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Let's Build It

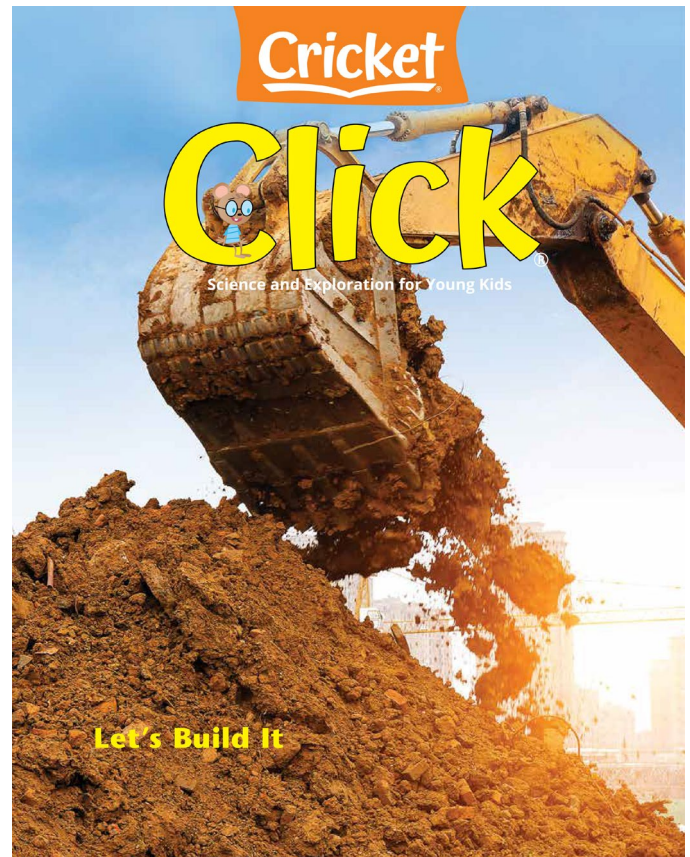
Tear it down and build it up! This month's issue of CLICK magazine is filled with articles about and exciting photographs of big machinery. Readers will go on an adventure to a construction site and learn how big trucks and hard workers help in the demolition and construction processes.

CONVERSATION QUESTION

What equipment is needed for building?

TEACHING OBJECTIVES

- Students will learn the specific purpose of each big machine at a construction site.
- Students will explain the structure and function of construction machinery.
- Students will learn how each step of the demolition process clears the way for new construction.
- Students will learn how bottle schools benefit the community and the environment.
- Students will establish the proper sequence of steps in the demolition process.
- Students will examine the process of building a bottle school.
- Students will use creative play to demonstrate action words.
- Students will identify rhyming words.
- Students will learn more about Hug It Forward projects.



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

- **Building with Big Machines**
Expository Nonfiction, ~660L
- **Demolition**
Poem, N/A
- **Building Schools with Bottles**
Expository Nonfiction, ~570L

Click® Teacher Guide: March 2022

Building with Big Machines

pp. 8–12, Expository Nonfiction

Huge construction vehicles often capture the attention of children of all ages. This article provides the reader with photographs and information about the function of each big machine.



ENGAGE

Conversation Question: What equipment is needed for building?

Display the title of the article, “Building with Big Machines.” Ask students to help you generate a list of different trucks that can be found at a construction site. Have the class watch an episode of “Bob the Builder” (available online), and identify different trucks as they appear on screen. Then distribute the article and instruct students to notice which trucks in the article were also seen in the episode.

INTRODUCE VOCABULARY

Review homonyms with the class: two or more words that have the same spelling but different meanings. Explain that all of the Key Vocabulary terms have more than one meaning. Post and discuss the words and the definitions. Inform students that these definitions give the best meaning for the words as used in the article. Ask volunteers to share other meanings for each word, providing help if necessary. As a post-reading activity, challenge students to identify other homonyms in the article and share the multiple meanings.

RESOURCES

Structure and Function: Truck Stop

OBJECTIVES

- Students will learn the specific purpose of each big machine at a construction site.
- Students will explain the structure and function of construction machinery.
- Students will use creative play to demonstrate action words.

