

LESSON 8:

How Can We Be Safe on Our Routes to School?

LESSON OVERVIEW

This lesson begins by having students think about what makes a safe route for pedestrians and bicyclists. Students will consider how they can assess the safety of different routes. The class will discuss what makes routes safe or less safe and collaboratively come up with a rating system to use when assessing their routes. After coming up with a rating system, the class will test the system by assessing the pedestrian and bicycle safety of their school block. As homework, students will assess the pedestrian and bicycle safety of their routes to school.

OBJECTIVES

- Determine what factors affect pedestrian and bicycle safety.
- Determine the safety of different routes to school.

TOPIC

Safe Routes to School

STANDARDS SUPPORTED IN THIS LESSON

Common Core State Standards for Mathematics

Grade Four

- **4.NBT.B.4:** (CCSS.Math.Content.4.NBT.B.4): Fluently add and subtract multi-digit whole numbers using the standard algorithm.

California Health Education Content Standards

Injury Prevention and Safety – Grade Four

Standard 1: Essential Concepts

- **1.16.S:** Identify ways to reduce risk of injuries from fires, around water, while riding a motor vehicle, as a pedestrian, on the playground, and from falls.

Standard 8: Health Promotion

- **8.3.S:** Encourage others' safety behaviors (e.g., wearing bicycle helmets and seat belts).

California Science Content Standards

Investigation and Experimentation – Grade Five

- **6.b:** Develop a testable question.
- **6.c:** Plan and conduct a simple investigation based on a student-developed question and write instructions others can follow to carry out the procedure.

National Health Education Standards for Grades Three to Five

Standard 1: Essential Health Concepts

- **1.5.4:** Describe ways to prevent common childhood injuries and health problems.

Standard 8: Health Promotion

- **8.5.1:** Express opinions and give accurate information about health issues.
- **8.5.2:** Encourage others to make positive health choices.

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MATERIALS NEEDED

- Chart paper (6 pieces)
- Markers (5 sets)
- Clipboards (1 per student)
- Pencils (1 per student)
- *Let's Keep Score!* worksheet (1 per student)
- *How Safe is Your Route?* worksheet (2 per student)
- *Neighborhood Safety: The Big Five* sheet (1 for teacher reference)
- Neighborhood Pictures (1 per pair)

PREPARATION ACTIVITIES

- On five pieces of chart paper, write the following words (1 word on the top of each paper): sidewalks, intersections, motorists, bicyclists, environment. Under the word, draw a line down the middle of the paper. Write "**Safe**" on one side of the paper and "**Not Safe**" on the other.
- Divide the class into five groups. Give one piece of labeled chart paper and a set of markers to each group.
- Make copies of *Let's Keep Score!* and *How Safe is Your Route?* worksheets.
- This lesson includes a walk around the school block. You may want to solicit parent volunteers to help with supervision.

STEPS FOR CLASSROOM ACTIVITY

What's Safe? (15 minutes)

- Ask students to consider how safe their neighborhood is for walking and bicycling. Ask a few students to share ideas and experiences. Ask students to think about how they can determine the safety of their neighborhood.
- Pass out the neighborhood pictures. Ask students to share the safe and less safe features of the neighborhoods they see.
- Tell students that there are features that make some neighborhoods safer than others. Explain that the students will consider how sidewalks, intersections, motorists, bicyclists, and the neighborhood environment contribute to pedestrian and bicycle safety.
- Discuss how neighborhoods with less safe features can be made safer for pedestrians and bicyclists. Tell students that even if their neighborhood has less safe features, they can still find ways to safely walk or bicycle.
- On their piece of chart paper, each group should write and draw ways that sidewalks, intersections, motorists, bicyclists, or the neighborhood environment effect pedestrian and bicycle safety. Each group will think about one aspect of neighborhood safety.

Keeping Score (15 minutes)

- Call the students back together to share their thinking about how sidewalks, intersections, motorists, bicyclists, and the neighborhood environment contribute to pedestrian and bicycle safety.
- Explain that students will measure the safety of their school neighborhood by calculating a safety rating. In order to do so, students will be adding and subtracting safety points based on different safety features. Through this process, students will be able to develop safety ratings for different neighborhoods.

PREPARATION TIME

10 minutes

ACTIVITY TIME

60 minutes

VOCABULARY

Intersection—A place where two or more roads meet.

