

Click®

Cleaning Up!

Maintaining a clean environment reduces pollution, protects endangered species, and helps to preserve Earth's natural resources. This issue of CLICK uses text, drawings, and photographs to teach young readers how and why keeping the environment clean and our ecosystem balanced is essential to continued life on this planet.

CONVERSATION QUESTION

How do we keep our world clean?

TEACHING OBJECTIVES

- Students will learn about the Ohio River Sweep.
- Students will learn how trash is collected by garbage trucks.
- Students will learn how wastewater gets cleaned.
- Students will analyze how humans affect the environment.
- Students will examine structure and function.
- Students will sequence events in a process.
- Students will locate the Ohio River's route through six states.
- Students will demonstrate an understanding of the trash collection process through kinesthetic play.
- Students will participate in a water filtering experiment.



In addition to supplemental materials focused on core STEM skills, this flexible teaching tool offers vocabulary-building activities, questions for discussion, and cross-curricular activities.

SELECTIONS

- **The Ohio River Sweep**
Expository Nonfiction
- **Here Comes the Garbage Truck**
Expository Nonfiction
- **Flush!**
Realistic Fiction

The Ohio River Sweep

pp. 10–12, Expository Nonfiction

Stretching 981 miles, the Ohio River flows through six states in the eastern United States. This article teaches readers how adults and children work together to keep the river clean.



RESOURCES

- Analyze Human Influence: *Rambling River*

OBJECTIVES

- Students will learn about the Ohio River Sweep.
- Students will analyze how humans influence the environment.
- Students will locate the Ohio River's route through six states.

KEY VOCABULARY

- sanitation** (p. 10) the process of keeping places clean and healthy, especially by providing a sewage system, a clean water supply, and the safe disposal of waste
- volunteers** (p. 11) people who do something for other people or for an organization, willingly, without being forced or paid to do it

ENGAGE

Conversation Question: How do we keep our world clean?

Motivate students to learn about the Ohio River Sweep by arranging a treasure hunt. Students will read on page 11 that cleaning up the river is “kind of like a treasure hunt, except they search for things that don’t belong there.” While students are out of the room, place some objects in the “wrong” place. (Ex: Put a book in the block basket, a plastic animal in the crayon bin, etc.) Then give the students five minutes to search the room and put items in their proper places. Pose the questions: *Why is it important to keep our classroom clean? Why is it important to keep our Earth clean?*

INTRODUCE VOCABULARY

Post and discuss the two vocabulary words and definitions. Have students Think-Pair-Share with a partner:

- Why is it important to have proper **sanitation** practices in our school? In our community? How can you help?
- Discuss an event in which you participated as a **volunteer**. Did you sell cookies? Take part in a walkathon? Help out in the classroom?

READ & DISCUSS

Reinforce comprehension of the details in the article by using the following prompts to direct discussion.

- What kinds of animals rely on the Ohio River?
- How does the Ohio River Valley Water Sanitation Commission help to keep the river clean?
- What is the best way to make sure that the Ohio River (and other rivers) stays clean?
- How many different Ohio River Sweeps took place in 2023?
- How does trash often get carried down river?

SKILL FOCUS: Analyze Human Influence

INSTRUCT: Elicit from students that the main idea of the article is to provide readers with information about the importance and process of keeping our rivers clean. Review the main points with the class, emphasizing how it takes a combination of resources to keep the Ohio River clean. Distribute the graphic organizer, *Rambling River*, and tell students that they will be using information from the article and their own thinking to complete each section.

ASSESS: Circulate and discuss as students are working. Review as a whole class.

EXTEND

Geography: Display a map of the U.S. that includes rivers and lakes. Tell students that the Ohio River begins in Pittsburgh, Pennsylvania, and runs through six different states. Invite a student to mark the river's beginning point. Then tell students that the river ends in Cairo, Illinois, and have a volunteer mark that location. Finally, trace the route of the river from point to point, noting aloud which states it passes through.

Rambling River

Analyze Human Influence Use information from the article and your own thinking skills to complete each section of the worksheet below. You may use pictures and words in your answers.

This is how trash is hurting our river wildlife:

This is how ORSNCO volunteers help the Ohio River:

This is how I can help keep Earth's rivers and oceans clean:

Here Comes the Garbage Truck

pp. 24–26, Expository Nonfiction

Garbage trucks are vehicles that are specially designed to collect and transport waste to designated facilities. Young readers will ride along with two sanitation workers to learn about the trucks and the toil.



RESOURCES

- Structure and Function: Traveling Trash

OBJECTIVES

- Students will learn how trash is collected by garbage trucks.
- Students will examine structure and function.
- Students will demonstrate an understanding of the topic through kinesthetic play.

KEY VOCABULARY

- **rumbles (p. 24)** makes a low, heavy rolling sound
- **support (p. 25)** to bear the weight of; to hold up

ENGAGE

Conversation Question: How do we keep our world clean?

Tell students that you are thinking of a truck that does special work in the neighborhood (garbage truck). Describe the truck visually and then use the words, “Crash! Clang! Clatter!” from the article (p. 24) to describe its sounds. Continue with descriptors until they have guessed “garbage truck.” Were the sounds helpful in revealing the type of truck? Discuss how authors often use *onomatopoeia* to add excitement and interest to their writing.

