Bike Parts Race

LESSON PLAN OVERVIEW

SUGGESTED GRADE LEVEL	K 1 2 3 **4 5 6 7 8**
SUGGESTED TIME	one class period
SETTING	auditorium classroom gymnasium outside
LEARNING STYLE ACCESS	auditory kinesthetic visual

OVERVIEW

Teach students the names and locations of bicycle parts. Offer students a bike-related indoor physical activity.

MATERIALS

One multi-gear bicycle per team. One full set of bicycle tags per team. Photocopy the template on page B3-3 on colored card stock paper, using a different color for each team. Cut between the words and attach pipe cleaners or twist ties to one end. Be sure each bike has all the parts listed, and remove the tags for any missing parts. Or leave additional parts in the mix and use it as a teaching moment about what things are on some bikes and not on others.

VOCABULARY

gear, reflector, derailleur, fork, lever, quick-release, hub, dropout, spoke.

MODIFICATIONS FOR CHILDREN WITH DISABILITIES

Create a matching game with a picture of the bike and all the parts listed separately, or have student with disability be the judge/facilitator or help you check to make sure all parts are correct.

MODIFICATIONS FOR USE IN LOW INCOME SCHOOLS

None needed

IMPRESSIONS

A great lesson to learn parts and get the kids moving. For more activity, place the bike far away from where the kids will be sitting in a line, ready to run and place their tag on the bike. A short bike parts introduction could happen first, or you could just start the race and see how many parts the kids already know.

SOURCE

Bike New York

3. The Bike Parts Race

OBJECTIVES

- Teach students the names and locations of bicycle parts
- Offer students a bike-related indoor physical activity.

NECESSARY RESOURCES

- One multi-gear bicycle *per team*
- One full set of bicycle tags *per team.* (Photocopy the template on page B3-3 on colored card stock paper, using a different color for each team. Cut between the words and attach pipe cleaners or twist ties to one end. Be sure each bike has all the parts listed, and remove the tags for any missing parts.)

TEACHER'S NOTE: This competitive game will give students some fun exercise. It can be used instead of or in addition unit E2, Learn the Names of Bike Parts.

Instructions

The object of this game is for each team to get rid of its bicycle tags first. Divide students into teams with equal numbers of students. Each team should divide the hang tags equally among its players.

- Position bicycles at one end of the space and the teams at the other end.
- When the game starts ("go," whistle, etc.), the first player from each team runs across the room to his or her team's bike and hangs the tag on the appropriate part. The player then runs back and tags the next player on the team, who performs the same task, then tags the next player, etc.
- Rotate players through the line until all the tags from their team have been hung correctly.
- The team that finishes first earns five points.
- Each team gets one point for each part they tagged correctly.

3. The Bike Parts Race

FUN FACT: Bike messengers can be found in most major cities around the world. They are cyclists who are paid to deliver small packages quickly through busy, crowded streets. It's a hard, sometimes dangerous job, done in almost any kind of weather, and it doesn't pay very well.

Nelson Vails was a New York City bike messenger who rose from humble origins and seized his opportunity for a moment of glory. And as with Major Taylor (see Fun Fact, page A1-3), cycling provided the opportunity.

Vails was one of 10 children in a Harlem family. His dad was a janitor, and his mother was a nurse. By the time he was a teenager, Vails had caught the bike bug. He frequently raced at the Kissena Velodrome in Queens, New York City's only bike racing track.

As a young man of 19, Vails needed a job, so he became a bike messenger. Besides riding eight to 10 hours a day, he trained by riding 40 miles before work every day, and he also rode on weekends. His messenger nickname was "Cheetah," the fastest cat in the jungle.

In 1980, he was invited to join a local bike racing team after he beat their fastest riders in a track race. In 1982, he made the U.S. cycling team, and he won a gold medal in the 1983 Pan Am games. But then came disappointment. He barely missed making the U.S. Olympic cycling team when he came in second to another American racer, Mark Gorski. Under the rules then, only one racer from each country could compete in the 1,000-meter sprint, which was Vails's specialty.

Then international politics intervened. The Soviet Union and its allies in Eastern Europe boycotted the 1984 Los Angeles Olympics, which opened up more spots in bike racing. Nelson Vails was back on the team, and like a bike messenger seeing an opening in dense traffic, he took advantage of his second chance. U.S. Olympic cyclists had not won a single medal in 72 years. Competing against the best from Europe, Japan, and Latin America, the U.S. team won nine medals, including four gold.

Nelson Vails won one of those medals, a silver in the 1,000-meter match sprint, coming in second again to Mark Gorski. The next time Vails rode up a street in Manhattan, it was very slowly along the Broadway's Canyon of Heroes, as confetti fell from the skyscrapers on him and his fellow American Olympians.

6. The Bike Parts Race

Front Derailleur	Brake Lever	Fork
Seat	Seatpost	Top Tube
Brake	Reflector	Cable
Chain	Shift Lever	Tire
Handlebar	Stem	Quick-Release Lever
Dropout	Frame	Grips
Rim	Spoke	Hub


seat
seatpost
seatpost clamp
handlebar
shift & brake lever
stem
headset
cable housing
tire
rim
spoke
seatpost binder
shift cable
fork crown
brake
water bottle
screws
fork
spoke nipple
front derailleur
hub
frame
pedal
crankarm
chain
chainring
rear cogs (cassette)
rear derailleur
disk brake mount
skewer
valve stem

Comic Strip

LESSON PLAN OVERVIEW

SUGGESTED GRADE LEVEL	K 1 2 3 4 **5** **6** **7** **8**
SUGGESTED TIME	one class period
SETTING	auditorium classroom gymnasium outside
LEARNING STYLE ACCESS	auditory kinesthetic visual

OVERVIEW

Students will compose an original story that teaches a lesson about walking/biking safety. Students will illustrate the story in comic form. Students will present the story to younger students, thereby teaching them about walking/biking safety.

MATERIALS

My comic strip blanks, sample comic strips from previous classes

VOCABULARY

illustration, representation, convey, narrative

MODIFICATIONS FOR CHILDREN WITH DISABILITIES

Provide examples of work already completed, larger comic strip boxes.

MODIFICATIONS FOR USE IN LOW INCOME SCHOOLS

None needed

IMPRESSIONS

This can be a venue to help with any lessons. Topics do not have to necessarily be "safety" related.

SOURCE

SR2S Nebraska

ACTIVITY 4

COMIC STRIP

OBJECTIVES:

- Students will compose an original story that teaches a lesson about walking/biking safety.
- Students will illustrate the story in comic form.
- Students will present the story to younger students, thereby teaching them about walking/biking safety.

NEBRASKA STATE STANDARDS:

Reading/Writing 8.2.1 – Students will write using standard English (conventions) for sentence structure, usage, punctuation, spelling, and paragraph indentation.

