



#10004 HEAVY EQUIPMENT OPERATOR

BIG KIDS PRODUCTIONS, INC., 1993
Grade Level: 2-5
30 mins.

DESCRIPTION

Three young boys dream of becoming heavy equipment operators. Robby learns there are many kinds and sizes of cranes as he visits several construction sites. Eli rides in a variety of dump trucks, and Zach observes dirt movers, from small bulldozers to huge excavators. Adults on site answer questions and explain procedures. Each boy thinks his is the best job.

ACADEMIC STANDARDS

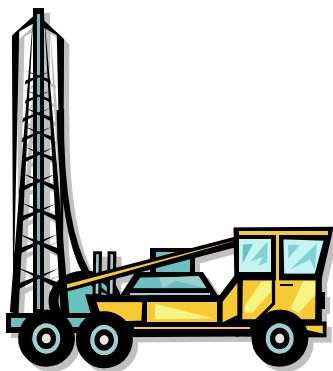
Subject Area: Life Skills–Life Work

- Standard: Makes general preparation for entering the work force
 - ◆ Benchmark: Analyzes a current job and its future possibilities (See INSTRUCTIONAL GOALS 1 and 3.)



Subject Area: Technology

- Standard: Understands the nature and uses of different forms of technology
 - ◆ Benchmark: Knows that construction technology requires building materials, specialized tools and machines, money, time, energy, land, and human work and that the final structures are subject to local building codes (See INSTRUCTIONAL GOALS 2.)



INSTRUCTIONAL GOALS

1. To encourage young children to think about job interests for their future.
2. To demonstrate the functions of three common categories of heavy equipment machines—cranes, dump trucks, and dirt movers.
3. To understand the duties of heavy equipment operators on their jobs.
4. To illustrate the necessity of teamwork in operating heavy equipment.

VOCABULARY

1. backhoe
2. cable
3. claw
4. crane
5. compactor
6. construction
7. dispatcher
8. ditch
9. excavator
10. humungous
11. mile
12. million
13. operator
14. ton

BEFORE SHOWING

1. Brainstorm a list of jobs that adults have. Discuss individual job interests.
2. Invite parents from a variety of jobs to relate their work experiences.
3. Estimate the height in feet of the school building. Record for later comparison with statistics in the video.
4. Fill a bucket with water that weighs about ten pounds. Take turns lifting it and keep for reference after watching the video.

AFTER SHOWING

Discussion Items and Questions

1. Why do heavy equipment operators need to begin work so early in the morning?
2. What does a dispatcher do? What other jobs might require a dispatcher?
3. What other people does a heavy equipment operator rely on for help? What do they do to help?
4. What does the statement, "It takes a crane to build a crane" mean?
5. What are some dangers of being a heavy equipment operator?
6. What is special about a tower crane? A crawler crane? A hydraulic crane?
7. Explain the use of the claw.
8. Explain how the features of a bulldozer are used.
9. Why do dump trucks have so many wheels?
10. Describe both ends of a backhoe. Explain what the "teeth" on a backhoe do.
11. Name several types of dirt movers. How are they different?



Applications and Activities

1. Interview heavy equipment operators. Ask them about the difficulties they encounter on their job.
2. Compare the size of a grown man with the tire of a bulldozer or dump truck by drawing the actual height of each one on a paper side by side.

3. Obtain a heavy equipment catalog (i.e., CASE, Caterpillar, John Deere, etc.). Find the equipment pieces from the video in the catalog and discuss other machines of interest.
4. Visit a construction site and observe the heavy equipment used. Take pictures and make a scrapbook of the trip.
5. Write a mock classified ad for the position of a heavy equipment operator. Include qualifications needed for the job.
6. Using a dictionary or thesaurus to find as many synonyms as possible for the word "big." Then find other adjectives that describe heavy equipment.
7. Role-play or mime the job duties of a heavy equipment operator. Observers guess and relate which machine they see.
8. Create a control panel for heavy equipment using a cardboard box and various gadgets for buttons and dials. Label each piece with a command the operator uses.
9. In pairs, coordinate the movements of a crane, a dump truck, a backhoe, or a bulldozer. Be sure the movements and commands are in sync.
10. Choose a machine of special interest and draw self-portraits operating heavy equipment. Display the pictures.
11. Compare the tower crane, which is 400 feet tall, with the height of your school. (See BEFORE SHOWING.)
12. Calculate how many ten pound buckets of water would equal a ton. (See BEFORE SHOWING.) Discuss the fact that a crane can lift 300 tons.
13. Go to a hardware or home improvement store and look closely at the variety of cables. Discuss the many uses of cables.



CMP RELATED RESOURCES

- [Roads And Bridges #3650](#)
- [Trucks #3673](#)

World Wide Web



The following Web sites complement the contents of this guide; they were selected by professionals who have experience in teaching deaf and hard of hearing students. Every effort was made to select accurate, educationally relevant, and "kid safe" sites. However, teachers should preview them before use. The U.S. Department of Education, the National Association of the Deaf, and the Captioned Media Program do not endorse the sites and are not responsible for their content.

- **FUNDRAISING IDEAS & PRODUCTS CENTER**

<http://www.fundraising-ideas.org/DIY/truckequipment.htm>

Hold a Truck and Heavy Equipment Show to raise funds for your school. This Web site page explains how to conduct just such a show.

- **HOW HYDRAULIC MACHINES WORK**

<http://www.science.howstuffworks.com/hydraulic.htm>

Shows text, pictures, and videos of how hydraulic machines operate. Site includes nine sublinks to clear and specific information. Suggested to save MPEG videos to a hard drive for future use.



- **HOW HYDRAULIC CRANES WORK**



<http://www.science.howstuffworks.com/hydraulic-crane.htm>

Who wouldn't want to operate a hydraulic crane? This site gives student-level explanations and graphics for easy understanding. Many links related to specific heavy equipment use.

- **3000 TOYS**

http://www.3000toys.com/catalog/item_list.asp

Retail site of dozens of thumbnail sketches, which can be enlarged, of construction equipment toys. Many toys are exact duplicates of brand-name equipment. Great way to entice young viewers.