learn more about. Use the Internet or library resources to research answers to your questions. Find out more about water purification and sewage treatment methods. Finally, you may want to call your water company to follow up with any unanswered questions.

Design a three-poster flowchart to display in your class. The posters should contain the following information:

- poster 1: the sources of your water
- poster 2: how your water is purified
- poster 3: how your water is treated after it leaves your house

Hands-On Activity # 1

Write a Screenplay!

Have you ever watched a movie or television show about people who live in the future? Stories about people who live in the future, or on other planets, are called SCIENCE FICTION. In this activity, you will **write a science fiction screenplay.** A screenplay is a script for a movie or television show. It tells the actors what to say, and includes descriptions of the scenery, or background.

1. Work with a group of **four to five** classmates. Begin by talking about how you think people in the future will use resources. The world's supply of fossil fuels has run out. Answer the following questions:

- How do people get energy for their homes and buildings? Do they use electricity? Where does the electricity come from?
- Do people still use metals? Plastics? Glass? If so, how do they keep these resources sustainable? If not, what other materials do they use?
- What are people's houses like?
- Do people still use automobiles? If so, what type of fuel do they run on? If not, how do people get around?
- What type of clothes do people wear? What materials are they made from?
- Has society solved problems of air and water pollution? If so, how? If not, what is it like to live with the pollution problems?

2. With your group, **brainstorm a general storyline** about people who live in the future. Choose characters for each member of the group. Find a way to work the answers to the above questions into your storyline.

3. Write your screenplay. Look in your library for other screenplays. Look through a few samples of other screenplays to get an idea of how they are written.

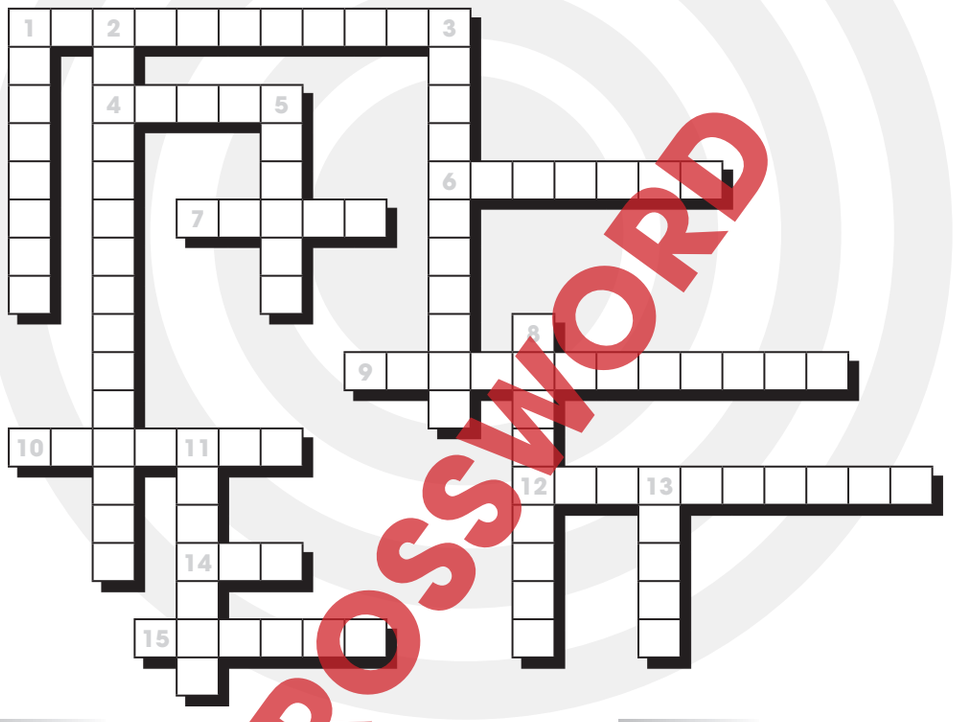
4. Practice your play. You will need a few rehearsals to memorize your lines. Work together to create scenery for your movie. Be creative and have fun!

5. Ask a parent or teacher to help you record your screenplay with a video camera. Edit the movie and show it to your classmates.

After You Read

NAME: _____

Crossword Puzzle!



Across

1. recycling makes a resource _____
4. an important resource for drinking and washing _____
6. to turn a material from an old product into a new product _____
7. what you do when you refill a water bottle _____
9. the practice of saving and protecting natural resources _____
10. broken down organic matter _____
12. the water that flows down the drain _____
14. the gases in the atmosphere _____
15. how solids are taken out of wastewater _____

Down

1. a renewable resource that can power a home _____
2. what happens to wastewater _____
3. everything that surrounds you _____
5. to use less _____
8. a resource that is quickly replaced by nature _____
11. once-living _____
13. harmful _____

After You Read

NAME: _____

Comprehension Quiz

30

Part A

8

Circle the word True if the statement is true. Circle the word False if it is false.