KEY VOCABULARY

- **cab (p. 8)** the driver’s compartment in a truck
- **tracks (p. 8)** steel belts with grooves in place of tires
- **crane (p. 11)** a large machine that moves things by lifting them in the air

READ & DISCUSS

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

1. Why do some construction vehicles have tracks instead of wheels?
2. How does a dump truck dump its load?
3. What does the claw on the back end of a bulldozer do?
4. How does a tower crane help to build a skyscraper?
5. Why does a concrete mixer need lots of wide wheels?

SKILL FOCUS: Structure and Function

INSTRUCT: Elicit from students that the main idea of the article is to provide a detailed description of big construction machinery. Present the *Structure and Function: Truck Stop* graphic organizer, and tell students that they will be using information from the article to “show and tell” how each part of the big truck performs a special function. Depending on the abilities of the students, they may write and/or draw their answers.

ASSESS: Circulate and have mini-conversations with students as they are working. Remedial readers may work with a partner to reread the text. Collect and review their work to further assess their understanding of the structure/function relationship.

EXTEND

Creative Play Arrange for students to go outside or have trays of play sand available in the classroom. Gather toy trucks for the children to maneuver through the “construction site.” Direct them to perform certain actions from the text: digging, scooping, dumping, driving, and pushing. Take the opportunity to tell students that action words are called *verbs* and ask them to name other verbs that pertain to a construction site.

Truck Stop

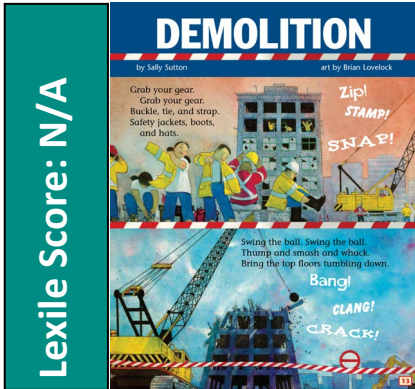
Structure and Function Gather information from the photographs and words in the article to explain how each piece of equipment is helpful at construction sites.

Equipment	Show/use pictures (What does it look like?)	Tell/use words (What does it do?)
excavator's bucket		
dump truck's bed		
bulldozer's blade		
concrete mixer's drum		

Demolition

pp. 13–17, Poem

This poem uses onomatopoeia and rhyme to emphasize the sounds and sights at a demolition site. Students will learn how purposeful destruction allows beautiful new things to be built.



RESOURCES

Sequencing: Crash and Clear

OBJECTIVES

- Students will learn how each step of the demolition process clears the way for new construction.
- Students will establish the proper sequence of steps in demolition.
- Students will identify rhyming words.

KEY VOCABULARY

- **safety** (p. 13) protecting from harm or danger
- **grind** (p. 15) to crush something into powder or very small pieces
- **heap** (p. 16) to put something in a large pile

ENGAGE

Conversation Question: What equipment is needed for building?

Distribute the article and allow students to take a picture-walk through the pages. Ask them what they notice about the layout of the text. Guide them to notice the bold sound words in large font followed by exclamation points. Introduce the term *onomatopoeia* and tell students that it refers to words that create a sound effect to mimic the thing/action being described. Have students locate these words on the pages. When you read the paragraphs aloud, have students join you in reading the examples of onomatopoeia with their loud voices.

INTRODUCE VOCABULARY

Post and discuss the three vocabulary words and definitions. Have students Think-Pair-Share with a partner. Give them the following directives, one at a time:

1. Why is **safety** important when playing sports? How do you prepare to stay safe?
2. What would you **grind** up over food?
3. What things do you **heap** in a pile?

Emphasize the key words as they are revealed in the reading.

READ & DISCUSS

Post and discuss questions prior to reading. Read the poem aloud, pausing when answers to the questions are revealed.

1. What kind of safety equipment do the workers wear?
2. How do the top floors come tumbling down?
3. What happens to the crushed stone?
4. How is the sawdust turned into mulch?
5. Why is the steel sorted?

SKILL FOCUS: Sequencing

INSTRUCT: Elicit from students that the main idea of the poem is to entertain readers while teaching them about the steps of a demolition project. Present the *Sequencing: Crash and Clear* graphic organizer, and tell students that they will use information from the poem to correctly number the steps. This may be done orally for very young students.