INTRODUCE VOCABULARY

Post and discuss the two vocabulary terms with the class. Divide the class into small groups, giving each group a selection of blocks and toy vehicles. Instruct them to construct bridges that will **support** the weight of the vehicles **rumbling** over them. Circulate and visit with each group, having them use the vocabulary words to explain their creations.

READ & DISCUSS

As a post-reading activity, lead a discussion based on the following questions.

1. Why does a garbage truck need extra wheels?
2. Where does the driver of the truck ride?
3. Why does a trash collector ride on a step at the back of the truck?
4. What kind of truck collects trash from big buildings?
5. What does a vacuum truck do?

SKILL FOCUS: Structure and Function

INSTRUCT: Guide students to obtain information from the text, captions, and photographs in the article. Remind them that the article was written to teach readers how garbage trucks function to remove trash from our neighborhoods. Present the graphic organizer, *Traveling Trash*, and tell students they will be using information from the article to “Show & Tell” how each part of the sanitation truck functions. Allow students to work in small groups to discuss what they have learned.

ASSESS: Review answers. Have students take the worksheet home and instruct them to “teach” someone they live with about the parts of this important community vehicle—the garbage truck.

EXTEND

Kinesthetic Play: Revisit pages 25 and 26 and review the different kinds of garbage trucks—rear loader, side loader, and front loader. Using simple materials, such as a basket or box and a (clean) piece of garbage, have students use their bodies to replicate the motions of the truck. Example: *For the side loader, have them pick up (with their right hand) a piece of trash that is on the floor to the right of their body. They will then arc their arm up and over their head to deposit it in a basket on their left side.* Next, have them carry out the motions of the front loader and the rear loader.

Traveling Trash

Structure and Function Gather information from the photographs and words in the article to explain the purpose of each part of the garbage truck. You may use pictures and words to record your answers.

Truck Part	Show/Use Pictures What does it look like?	Tell/Use Words What does it do?
trash bin		
hopper		
packer blade		
grabbing claw		

Flush!

pp. 27–33, Realistic Fiction

Young readers will follow along as Mom teaches Andy and Lizzy about the filtration process at sewage plants. The story format simplifies this complicated process, allowing students to clearly understand what happens to our waste.



ENGAGE

Conversation Question: How do we keep our world clean?

In large letters, write the title of the article on the board, "Flush!" Discuss the meaning and then draw students' attention to the spelling of the word. Note out loud that the word contains a digraph. Tell students that a digraph is a group of two consonants that make a single sound. Have them identify the digraph (*sh*). (*Fl* is a blend—both sounds are heard.) Set a timer for two minutes and have the class brainstorm a list of words that contain the digraph *sh*.

INTRODUCE VOCABULARY

Post and discuss the key vocabulary words and definitions on the board. Then display the following cloze sentences and have students supply the correct word:

1. The _____ in the air conditioner remove dust and pollen from the air.
2. The teaspoon of sugar _____ in my tea.

READ & DISCUSS

Post and discuss questions prior to reading the article aloud. Then reread the article, pausing when answers to the questions are revealed.

1. How does the stuff you flush leave the house?
2. What do the two different sets of pipes in a house do?
3. What happens at the sewage treatment plant?
4. Why don't tissues go in the toilet?
5. Why is it problematic to drop objects into drains?
6. What did Mom teach Andy and Lizzy about sewage treatment?

SKILL FOCUS: Sequence Events

INSTRUCT: Review sentences from the article describing how it takes a series of steps for waste to be broken down. Introduce the worksheet, *Sewage Sequence*, and tell students that they will be using information from the article to correctly number the steps in each section from 1 to 3. This may be done orally for very young students.

ASSESS: Circulate and have mini-conversations with students as they are working.

EXTEND

STEM: Obtain the following materials to do a water filtration experiment with the class: 2 glass jars, a plastic cup with a hole cut in the bottom, 3 coffee filters, clean sand, gravel, and dirty water. (Make your own by adding dirt, coffee grinds, etc. to the jar of clean water.) **Procedure:** **1.** Line the bottom of the plastic cup with the coffee filters. Add a layer of sand, followed by a layer of gravel. **2.** Place the cup into the mouth of the empty jar. The cup's bottom 1/3 should be in the jar. **3.** Pour the water into the cup. Dirt will be filtered out, dripping much cleaner water into the jar below. **4.** Clean filter and send the water through again to remove even more waste. Discuss the process.

RESOURCES

- Sequence Events: Sewage Sequence

OBJECTIVES

- Students will learn how wastewater gets cleaned.
- Students will sequence events in a process.
- Students will participate in a water filtering experiment.

KEY VOCABULARY

- **dissolved** (p. 31) absorbed by a liquid, especially when mixed; disappeared gradually
- **filters** (p. 31) devices for separating solid particles and impurities from a liquid or a gas

Sewage Sequence

Sequence Events Gather information from the text to help you put the sentences in the correct order. Label the sentences 1–3 to show the order, then reread the paragraph for accuracy.

- A.** _____ The pipes under the street join with other pipes and form even larger pipes.
_____ The largest pipes go to the sewage treatment plant.
_____ The pipes from our house lead to big pipes under the street.
- B.** _____ Waste from a sewer pipe flows through a giant screen.
_____ The trash and grit are removed from the water and taken away by garbage trucks.
_____ Water moves through a big tank where heavy bits of grit sink to the bottom.
- C.** _____ Clumps of grease and oil float to the top of the water, and sludge settles on the bottom of the tank.
_____ The greasy scum and sludge get removed.
_____ Next, the water moves to another big tank.