Reading/Writing 8.2.4 – Students will demonstrate the use of multiple forms to write for different audiences and purposes.

Reading/Writing 8.3.2 – Students will use multiple presentation styles for specific audiences and purposes.

Science 8.7.1 – Students will develop an understanding of personal health.

TIME/DURATION: 1 hour

MATERIALS:

- A copy of the provided My Comic Strip sheet for each student

INSTRUCTIONS:

1. Print out one comic book sheet for each student.
2. Instruct students to write a 6-frame comic story on a separate sheet of paper. The story should teach a lesson about walking/biking safety.
3. Once their story is complete, they may begin illustrating the story on the comic book page.
4. When the illustrations are complete, assign each student in your class to a student in kindergarten or first grade. Your students should use the comic story they've created to teach a lesson about biking/walking safety to the younger students.

NAME: _____

STUDENT WORKSHEET

MY COMIC STRIP

Title: _____

Group Poem

LESSON PLAN OVERVIEW

SUGGESTED GRADE LEVEL	K 1 2 **3** **4** 5 6 7 8
SUGGESTED TIME	one class period
SETTING	auditorium classroom gymnasium outside
LEARNING STYLE ACCESS	auditory kinesthetic visual

OVERVIEW

Students will collaborate in small groups to relate their experiences/views about walking, biking, and safety by composing original poetry.

MATERIALS

Notebook paper, pencil

VOCABULARY

rhyme, association, simile, analogy

MODIFICATIONS FOR CHILDREN WITH DISABILITIES

Print out all materials in stead of giving instructions orally.

MODIFICATIONS FOR USE IN LOW INCOME SCHOOLS

None needed

IMPRESSIONS

*Students will demonstrate the use of multiple forms to write for different audiences or purposes- a different type of lesson which will allow students to be creative and share. **In a sharing environment like a classroom, be aware of any potential emotional issues concerning accidents or tragic events around the school or in the community***

SOURCE

SR2S Nebraska

ACTIVITY 1

GROUP POEM

OBJECTIVES:

- Students will collaborate in small groups to relate their experiences/views about walking, biking, and safety by composing original poetry.

NEBRASKA STATE STANDARDS:

Reading/Writing 4.2.4 – Students will demonstrate the use of multiple forms to write for different audiences or purposes.

Reading/Writing 4.3.1 – Students will participate in group discussions by asking questions and contributing information and ideas.

TIME/DURATION: 30 minutes

MATERIALS:

- None

INSTRUCTIONS:

1. Break the students into groups of four or five.
2. Give each group a word associated with walking and biking safety (helmet, stop sign, etc.).
3. Instruct the students to write the word vertically along the left-hand side of a piece of paper, leaving a few spaces between each letter.
4. Tell the students to create a poem as a group, using each letter of the word to start a line about the word's meaning and how it applies to walking or biking.
5. After about 20 minutes, have the groups share their poems with the class.

ACTIVITY 2

BIKE SAFETY PRESENTATIONS

OBJECTIVES:

- Students will collect and examine information about walking/biking safety.
- Students will compose reports on walking/biking safety.
- Students will present their findings to the class.

NEBRASKA STATE STANDARDS:

Science 4.7.1 – Students will develop an understanding of personal health.

Reading/Writing 4.1.4 – Students will identify the resource appropriate for a specific purpose, and use the resource to locate information.

Reading/Writing 4.2.1 – Students will write using standard English (conventions) for sentence structure, usage, punctuation, capitalization, and spelling.

Reading/Writing 4.2.2 – Students will write paragraphs/reports with focus, related ideas, and supporting details.

Reading/Writing 4.3.2 – Students will deliver organized oral presentations using complete sentences, clear enunciation, adequate volume, and eye contact.

TIME/DURATION: 1–2 weeks

MATERIALS:

- None

INSTRUCTIONS:

1. Assign each student a topic related to walking or biking (the importance of exercise, bicycle safety laws, etc.)
2. Allow the students time to research the topic in the library, using online and off-line sources.
3. Instruct each student to write a paper on their topic, in whatever format you see fit.
4. Each student will present his or her findings to the class in a 5-minute presentation.
5. Encourage students to use creative visual aids in presentations.

That Hurts!

LESSON PLAN OVERVIEW

SUGGESTED GRADE LEVEL	K 1 2 **3** **4** **5** 6 7 8
SUGGESTED TIME	one class period
SETTING	auditorium classroom gymnasium outside
LEARNING STYLE ACCESS	auditory kinesthetic visual

OVERVIEW

During this lesson students will become aware of activities that could be potentially dangerous or fatal.

MATERIALS

"That Hurts" student handout, "That Hurts" safety questions, small band-aids, 5x8 cards or blank paper

VOCABULARY

accident, EMT, moderator

MODIFICATIONS FOR CHILDREN WITH DISABILITIES

None needed

MODIFICATIONS FOR USE IN LOW INCOME SCHOOLS

None needed

IMPRESSIONS

The handout could be reworded to be a little less scary.

SOURCE

SR2S Kentucky

SAFE ROUTES TO SCHOOL

That Hurts!
Lesson Plan

Grade Level:	3-5
Subject Areas:	Reading, Practical Living/Vocational Studies
Core Content:	RD-(EP,04,05)-2.7, PL-(04,05)-1.4.01
Overview:	During this lesson students will become aware of activities that could be potentially dangerous or fatal.
Suggested Time:	1-2 class periods
Materials Needed:	That Hurts Student Handout That Hurts Safety Questions Small Band-Aids 5x8 cards or blank paper
Vocabulary:	accident, EMT, moderator

Activities:

1. Discuss accidents involving bicycles, buses, cars, skateboards, trains and pedestrians. Ask students if they have ever been injured by a vehicle. Discuss how the accidents could have been prevented.

2. Distribute the handout "That Hurts!". Have students read the descriptions and identify what modes of transportation were being used. Be sure to discuss how the collisions could have been prevented.

3. Divide the class into teams of four to six students. Have each group choose a secretary, an EMT and a crash victim. Give each team a stack of 5x8 cards and an ample supply of band-aids.

   Rules of the game:
   - The moderator will ask a series of transportation safety questions.
   - As a team, students will decide upon the correct answer and the secretary will record it on a 5x8 card. When a signal is given, the answers will be displayed.
   - For every incorrect answer, the team's EMT will place a band-aid on the crash victim's forehead. At the end of the game, the team whose crash victim has the fewest band-aids will be declared the winner.

4. Discuss the correct answers to each of the transportation safety questions.

Extension:

- Invite a member of the local EMS to visit the class and discuss his or her job and accidents he or she may have experienced that could have been prevented.

That Hurts!

