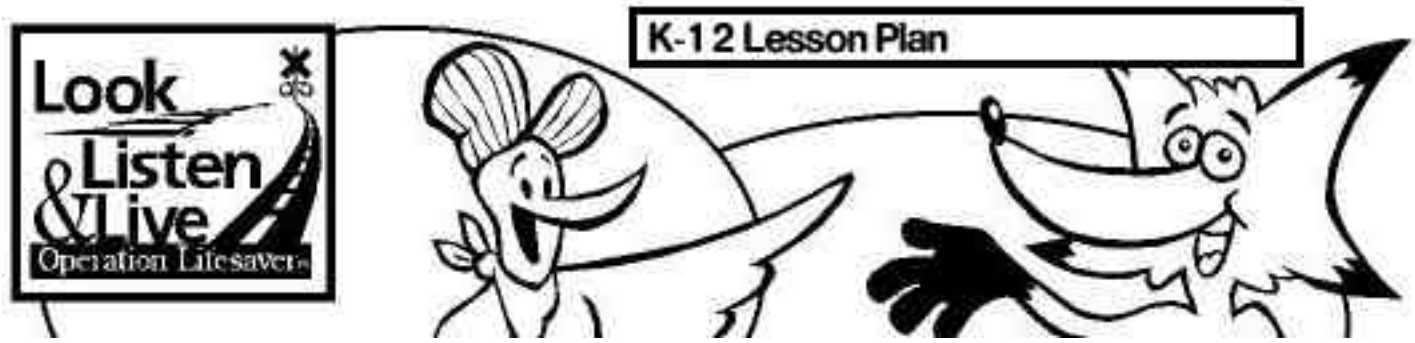

MEASURE UP TO SAFETY

Grade: Third Grade

Subjects:

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SAFETY MESSAGE:

- Play a safe distance from the tracks.

OVERVIEW

This lesson combines measuring and problem-solving skills to illustrate to the students the safe distance required between people and train tracks. Through a hands-on activity, students will be able to better understand the distance measurements.

SUGGESTED TIME ALLOWANCE

35-45 minutes

OBJECTIVES

Students will be able to:

- Understand the importance of staying a safe distance from the railroad tracks.
- Measure the width of train tracks, width of a train and the safe distance to stay away from the tracks and train.
- Demonstrate knowledge of the width of train tracks, the width of a train and a safe distance to stay from train tracks and trains.

National Academic Content Standards addressed by this lesson.

MATERIALS

For the class:

- Masking tape (if indoors)
- Chalk (if outdoors)
- Measurements of the width of train tracks, width of a train, overhang and right-of-way
- Yarn
- Paper
- Pencils

VOCABULARY

Trespassing, right-of-way, overhang, gauge

PROCEDURES

TEACHER PREPARATION:

Read the background information on trespasser safety (Track Facts and Myths & Realities). Arrange for a large space to do this lesson, as measurements (width of the tracks, width of a train, width of the overhang and safe distance for children to be away from the tracks) will be either chalked out on a sidewalk outside or taped on a floor inside.

MOTIVATION:

Ask the following questions: *How wide do you think the train tracks are? How wide do you think a train is? How close to a train do you think you could safely stand?* Have students show you physically in the space (indoors or outdoors) you have chosen to complete this lesson.

ACTIVITY:

1. Mark the following with tape or with chalk: two straight lines 4 feet, 8 inches apart representing the width of the gauge (tracks); two straight lines 3 feet on each side of the gauge

marks, representing the overhang; two straight lines extending at least another 25 feet on each side of the overhang marks, representing a safe distance to be from the train and train tracks.

2. If the activity is done outside, have students role play, with half of the group being the train and the other half doing safe activities at a safe distance. Students can stand side-by-side to represent the train and its overhang from the tracks. If the activity is done inside, have students take turns standing the correct distance from an object representing the train to get a feel for what the safe distance is.
3. In either location, have the students use the yarn to represent the very heavy and long straps that could be flapping from the train. These straps, if they were to hit someone, could cause serious injury or death.
4. Once the experiment is completed, have the students draw what they learned by illustrating the experiment, marking all of the correct measurements in their illustration. Include the tracks, the train, the train overhang, and the minimum safe distance people should be from the tracks.

CONCLUSION:

Have students look at their illustration of the experiment and discuss: *What could tell someone if they were trying to get you to stand too close to the tracks? Would you be able to give them reasons why not to stand too close? Could you prove your point? You now have the knowledge it takes to answer someone who may not know why you should not stand close to a train or the tracks. Remember to always "Stay Off! Stay Away! Stay Alive!"*

HIGHER ORDER THINKING

To assure students are using critical thinking skills, pose a challenge such as this at an appropriate place within the lesson: Convert the standard measurements into metric, making all the calculations necessary to find the safe distance from the railroad tracks.

ASSESSMENT

- Class discussion (Understand the importance of staying a safe distance from the railroad tracks.)
- Class activity and pictorial representation on paper (Measure the width of train tracks, width of a train and the safe distance to stay away from the tracks and train.)
- Class activity and pictorial representation on paper (Demonstrate knowledge of the width of train tracks, the width of a train and a safe distance to stay from train tracks and trains.)

EXTENSIONS

Language Arts: Have students design a brochure to be used with younger children showing the dangers of being too close to the train tracks.

TEACHER RESOURCES

Background information on trespasser safety (Track Facts and Myths & Realities - Acrobat Reader recquired)
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:

Arts: Theater
Level II: Elementary (Gr. K-4)
Standard 2: Uses acting skills

Benchmark: Knows how to interact in improvisations

Mathematics

Level II: Upper Elementary (Gr. 3-5)
Standard 4: Understands and applies basic and advanced properties of the concepts of measurement
Benchmark: Knows approximate size of basic standard units (e.g., centimeters, feet, grams) and relationships between them (e.g., between inches and feet)

Science

Level II: Upper Elementary (Gr. 3-5)
Standard 15: Understands the nature of scientific inquiry
Benchmarks:

- Plans and conducts simple investigations (e.g., makes systematic observations, conducts simple experiments to answer questions)
- Uses simple equipment and tools to gather scientific data and extend the senses (e.g., rulers, thermometers, magnifiers, microscopes, calculators)

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