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- On a piece of chart paper, write students' ideas for important safety features to assess. For each feature, have students assign a number of points. For example, "Has clearly labeled intersections" could have a value of plus five points while "Has cracks in sidewalks" could have a value of minus two points. Use the *Neighborhood Safety: The Big Five* sheet to help guide your discussion.
- Pass out the *Let's Keep Score!* worksheet and have students write down the features and point values that they collectively determine. This information should also be written on the chart paper.

Walk Around the Block (20 minutes)

- Make sure every student has a *Let's Keep Score!* worksheet, a *How Safe is Your Route?* worksheet, a pencil, and a clipboard.
- Tell students that they will be trying out their rating system by assessing the safety of the school block. They should consider how safe the block is for pedestrians and bicyclists.
- On the *How Safe is Your Route?* worksheet, have students note the features and points that they listed on the *Let's Keep Score!* worksheet.
- During the walk, keep the class together and discuss the safety features that are noticed as they arise.
- After the walk, have students compute the total safety score for the school block and answer the questions at the end of their worksheets.

Reflection and Homework (10 minutes)

- Have students think about how the school block could be made safer for pedestrians and bicyclists. Have students share ideas about what could be done to make the block safer. Ask students to consider whether there is anything they can do to make the block safer for pedestrians and bicyclists.
- Have students consider how their rating system worked. Ask students if they would like to make any changes to their rating system. If changes are suggested, try to find consensus as a class before implementing changes. If changes are implemented, have students note the changes on their *Let's Keep Score!* worksheet.



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- Tell students that as homework they are going to assess the pedestrian and bicycle safety of their routes to school. Sometime this week, they should walk or bicycle to school and note the safety features of their neighborhoods. If students are unable to walk or bicycle to school, they should take their normal transportation to school but assess the safety of their route through the eyes of a pedestrian or bicyclist. Using another copy of the *Let's Keep Score!* worksheet, students will compute the safety score of their route to school.

Ideas for Extending the Lesson

- Print out Google Maps to show students' routes to school. If you have a computer lab, you can teach students how to show and print these maps themselves. Have students trace their routes and note safety features as they walk and bicycle to school.
- Have students write letters to the mayor or city council suggesting safety improvements to the neighborhood. Encourage students to share evidence from their neighborhood safety walks. To learn more about the safety of their neighborhoods, have students analyze the traffic injury data available at <http://www.casaferoutestoschool.org/test-news-1/>.
- Ask students to conduct brief interviews with safety professionals (e.g., public health professionals, local police officers, etc.) to find out about efforts to keep neighborhoods safe. Have students ask the following questions: What type of data or information do you use to measure safety near schools? Who is responsible for analyzing and interpreting that information? Are the data you collect available for our school?



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Student Worksheet

Let's Keep Score!

Name: _____ Date: _____

As a class, determine which features contribute to the safety of your route. Write down each feature and the number of safety points (positive or negative) assigned to each feature. You will use this scorecard to determine the safety of your route.

Feature	Safety Points

Student Worksheet

How Safe is Your Route?

Name: _____ Date: _____

As you walk or bicycle, use the *Let's Keep Score!* scorecard to help you determine the safety of your route. Write down the features that you notice and the number of points (positive or negative) assigned to each feature.

I walked / bicycled (circle one)

Feature	Notes	Points

How many total points did your route get?

What could make your route safer?

Neighborhood Safety: The Big Five

Consider the following aspects when creating your class' neighborhood scorecard.

1. Sidewalks

- Are there sidewalks in your neighborhood?
- Are they wide enough?
- Do they have cracks or gaps?
- Are parked cars, bushes, or other obstacles blocking the sidewalks?

2. Intersections

- Are there crosswalks? Are they clearly labeled?
- Are there traffic signals? Do they work properly and allow for enough time to cross the street?

3. Motorists

- Do motorists seem cautious? Are they aware? Are they speeding?
- Do motorists stop for pedestrians?
- Do motorists stop for traffic signals?

4. Bicyclists

- Are there other bicyclists on the road?
- Are there bicycle lanes?
- How do motorists interact with bicyclists?

5. Environment

- Is the neighborhood safe?
- Is the neighborhood clean?
- Is the neighborhood well lit at night?
- Are there unleashed or menacing dogs?



No sidewalk



Blocked sidewalk



Unleashed dog



Crossing guard



Bicycle lane



Clear and clean sidewalks