Student Handout

Name _____

Preventable Collision 1

A group of middle school students were horsing around on their way home from school. Waiting for the light to change at an intersection, Tom stepped backward into the street to keep from being whacked on the head with a biology book. Just then a car made a right-hand turn and hit him with its bumper. The impact threw the student into the air and onto the curb. A dental surgeon repaired and implanted his front teeth. An orthopedic surgeon repaired his leg and pelvic bones.

Transportation _____

Preventable Collision 2

The brothers were only three blocks from home. Hugh had finished arguing with his brother about whether to tune in to KNRK or KISN and was just fastening his seat belt when his brother Alan swerved into the other lane to avoid a squirrel. They hit an oncoming vehicle. There were three crashes within less than two seconds: the two vehicles slamming together, Alan's head slamming against the windshield and his internal organs slamming against his skeletal structure. For the most part, the scars on his skull and forehead don't show, but even after three months, he is wearing a neck brace and is still in serious pain.

Transportation _____

Preventable Collision 3

The front wheel of Tom's vehicle slipped into the pavement expansion joint on the Morrison Bridge just past the entrance to the I-75 freeway. He was thrown off, but luckily not into traffic. Unfortunately, Tom's head bounced against the pavement. Because of his bruises and facial swelling, his parents didn't recognize him at the emergency room.

Transportation _____

Preventable Collision 4

Susan spotted her friend waiting at the station on the opposite side of the street. She darted across the tracks. The operator did not have time to warn her or apply the brakes. You don't want to know the details.

Transportation _____

Preventable Collision 5

Samantha thought that jumping the curb wasn't a big deal until a nurse had to pick the gravel out of her kneecap and shin. Over the next few weeks the wound stuck to the inside of her jeans, the shower water stung like an acid burn and the whole wound cracked open and started to seep when she bent down to put her clothes in the dryer.

Transportation _____

Safe Routes to School
That Hurts! Safety Questions

1. Must bicycles follow the same rules as other vehicles?
   Answer: Yes

2. By law, bicyclist must ride on which side of the street?
   Answer: Right side

3. What piece of biking equipment is designed to cushion the head during a fall?
   Answer: Bike helmet

4. Of the 800 people per year in the U.S. who die from bike crashes, what type of injury do most sustain?
   Answer: A head injury

5. What type of clothing should cyclists wear to be seen by drivers?
   Answer: Bright clothing; neon and fluorescent are also acceptable

6. How do bicyclists communicate with other drivers?
   Answer: Hand signals

7. All bus and train operators have what means of communication to call for help in case of an emergency?
   Answer: A telephone

8. Yes or No? Buses only stop at designated bus stops.
   Answer: No. If you are riding the bus at night by yourself, the driver will let you off anywhere on the route that is safe.

9. A train going 45 miles an hour needs what distance to stop: ten yards, one block or five blocks?
   Answer: Five blocks

10. If you feel threatened by someone at a bus stop who is getting on the same bus, where should you sit once you board?
    Answer: Near the driver

11. Which is the most common cause of skating injuries: showing off, irregularities in riding surfaces or traveling at high speeds?
    Answer: Irregularities in the riding surface

12. What percentage of injured skateboarders is male: 90%, 75% or 50%?
    Answer: 90%

13. The most common skateboard injury is to the head, elbows or wrist?
    Answer: Wrist

14. A reason children below the age of five should not ride skateboards is because they have big heads. True or false?
    Answer: True

15. Are more males or more females killed in pedestrian accidents?
    Answer: Males

16. If there is no sidewalk, should a pedestrian walk facing or not facing the traffic?
    Answer: Facing the traffic

17. If you are crossing an intersection on foot, what is the best way to make certain a driver making a right hand turn sees you?
    Answer: Make eye contact

18. What should you do if the DON'T WALK signal begins to flash once you have started to cross the street?
    Answer: Keep Walking

19. What is the word for crossing the street at any point other than at a marked crosswalk or corner?
    Answer: Jaywalking

Traffic Signals
Stop and Go Game

LESSON PLAN OVERVIEW

SUGGESTED GRADE LEVEL	K 1 2 **3 4 5 6** 7 8
SUGGESTED TIME	one class period
SETTING	auditorium classroom gymnasium outside
LEARNING STYLE ACCESS	auditory kinesthetic visual

OVERVIEW

Students will be able to identify the meaning of 7 pedestrian and traffic signals by playing an active memory game.

MATERIALS

Signal flash cards (included)
Large, open space, such as a gym or school yard to play the game

VOCABULARY

extend, signal, yield, simulation

MODIFICATIONS FOR CHILDREN WITH DISABILITIES

Copy of all materials, use some of the modifications listed in the materials.

MODIFICATIONS FOR USE IN LOW INCOME SCHOOLS

Don't use Powerpoint, print out presentation in stead to a class set.

IMPRESSIONS

Great activity that isn't lecture based.

SOURCE

SR2S Philly

Physical Education: Traffic Signals Stop and Go Game, 15 minutes

Objective: Students will be able to identify the meaning of 7 pedestrian and traffic signals by playing an active memory game.

MATERIALS

- Signal flash cards (see Pedestrian Resources tab or PowerPoint at www.saferoutesphilly.org/schools/curriculum)
- Large, open space, such as a gym or school yard to play the game

TIP *To preserve your flash cards, place them in plastic page protectors.*

1. SIGNALS: Introduce traffic signals using the flashcards (left, right, walk, don't walk, yellow, red and green).

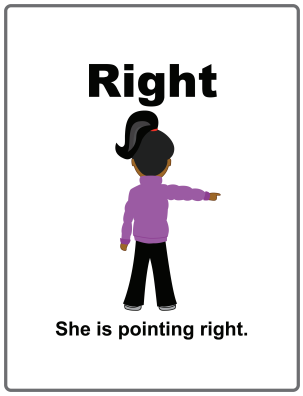
2. SIGNALS STOP AND GO GAME: Tell students they are going to play a game to learn the meaning of each signal. Think of this game as a combination of "Red light, Green light" and "Simon Says".

TIP *If you have limited space, use the motions in parentheses, which allow students to stay seated or stand next to their desks.*

A. Explain that each signal is associated with a different action and model the actions on the next page (you may need to modify actions to fit the needs of your students).