ASSESS: Circulate and have mini-conversations with students as they are working. Discuss which steps of the demolition process may also be part of the building process. (Ex: safety, sorting, loading, etc.)

EXTEND

Language Arts Review with the class that rhyming words are two or more words that have the same or similar ending sounds. Write the word *tap* on the board and underneath it write *map*. Have students read the words aloud with you and identify the letters that create the rhyme sound. Ask students to help you add other *-ap* rhyming words. Revisit the poem and read aloud each paragraph and have students circle the rhyming pairs in each section.

Crash and Clear

Sequencing: Look at the pictures and read the words in the poem. Then put the steps in the correct order from demolition to construction.

Step Number	Demolition to Construction
	Hose the dust and dampen the dirt.
	Sort the steel for reuse.
	From demolition to construction, now the job is done.
1	Put on safety gear.
	Crush the stone to make new concrete.
	Bash and smash and watch the walls fall.
	Load the trucks to take away junk.
	Build a new playground to play and climb.
	Swing the wrecking ball over and over.
	Shred the wood and turn the sawdust to mulch.

Use the back of this paper to draw one of the steps. Ask a partner to guess which step you've drawn.

Building Schools with Bottles

pp. 22–26, Expository Nonfiction

This article teaches young readers how an item we thoughtlessly toss into the recycling bin can be repurposed as a strong building material. Colorful photographs accompany this simple text that explains how bottle schools are built.



RESOURCES

Examine Process: Trash to Treasure

OBJECTIVES

- Students will learn how bottle schools benefit the community and the environment.
- Students will examine the building process of a bottle school.
- Students will learn more about Hug It Forward projects.

KEY VOCABULARY

- **eco-brick** (p. 22) a plastic bottle packed with used plastic trash that serves as building blocks
- **chicken wire** (p. 23) wire netting

ENGAGE

Conversation Question: What equipment is needed for building?

Generate a discussion about the pride that is felt when you are part of accomplishing a big goal. Ask if any of the students have helped to build a tree house, paint a room, or put together a play set. Encourage conversation. Give examples of projects that you have helped to complete and how it made you feel. Tell students they are going to read an article about children who helped to build their own school!

INTRODUCE VOCABULARY

Post and discuss the vocabulary terms with the class. Be sure students understand what these items look like by showing them the photographs on page 24. Then have students fold a piece of paper into quarters and unfold it. Tell students to use two of the boxes to draw and label eco-bricks and chicken wire. After reading the article, they will use the other two boxes to draw and label two additional building materials that were discussed in the text.

READ & DISCUSS

As a post-reading activity, discuss the following questions.

1. How is a bottle school built?
2. Who helps to build each school in the Hug It Forward program?
3. What are the cleaned plastic bottles filled with?
4. How is chicken wire used for building the walls?
5. Explain how Hug It Forward bottle schools are good for the community and good for the environment.

SKILL FOCUS: Examine Process

INSTRUCT: Review the information from the article that describes how bottle schools are built. Remind students that the article was written to teach readers about the materials used in and process of building a Hug It Forward bottle school. Introduce the *Examine Process: Trash to Treasure* worksheet and instruct students to use pictures and words to explain each step in the process.

ASSESS: Review graphic organizers with the class. Read aloud this sentence from page 23: “They need about 80 plastic bags or around 100 chip wrappers to fill one bottle all the way to the top.” Engage the class in an experiment that shows them how long it would take the class to collect the amount of material needed to make one eco-brick.

EXTEND

Philanthropy Visit hugitforward.org and have the class view the gallery of pictures and videos. Students will be able to watch the pages of the article come alive. Inform them that many children are denied an education simply because there is not a safe, clean building for them to learn in. Present students with a fundraising opportunity (it can be something simple!) where proceeds will be donated to help build a bottle school. Donation information is on the website. Have students make posters, get others involved, and reach a set goal.

Trash to Treasure

Examine Process Use pictures and words to explain each part of the bottle school building process.

<p>1. Stuff bottles with trash.</p>	<p>2. Tie bottles in rows between chicken wire.</p>
<p>3. Add layers of concrete to the walls.</p>	<p>4. Add floor, windows, roof, and paint.</p>