1) Nonrenewable resources are replaced by natural Earth processes faster than people can use them up.
   True **False**
2) Metals, wood, and plastic are all made with resources from the land.
   True **False**
3) At a recycling facility, plastic bottles are washed and filled with new products.
   True **False**
4) An apple core is an example of organic matter.
   True **False**
5) Sewage treatment makes water safe to drink.
   True **False**
6) Recycled water comes from unopened water bottles that have been sent to a recycling facility.
   True **False**
7) Automobiles that run on gasoline are a major cause of air pollution.
   True **False**
8) Green businesses are businesses that try to use as many natural resources as possible.
   True **False**

Part B

4

Put a check mark (✓) next to the answer that is most correct.

1) Which item could you place on a compost pile?
- ○ **A** plastic bottle
- ○ **B** glass jar
- ○ **C** banana peel
- ○ **D** newspaper

2) Which of these is NOT a use for recycled water?
- ○ **A** drinking
- ○ **B** watering plants
- ○ **C** restoring wetlands
- ○ **D** cooling machines in factories

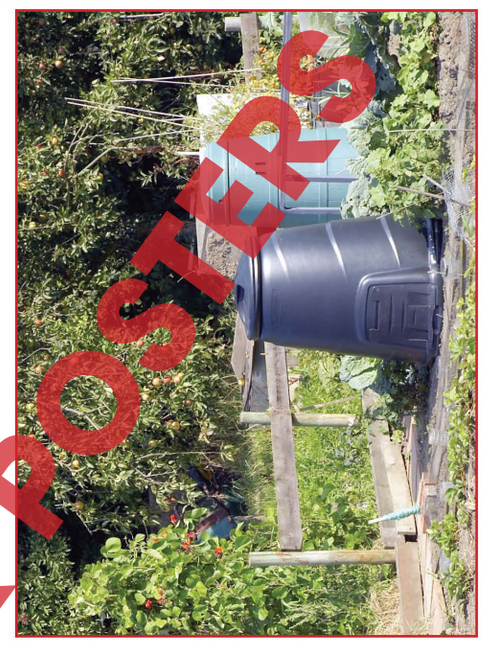
3) Which substance can cause smog?
- ○ **A** bauxite
- ○ **B** benzene
- ○ **C** carbon
- ○ **D** ozone

4) Which source of energy is nonrenewable?
- ○ **A** solar
- ○ **B** wind
- ○ **C** petroleum oil
- ○ **D** running water

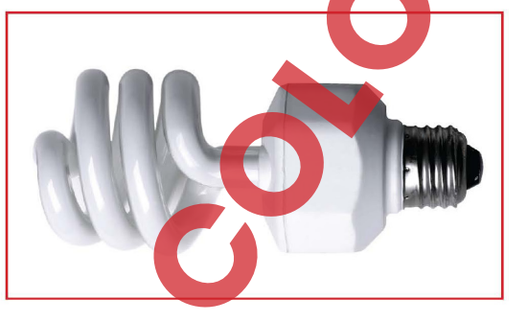
SUBTOTAL: /12

Conservation Methods

Choose Renewable Energy



Compost Waste



Reduce Energy Usage

Recycle

NAME: _____

After You Read

Fresh Water Resources

3. Explain why water must be treated both **before** and **after** it goes to your home

_____

_____

_____

_____

_____

4. Describe **three** different sources of wastewater.

1) _____

2) _____

3) _____

Extension & Application

5. Research the **water purification** and **sewage treatment plants** in your area. Work with a group of students. Call your water company or district. Ask them to send you information about the water purification and sewage treatment facilities in your area. Ask them also for information about where your drinking water comes from.

Read through the information from your water company. Write a list of **questions** about things you don't understand, or things you want to learn more about. Use the Internet or library resources to research answers to your questions. Find out more about water purification and sewage treatment methods. Finally, you may want to call your water company to follow up with any unanswered questions.

Design a three-poster flowchart to display in your class. The posters should contain the following information:

- poster 1: the sources of your water
- poster 2: how your water is purified
- poster 3: how your water is treated after it leaves your house

EASY MARKING ANSWER KEY

EZ

3. Water treatment removes substances that can make people sick, such as parasites and pollutants.

4. Water that flows down drains, runoff, water used in factories

5. Answers will vary

Answers will vary

11

Answers will vary

12

Answers will vary

13

Answers will vary

10

14