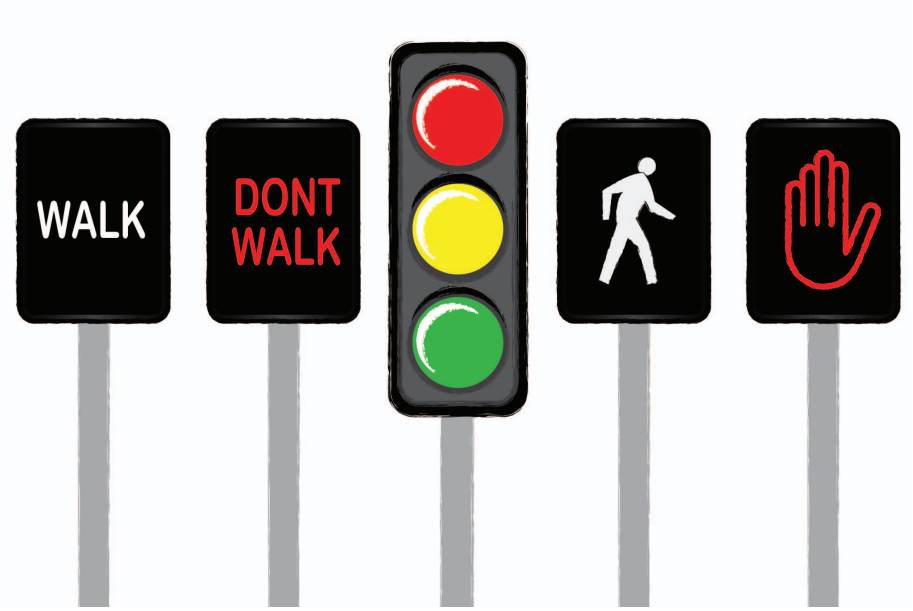
B. Instruct students to spread out around the space, giving themselves plenty of room, but making sure they can still see the signal cards when you hold them up.

TIP *When modeling "left" and "right" be sure to either turn your back to the class or use the opposite hand so that students know the correct hand to use.*



C. Stand where you are visible to each student and hold up the flashcards, rotating them at random while students perform the actions associated with each card. Play the game for approximately 10 minutes.

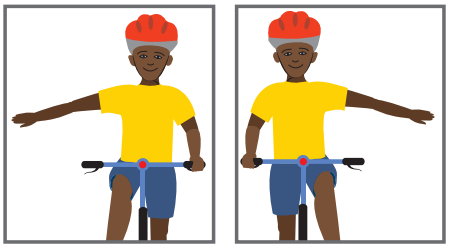
- **LEFT:** Shuffle left 5 times; (look and point left)
- **RIGHT:** Shuffle right 5 times; (look and point right)
- **WALK:** Walk or lunge forward; (march in place)
- **DON'T WALK:** Stop moving and place your hands on your hips
- **GREEN:** Move forward by running or skipping; (pump your arms as if you were running)
- **YELLOW:** Run in place; (flash hands by opening and closing them)
- **RED:** Stop moving and extend your right arm in front of your body, signaling "stop"



TIP

You can use this lesson for a 5th grade bike safety lesson by using the bike safety simulation cards and making the following modifications:

- *For "left" and "right", have students show you their hand signals for bicycling*
- *Omit "walk" and "don't walk" from the signal cards used*
- *Add in the "yield" sign and instruct students to hop in place*

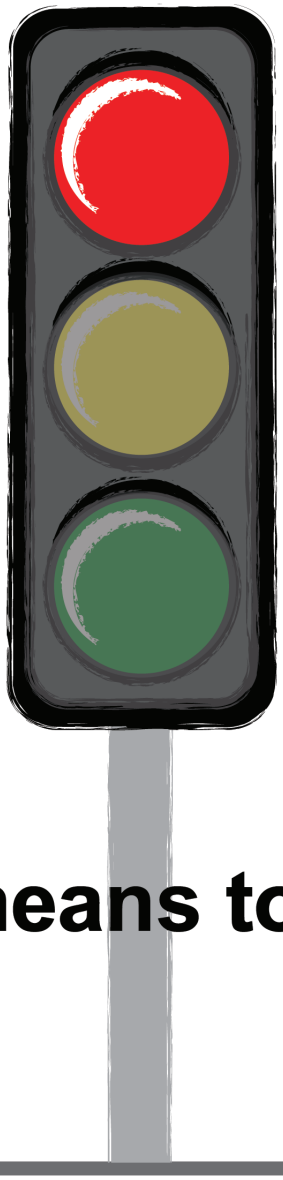


RIGHT LEFT

Signals

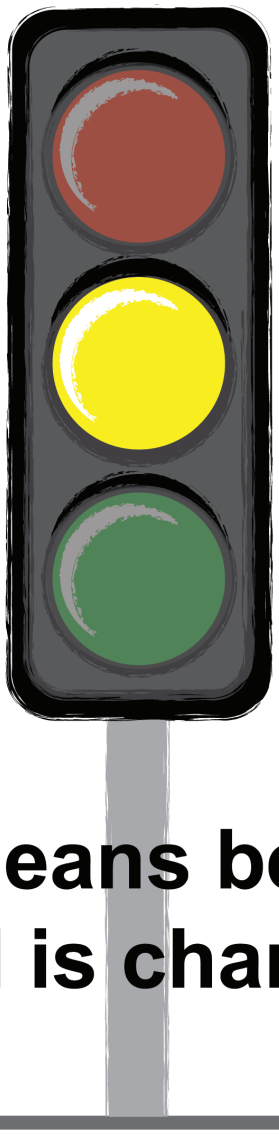
Lights that tell cars and people when to stop and go.

Red



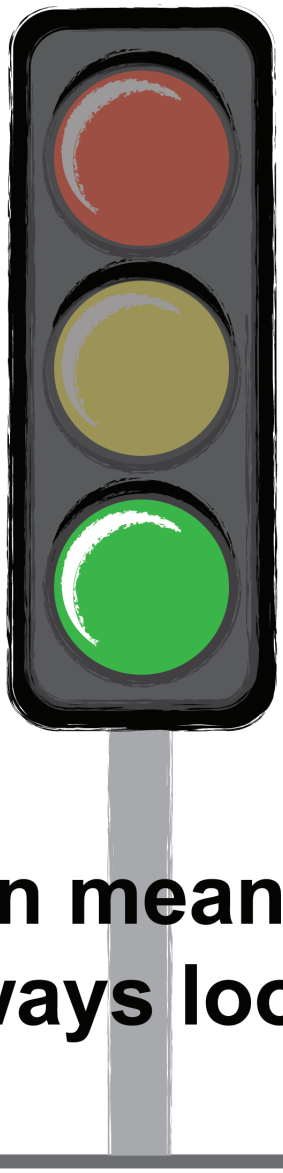
Red means to stop.

Yellow



Yellow means be careful, signal is changing.

Green



Green means go,
but always look first.

Don’t Walk

Stop and wait for signal.

Walk

Go, but always look first.

Trips and Travel
Choice and Change

LESSON PLAN OVERVIEW

SUGGESTED GRADE LEVEL	K 1 **2** **3** 4 5 6 7 8
SUGGESTED TIME	variable
SETTING	auditorium classroom gymnasium outside
LEARNING STYLE ACCESS	auditory kinesthetic visual

OVERVIEW

Students will learn about travel options and how their classmates get to school. Students will participate in a travel choice survey and create graphs that reflect their findings. They will collaborate on possible solutions to the barriers that prevent students from walking or rolling to school.

