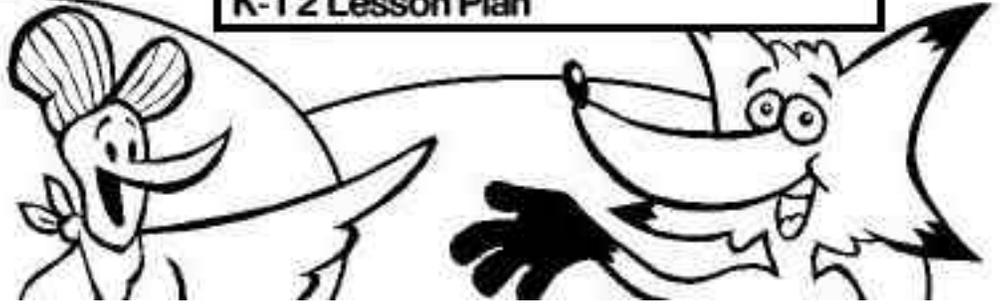




K-12 Lesson Plan



HEAVY DUTY

Grade: Kindergarten

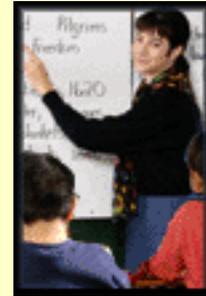
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OVERVIEW

This lesson uses various items to help students understand the significant size difference between trains, vehicles and people. It helps make them aware that trains cannot stop quickly, and, therefore, we must use extreme caution around railroad tracks.

SAFETY MESSAGE:

■ Trains are heavy.

SUGGESTED TIME ALLOWANCE

25-30 minutes

OBJECTIVES

Students will be able to:

- Understand the size differences between a train, a vehicle and a person.
- Demonstrate understanding of weight comparisons.
- Recite this safety message: "Be careful around trains."

National Academic Content Standards addressed by this lesson.

MATERIALS

- Wooden or metal toy locomotive/train
- Toy people and vehicles (somewhat to scale of the train)
- Worksheet
- Crayons
- *Trains* by Anne Rockwell (optional)

VOCABULARY

Trains, locomotive, vehicle, bigger than, smaller than

PROCEDURES

TEACHER PREPARATION:

Read basic background information on train safety. Gather materials to generate discussion.

MOTIVATION:

Provide students some real-life examples comparing objects and their size: *How many of you have seen a train? Who has ridden on a train? Can a train run on the road? Could a train fit in our classroom?* As the students answer these questions and listen to their classmates' responses, guide them to the concept that trains are large. *Let's look at some items I have and do some more thinking about trains.*

ACTIVITY:

1. Show students the locomotive or toy train and briefly describe it. Explain the size of the people and cars in relation to the locomotive. Try using an example of something that is in the children's environment that is about 15 feet tall, 10 feet wide and 60 feet long to describe the size of a locomotive.
2. Allow the students to handle and view the objects. Ask them questions about the size difference and what would happen if one hit the other. For example: *Which is the biggest item? What would happen if the train hit the car?*

What would happen if the train hit the person? Would you get hurt if something much larger than yourself ran into you?

3. Emphasize relevant safety messages:
 - *Because trains are so large and heavy, we must be VERY careful when crossing tracks.*
 - *Because trains are so large and heavy, they take a LONG time to stop.*
 - *Because trains are so large and heavy, WE must pay attention when we are around them.*
4. Look at the worksheet with students: It says, "Be careful around trains." Have students say this out loud.
5. Provide instructions for the students: *There are three items on the page: a train, a car and a person. Color the heaviest item red (train), color the lightest item orange and color the one that weighs between the two blue.*
6. Once students finish coloring the three items, have them add a background to their pictures.

CONCLUSION:

Have students hold their drawings in the air. Check their work by going over what they have done: *Put your drawings in front of you and point to your red item. Are you pointing to the train? If you did you are correct. The train is the heaviest item. That is why trains cannot stop quickly - they are very heavy. Point to your blue item. Are you pointing to your car? If you did you are right! Cars must always watch out for trains, since the train is heavier than the car. Point to your orange item. Are you pointing to the person? That's correct, the person is the one that weighs the least out of the three items. That is why we must be careful around trains.* Have students repeat this one more time: *"Be careful around trains!"*

HIGHER ORDER THINKING

To assure students are using critical thinking skills, pose questions such as these at appropriate places within the lesson: *Who can retell the story*

by themselves and draw the train without any help? Can someone create his or her own story and picture? Can you use the same shapes that we used to draw the train, but tell a different story?

ASSESSMENT

- Discussion and completion of worksheet (Understand the size differences between a train, a vehicle, and a person.)
- Discussion and completion of worksheet (Demonstrate understanding of weight comparisons.)
- Participation in group recitation (Recite this safety message: "Be careful around trains.")

EXTENSIONS

Math: Math: Students can use blocks to represent a locomotive/train, a car and a person to show the size relationships they have learned.

TEACHER RESOURCES

Background information

Sly Fox & Birdie video clips (Quicktime required):

Throwing Objects at Trains

Playing in Boxcars

Driving Across the Tracks

Sly Fox & Birdie video

Video utilization tips for *Sly Fox & Birdie*

NATIONAL ACADEMIC CONTENT STANDARDS

These standards are provided by the Mid-continent Regional Educational Laboratory (McREL) online publication, Content Knowledge: A Compendium of Standards and Benchmarks for K-12 Education. <<http://www.mcrel.org/standards-benchmarks/>>

The following standards are addressed by the activities of this lesson:

Health

Level I: Primary (Gr. K-2)

Standard 5: Knows essential concepts and practices concerning

injury prevention and safety

Benchmark: Knows basic fire, traffic, water and recreation safety practices

Life Skills: Thinking and Reasoning

Standard 3: Effectively uses mental processes that are based on identifying similarities and differences (compares, contrasts, classifies)

Benchmarks:

- Identifies the similarities and differences between persons, places, things and events using concrete criteria
- Describes and compares things in terms of number, shape, texture, size, weight, color, motion, sound and behavior
- Recognizes simple patterns in the surrounding events and objects

Science

Level I: Primary (Gr. K-2)

Standard 15: Understands the nature of scientific inquiry

Benchmark: Knows that learning can come from careful observations and simple experiments

To see related standards for your state, search [Achieve's Clearinghouse](http://www.achieve.org/achieve/achievestart.nsf/Search?OpenForm):
< <http://www.achieve.org/achieve/achievestart.nsf/Search?OpenForm> >

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