MATERIALS

Supplies, This is the Way we Go to School book, Mode Chart (in Resource section), Double-sided copies of Travel Choice Survey and Travel Survey Results for each student

VOCABULARY

survey, patterns, pollution, traffic, congestion

MODIFICATIONS FOR CHILDREN WITH DISABILITIES

Bring a few extra copies of the materials for students to have in-hand for reading the books as opposed to just being read to. Have students read to you (ask teacher beforehand if anyone has special considerations for being called on). If in auditorium, have book made into presentation for use with projector and screen and read it to students that way.

MODIFICATIONS FOR USE IN LOW INCOME SCHOOLS

None needed

IMPRESSIONS

Great for the inclusion of math and graphing, applies to both bike and ped because you can measure each activity, really good extensions for expanded use.

SOURCE

Alameda County SR2S

Trips and Travel Choices and Change

Overview

Students will learn about travel options and how their classmates get to school. Students will participate in a travel choice survey and create graphs that reflect their findings. They will collaborate on possible solutions to the barriers that prevent students from walking or rolling to school.

Supplies

- ✓ *This is the Way we Go to School* book
- ✓ *Mode Chart (in Resource section)*
- ✓ Double sided copies of *Travel Choice Survey* and *Travel Survey Results* for each student

Activity: This is the Way we Go to School

- Read *This is the Way We Go to School* to the class. Afterwards, solicit from students a list of all of the different ways to go to school mentioned in the book, and write them down on the board or chart paper.
- Use the following prompts to begin a class discussion about travel options, and the different experiences that children from the book have in getting to school.

Discussion Prompts

- What kinds of things determine how you get to school? (*Suggestions: weather, distance from school, where parent's work, after school plans, cost, access to public transportation, cultural values, landscape and geography.*)
- Ask which of those things are a factor in how they get to school?
- Ask each student to pick a child from the book. Ask them to close their eyes and imagine using the same mode of transport as that child from the country they picked.
    - What would that be like?
    - Would it be hard?
    - Would it be fun?
    - Would it be fast or slow?
    - How would you feel when you got to school?

Note: Students, especially at this age may not be deciding how they get to school. So ask students about choices they do make in their lives, such as what game to play at recess or what book to read before going to bed? Emphasize the idea that each day we all have choices to make. Use the following list of benefits to encourage your students, if they have the opportunity, to choose to walk or roll to school.

A few Benefits of Walking or Rolling to School

- Walking and rolling are great ways to get exercise. It can count as part of the recommended 60 minutes a day of physical activity.

Safe Routes to Schools Alameda County

- It can be a fun way to spend more time with your friends in the morning and afterschool.
- You help to reduce the amount of pollution in the air.
- You help reduce the amount of morning traffic and congestion around your school.

Activity: Class Travel Survey

- Tell students you are going to conduct a survey to find out the class travel patterns and some of the reasons behind their responses. Pass out *Travel Choice Survey* and have each student fill it out.
- Put students into small groups of 3 or 4. Have each group select a reporter. Ask them to discuss their answers. When they are finished have each group report out on their findings.
- After each group reports out ask: What does this information tell us about our class travel patterns?

Student Graphs

- Put 2 or 3 of the small groups together so that there are approximatley 6-8 students in each group. Each group will create a graph for Question #1 : How did you get to school today? Discuss the results.
- Did more students walk, bike, or carpool to school?
- What are some of the challenges that prevent more students from walking or rolling?
- If students are being driven to school, how could they work towards more carpooling?
- Ask if anyone is part of a Walking School Bus or Bike Train. (*Organized groups of students walking or rolling to school with a trained parent.*) If there are students participating, ask what they like about it.
- In their groups have students brainstorm ideas about how to increase the number of students who walk, bicycle or carpool to school. Have them write their ideas in the space provided on the handout.

Activity: Week-long Class Mode Chart

This is best done over the course of a week to see if there is a change throughout the week.

- Prepare a large wall mode chart by using the *Mode Chart* template in the Resources section.
- Pick a week when you can spend a few minutes each morning recording how students came to school.
- Using the class Mode Chart, allow a few minutes each morning for students to mark the chart with a sticker or marker indicating how they came to school.

At the end of the week look at the chart and analyze the data with the class.

- Are there more students who come by car or by bike or who carpool?
- Are there more students who walked or took the bus?
- Look at the differences between the days and ask students why they think there are differences on different days of the week.
- What are some of the challenges that prevent more students from walking or biking?

Safe Routes to Schools: Connections and Extensions

MODE CHART COMPARISON

Do the Mode Chart activity twice, with a month in between each survey. Compare the results and review the benefits of walking or rolling to school. Challenge the class to see if they can improve their results.

Name: _____

Travel Choice Survey

1. How did you get to school today?

- ☐ I walked.
- ☐ I rolled. (Bicycling/Scooter/Skateboard)
- ☐ I took the bus.
- ☐ I drove in a car alone or with a sibling and a parent or other adult.
- ☐ I carpooled. (Carpooling means more than one family sharing a ride)
- ☐ Other (please describe)_____.

2. If you walked or rolled, why did you?

- ☐ It's good exercise.
- ☐ It helps the environment.
- ☐ It's fun and I enjoy it!
- ☐ It give me more time to spend with my friends.
- ☐ My parents encourage me because I live close to the school.
- ☐ Other (please describe)_____.

3. If you did not walk or roll to school, why not?

- ☐ It's too far.
- ☐ My parents say that it's not safe enough.
- ☐ We're in too much of a hurry in the morning.
- ☐ We have to drop off a sibling at another school.
- ☐ The school is on the way to my parents' work.
- ☐ I take the bus.
- ☐ Other (please describe)_____.

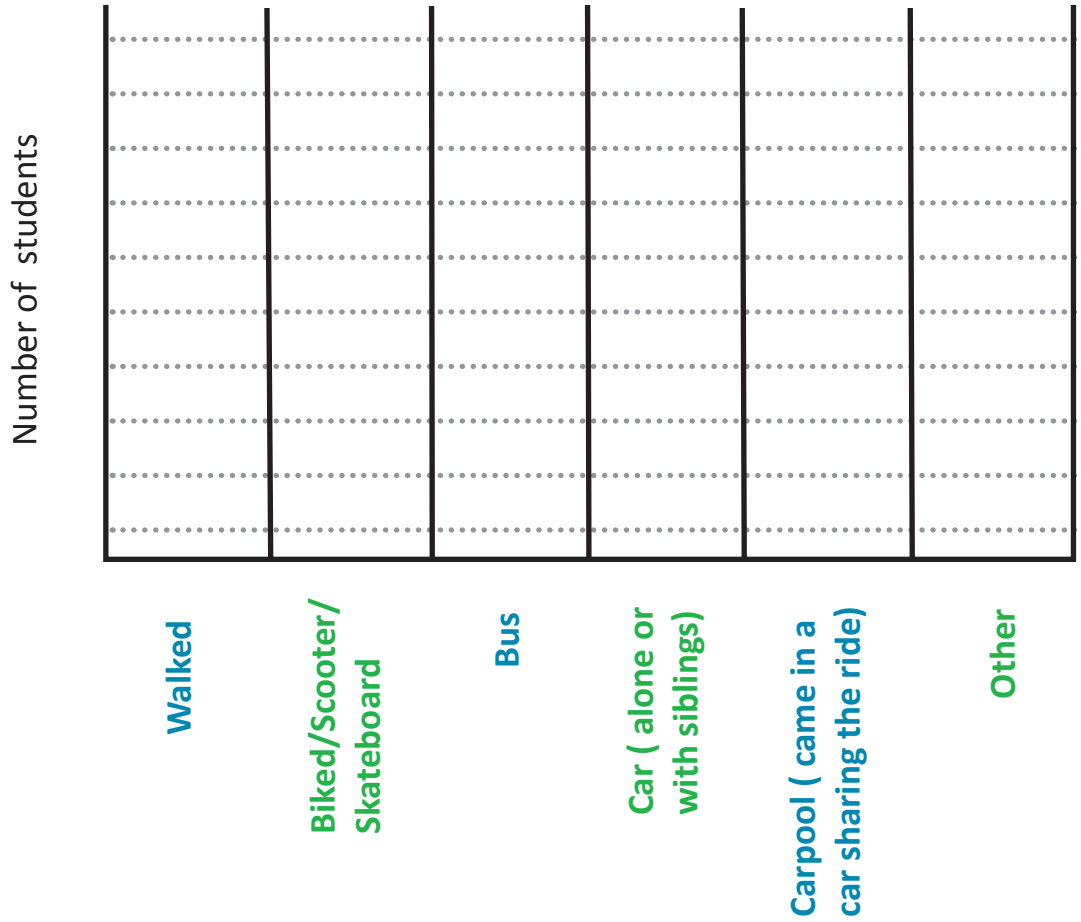
4. What would help you to start walking or rolling to school?

- ☐ I don't live close enough, but if my parents parked a few blocks from the school I could walk a little bit.
- ☐ If I had other kids to walk with in the neighborhood we could all walk together.
- ☐ If we found a safer route my parents would let me walk to school.
- ☐ I could try to get up earlier in the morning.
- ☐ Other ideas (please describe)_____.

Name: _____

Travel Choice Survey Graph

Fill in this graph based on Question # 1 from your group's Travel Survey results.



Write down your ideas that would help increase the bars that represent the number of students that walk, roll, take the bus or carpool to school.

_____

_____

_____

_____

_____

Safe Routes to Schools
Alameda County

MODE CHART	Monday	Tuesday	Wednesday	Thursday	Friday
Walk					
Roll (Bike, Skate-board, Scooter)					
School Bus or Public Transpor-tation					
Carpool (Sharing the ride with other people who don't live with you)					
Car					

Walk and Roll Team Trivia

LESSON PLAN OVERVIEW

SUGGESTED GRADE LEVEL	K 1 2 **3** **4** **5** 6 7 8
SUGGESTED TIME	one class period
SETTING	auditorium classroom gymnasium outside
LEARNING STYLE ACCESS	auditory kinesthetic visual

OVERVIEW

Students will review basic pedestrian and bicycle safety rules, and reasons for walking and bicycling in this fun and interactive Jeopardy-style team trivia game. This is an excellent way to reinforce important safety information throughout the year.

MATERIALS

Otto the Auto DVD (from AAA), Rewards/Prizes (stickers, pencils, etc.)

VOCABULARY

pollution, congestion, reduce, pedestrian

MODIFICATIONS FOR CHILDREN WITH DISABILITIES

Print materials ahead of time to have in hand, use hyperactive students to aid in game facilitation.

MODIFICATIONS FOR USE IN LOW INCOME SCHOOLS

None needed

IMPRESSIONS

Make up school specific trivia questions with school specific maps. Using this lesson format, more trivia questions can be created for different grades. Create a math-centered class with walk/bike math questions, for example "Q: in one rotation how far does a bike travel? A: a distance equal to its wheel circumference."

SOURCE

Alameda County SR2S

Walk and Roll Team Trivia

Overview

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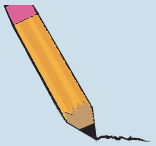
Supplies



- ✓ *Otto the Auto* DVD
- ✓ Rewards/Prizes

A Few Facts to Share:

- 45-85% of all head injuries from bicycle accidents could be avoided if bicyclists wore helmets.
- Kids today live a more sedentary lifestyle than they did 30 years ago and don't get enough regular physical activity.
- In many cities across the United States the motor vehicle is the single greatest polluter.
- Approximately 5 million children in the United States suffer from asthma, causing over 14 million lost school days per year.
- In many areas it is estimated that 20 to 30% of peak morning traffic is school-related.

Activity: Walk and Roll Team Trivia

This game will test students' knowledge of bike and pedestrian safety. To warm students up, show the Otto the Auto DVD or have a discussion about the importance of walking and rolling. Share these ideas if students don't already mention them:

- Reduce pollution
- Great physical activity
- Reduce traffic congestion around school
- It's fun

- Copy the Team Trivia Game Board onto the white board.
- Divide the class into 4 teams. Teams will work together to come up with the answers.
- Have each team pick a team name. Encourage names that are walk or roll related.
- Have each team choose a scorekeeper, and spokesperson who will select categories and report out answers.
- Teams will alternate choosing a category and point value/level and answer questions.
- Answers can be reported by writing on a piece of paper that they hold up or be announced verbally.

Tips for Success!

- Determine prizes ahead of time. Rewards that students value can work well, such as getting dismissed first for recess, extra free time, etc.
- Keep track of the team scores and have fun!

Team Trivia Game Board

Walk This Way	Safe Cycling	Why We Walk and Roll
10	10	10
20	20	20
30	30	30
40	40	40

Team Trivia Questions

Walk This Way

10 points
What should you do if you are halfway across the street and the green WALK signal changes to a flashing DON'T WALK signal? You should:
A. Keep walking at a normal pace to get to the other side of the street.
B. Turn around and go back.
C. Run the rest of the way across the street.

Answer: A
You should never run in the street because you could fall down. Explain that even after the don't walk signal starts flashing, opposing traffic remains at a red light for a few seconds longer so that pedestrians have a chance to get across the street.

20 points
Which side of the street do you want to walk on when there is no sidewalk?
A. On the side of the street that faces oncoming cars
B. On the other side, in the same direction as the cars?

Answer: A
We do this because it is easier for the drivers to see us because we can look through the windshield at the person driving the car and try to make eye contact.

30 Points (*10 points for each*)
What are the three things you should do every time you come to the "edge" of the sidewalk, after you stop?
A. Wave your arms, look left and run
B. Look left, right and left again
C. Listen, look over your shoulder, step off the curb

Answer: B
We look left then right, then left again to make sure no cars have come while we were looking to the right.

40 points
Recite the rhyme, *Use Your Head before your feet*, and explain why it is important to do all of these things.

Answer: Stop every time at the edge of the street.
Use your head before your feet.
Make sure your hear every sound.
Look left, right, left and all around!

- It's important to be a smart pedestrian
- Cars don't always stop
- Drivers don't always see you

Safe Cycling

10 points
True or False? Bicyclists have to follow the same rules as cars when riding in the street?

Answer: True

20 points
What color lights do you need on your bike and which one goes where?

Answer: White light in front, red light in back

30 points
How do you make sure your bike is safe and in good condition before riding?

Answer: ABC Quick Bike Check.
A– Air in the tires, B– Brakes , C -Chain

40 points
True or False? (*10 points*)
Is it illegal to ride your bike, skateboard or scooter without a helmet in California if you are under 18 years old?
Answer: True

True or False? (*10 points*)
Can you get a ticket for not wearing a helmet if you are under 18?
Answer: True

Where on your head should your helmet be placed for it to fit and function properly? (20 points)
Answer: Your helmet should sit level on your head with space for two fingers between your eyebrows and the helmet.

Why We Walk and Roll

10 points
Walking and rolling to school can count towards the number of minutes of physical activity recommended for children. What is the daily recommendation?

Answer: At least 60 minutes a day of physical activity.

20 points (fill in the blank)
The increase in the earth's temeperature is called_____. The negative effect it is having is called _____.

Answer: Global Warming, Climate Change

30 points
Carbon Dioxide is the dominant greenhouse gas that causes climate change. What is the % of Carbon Dioxide emission caused by transportation in Alameda County?
A. 10%
B. 46%
C. 25%

Answer: B

40 points
Explain in your own words what Global Warming is? List 4 things you can do to help prevent it.

Possible answers: Ride your bike and walk to places, carpool to or from school, take the bus or BART to places, ask your parents to give up driving for 1 day a week, plant trees, etc.

What's the Speed Limit?

LESSON PLAN OVERVIEW

SUGGESTED GRADE LEVEL	**K 1 2 3 4 5 6 7 8**
SUGGESTED TIME	varies
SETTING	auditorium classroom gymnasium outside
LEARNING STYLE ACCESS	auditory kinesthetic visual

OVERVIEW

Students will learn about the importance of speed limits in our communities and investigate the area around the school to see if cars are speeding. Using data sheets, students will collect speeds and analyze the results to determine the driving behaviors of drivers in the school zone.

MATERIALS

Copies of How Fast are Cars Going? (grades 2-3)
Copies of Are Cars Speeding? and Speeds and the School Zone (grades 4-5)
Speed Detector Device. The recommended device is typically used for baseball pitch readings - a Bushnell Velocity Speed Detector. Many baseball and softball leagues and physical education teachers use them. Safe Routes can make this device available to you for this project.

VOCABULARY

community, velocity, radar, municipality, anecdotes

MODIFICATIONS FOR CHILDREN WITH DISABILITIES

Use computer to input numbers and create a graph of speeds, be in charge of the radar gun.

MODIFICATIONS FOR USE IN LOW INCOME SCHOOLS

None needed

IMPRESSIONS

Kids will love using a radar gun! This can be sourced from baseball team or local police.

SOURCE

Alameda County SR2S

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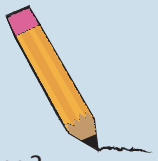

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Activity: How Fast are Cars Going?

- Begin with a discussion about speeding cars. Ask students to list all of the ways that speeding cars affect their daily lives. Students should feel free to share anecdotes, emotional reactions, daily routines, etc.
- Establish the idea of a school zone. Ask students how speeding cars affect the area around the school. Discuss speed limits and let them know the general area speed limit and the one established in the school zone. Explain that speed limits protect people.
- Introduce the idea of a radar detector and let students know they will be using one to find out about the speed of cars in the school zone. You will want to show them the device before you go outside and let the students know they will each take a turn with the device.
- First go to the main street near the school. Ask students to line up and take speed-readings one at a time. Each student should shout out their readings so the whole class knows what number to write down. Each student should record the speeds they hear on the chart. You may also use a small white board to write down the speeds as they are read, so that students may read the number as well.
- If you are working with older students, go to a second location, preferably a side street, to get another set of readings. If there is time, each student should take at least one reading.
- Students should then look over the speeds they recorded and note the highest speed they saw. Ask them to note some common speeds that they recorded. Are people speeding in the school zone?

Now What?

Letters to area officials – If you find that people are speeding in the school zone, you might want to have students write letters about the conditions in your area. Suggestions:

- Head of Transportation in your municipality
- Elected officials in your town or city
- Law enforcement

Name: _____

How Fast are the Cars Going?

Record each speed reading in the chart below.
See if you can fill in all 50 boxes!

We will see what the highest speed is at the end!

start here

A					
B					
C					
D					
E					
F					
G					
H					
I					
J					

What's the Speed Limit?

LESSON PLAN OVERVIEW

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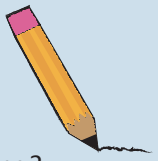

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Name: _____

Are Cars Speeding?

How fast are the cars going here?

Location 1:

Location 2:

Safe Routes to Schools
Alameda County

Why Should I Wear a Helmet?

LESSON PLAN OVERVIEW

SUGGESTED GRADE LEVEL	K 1 2 3 4 **5 6 7 8**
SUGGESTED TIME	one class period
SETTING	auditorium classroom gymnasium outside
LEARNING STYLE ACCESS	auditory kinesthetic visual

OVERVIEW

Cyclists will experience a simulation of brain damage. Cyclists will understand how a helmet protects fragile skulls.

MATERIALS

Pens or pencils, Student workbook or copies of Do You Wear a Bike Helmet questionnaire (page B2-5), Hand-held mirror for each student, Student workbook or copies of mirror exercises

VOCABULARY

brain damage, perception, disability

MODIFICATIONS FOR CHILDREN WITH DISABILITIES

Printouts for students to have in front of them.

MODIFICATIONS FOR USE IN LOW INCOME SCHOOLS

Bring your own supplies and mirrors.

IMPRESSIONS

A very unique approach to teaching the importance of helmets and attempting to understand brain damage.

SOURCE

Bike New York

2. Why Should I Wear a Helmet?

OBJECTIVES

- Cyclists will experience what brain damage is like.
- Cyclists will understand how a helmet protects fragile skulls.

TEACHER'S NOTE: Students may offer many reasons for not wearing a helmet while cycling. Excuses often reflect fears about their appearance ("Helmets look geeky," "Helmets are for babies," "They mess up my hair," "No one on my block wears a helmet"), as well as the belief that they will never have an accident ("I know how to ride a bike," "If I'm about to crash into a car, I'll just jump out of the way"). The statistics do not support these arguments. Some 83% of all bike crashes do not involve a motor vehicle according to the League of American Bicyclists, and a New York City Department of Health study showed that 97% of cyclists who had fatal crashes were not wearing a helmet.

Teaching about helmets helps students develop a less self-conscious and more positive, practical attitude toward wearing them. It's important to treat helmets as part of the sport, and to compare cycling to other sports where the use of helmets and other safety gear is normal and expected.

If students have shown resistance to wearing a helmet, the following activities will reinforce the importance of doing so.

FUN FACT: The one-minute mile was a goal that cyclists had been inching toward when **Charles Murphy**, with the help of the Long Island Railroad, achieved it on June 30, 1899.

Murphy, a professional racing cyclist, had been bragging that no train could outpace a cyclist as long as the bike was equipped with a high-enough gear to sustain a speed of 60 mph. But Murphy had a trick up his sleeve: he knew that if he could stay right behind the train, it would pull him along in a pocket of calm air. Cyclists today call this "drafting."

A public relations official for the Long Island Railroad saw an opportunity to prove to the public that the railroad wasn't as slow as everyone believed. The railroad constructed a special wooden track on a stretch between Farmingdale and Babylon, and after weeks of training, the sprint was on. Murphy drafted closely behind the train, even catching up to it and striking the rear car six times. Dust, cinders, and gravel were flying into his face. It was a very dangerous feat, and at the end, he was nearly killed when he almost ran out of wooden track between the rails. People on the rear car grabbed Murphy and pulled him aboard.

He had done it, covering one mile in 57.8 seconds, which earned him the nickname "Mile-a-Minute Murphy." Murphy later became a New York City police officer.

2. Why Should I Wear a Helmet?

ACTIVITY A: DO YOU WEAR A HELMET?

Necessary Resources

- Pens or pencils
- Student workbook or copies of Do You Wear a Bike Helmet questionnaire (page B2-5)

Instructions

Have the students fill out the Do You Wear a Bike Helmet questionnaire. To encourage honest answers, tell them they should not write their names on it. Collect the questionnaires and study the types of answers. Discuss the responses and counter-responses with the students.

Typical responses	**Ask students for possible solutions or counter-responses**
Helmets mess up my hair.	Carry a comb or brush to use after you take off your helmet.
Helmets look stupid.	Most passersby won't know you and won't care that you're wearing a helmet. Get a helmet that you like and make sure it's adjusted properly on your head. Show students pictures of cyclists with head or face injuries resulting from bike crashes while not wearing a helmet. Do the "brain damage" exercise below. (Activity B) Your family and friends won't think you look stupid for trying to protect yourself and be safe.
I'm a good cyclist and don't need a helmet.	All competitive bike events require participants to wear helmets. Even professional racers must use helmets.
I'll just ride on the sidewalk, not in the street.	83% of all bike accidents don't involve a collision with a motor vehicle. (*Source:* League of American Bicyclists)
No one in my neighborhood wears a helmet.	Discuss peer pressure. Making the same mistake everyone else is making will not prevent a head injury. Discuss students' dreams for their future. How might a head injury prevent them from reaching those goals?
It won't happen to me.	Have students read about people who were saved by their helmets (www.helmets.org/crashes.htm) and people who were not wearing helmets when they crashed (www.helmets.org/crashmor.htm).

2. Why Should I Wear a Helmet?

ACTIVITY B: BRAIN DAMAGE EXERCISE

Necessary Resources

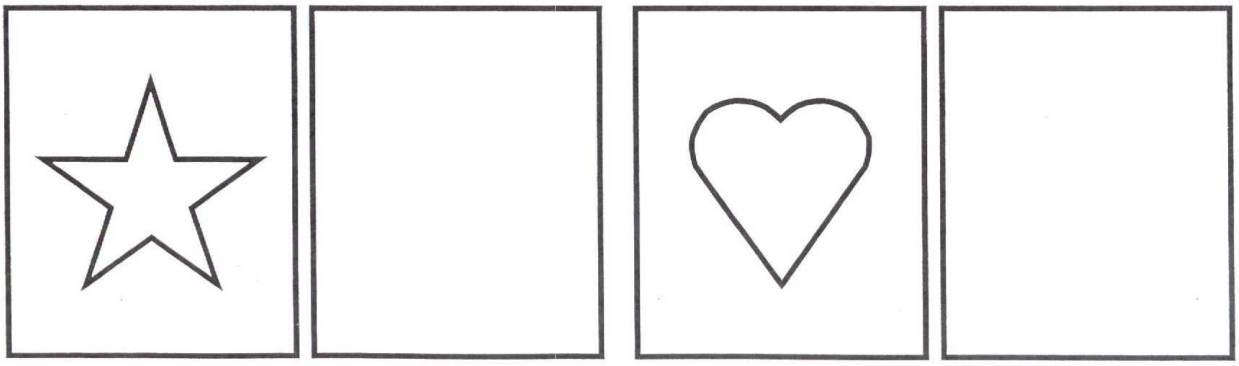
- Hand-held mirror for each student
- Pencils or pens
- Student workbook or copies of mirror exercises, below

Instructions

Ask students what they think having brain damage is like. Have them perform the mirror exercises below. These exercises approximate the difficulties someone with brain damage might have performing even simple tasks.

Looking only at the mirror, write your name in the box below. Do not look at the paper, only the reflection of the paper.

Looking only at the mirror, recreate the two shapes.



2. Why Should I Wear a Helmet?

ACTIVITY C: WHAT DIFFERENCE DOES A HELMET MAKE?

Necessary Resources

- An egg for each student
- Styrofoam cups and paper napkins for half the students
- Small sandwich bags for half the students
- Newspapers

Instructions

- Distribute eggs and newspapers to all students. Have them place the newspapers on the floor in front of them.
- Give cups and napkins to half the students. Ask them to wrap the napkin around their egg and place it inside the cup.
- Have the other students place their egg in a sandwich bag, seal it.
- Have both groups drop their eggs onto the newspaper. Compare the results. Explain that bike helmets are made of the same material as the Styrofoam cups, although stronger and more compressed.

- **Alternative drop test:** Use a bike helmet with a melon strapped into it, and a helmetless melon.

2. Why Should I Wear a Helmet?

Do You Wear a Bike Helmet?

1. Do you own a bike helmet? Yes No

2. Do you wear a bike helmet every time you ride? Yes No

If the answer to 1 or 2 is no, please answer 3.
3. List all the reasons you don't wear a bike helmet in the space below.

Do You Wear a Bike Helmet?

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