

## Smart Moves Lesson 8

### Safety

#### Overview:

Students read descriptions of transportation crashes, play a game that requires them to identify transportation safety rules, and then observe and record safe and unsafe behaviors in the community.

#### Objectives:

Students will be able to:

- Identify unsafe behaviors around transportation.
- Understand that unsafe behaviors can result in serious injury.
- Define safe behavior for pedestrians, drivers, and passengers.
- Apply their knowledge of safety rules to observations in the community.

**Time:** 2 class periods

#### Materials:

- Student Handout: *That Hurts!*
- Teacher's Resource for *That Hurts!*
- An appropriate number of 5" x 8" cards or blank sheets of paper
- Teacher's Resource: *Safety Questions*
- Small Band-Aids (enough for each team to have an ample supply)
- Student Handout: *Safety Surveillance*

#### Procedure:

1. Write on the board the words *bicycle, bus, car, skateboard/in-line skates, train, and feet.*

Ask the students whether anyone has been in an accident involving these types of transportation. If so, have them describe the accident and suggest what could have been done to prevent it. Tell the students that many transportation mishaps commonly called "accidents" could have been prevented. Suggest that because "accidents" are unforeseen events for which no one is to blame, the words "crash" or "collision" more appropriately describe many of the "accidents" on our streets and highways. Tell the students that they are going to talk about the blood, guts, pain, and sorrow of transportation collisions and how this misery can be prevented.

2. Distribute the handout *That Hurts!*. Have students read aloud the descriptions, identify what modes of transportation were being used, and discuss how the collisions could have been prevented. (The Teachers' Resource for *That Hurts!* offers ideas for preventing each crash.)

(Optional: Of the five modes of transportation discussed, determine by a show of hands which types students are most likely to use. During the following steps, use those pages of the Teachers' Resource *Safety Questions* that reflect how most students get about.)

Tell the students that they will play a game that requires them to think more about transportation safety.

3. Divide the group into teams of four to six.

Tell each group to choose: 1) a secretary, 2) an EMT (emergency medical technician) and, 3) a crash victim. Give each team a stack of 5" x 8" cards or sheets of blank paper and an ample supply of Band-Aids.

4. Explain the following game rules:
  - You (or a student moderator) will ask a series of transportation safety questions.
  - As a team, students will decide upon the right answer, whereupon the team secretary will print the answer on a card. When you give the signal, the secretaries will display the answers simultaneously to the whole group.

--For every incorrect answer, each team's EMT will affix a Band-Aid to the crash victim's forehead. At the end of the game, the team whose crash victim has the fewest Band-Aids will be declared winner.

5. Read the questions from the Teacher's Resource *Safety Questions*, and after the teams present their responses, supply the correct answer. Briefly discuss the questions and answers, connecting them to the crash descriptions on the handout *That Hurts!* or to the crashes they have described during the lesson's Introduction. Have the ETMs from teams with incorrect answers affix Band-Aids to the crash victims.
6. Once all the questions have been read, teams can remove Band-Aids one-by-one from their crash victims (and improve their chance of winning) by recalling and explaining the correct response to each question to which they gave an incorrect answer. Count the Band-Aids remaining on the crash victims and declare a winner.
7. Tell the students that they will now practice outside of class what they have learned by being alert for safe and unsafe behaviors, recording them, and then sharing their observations. Distribute the handout *Safety Surveillance*. Preview the examples. Ask students to focus on recording times when they might have been tempted to behave in an unsafe way but then remembered to be cautious. Request that students fill in at least three boxes. Set a time for students to bring the completed handouts back to class and explain the safety observations they recorded and any improvement in their own behavior.

**Assessment Opportunities:**

- Explanations of safety rules from *That Hurts!*
- Answers to the safety game
- Descriptions of behavior on the handout *Safety Surveillance*

**Extensions:**

*A Visual Organizer*

Students can interpret and present the information that they recorded on the handout *Safety Surveillance* in a graph, table, or chart. If possible, encourage the class to use computer software for this. Students might produce a bar chart showing the approximate age of people that they observed engaging in unsafe behavior or identify situations and places where people are most likely to jaywalk.

### *A Safety Campaign*

- Have students develop safety slogans or a safety program using the information they learned in class.
- Reproduce the Teacher's Resource *Safety Questions* and distribute it to the students. You might photocopy and post the "What Do You Know Bingo" questions found in this manual as well. Invite students to use the rules from these handouts to design their own safety games to be used by them and students in other classrooms. These games could be board games, puzzles, or charades.

### **Benchmarks:**

#### **English**

##### *Reading*

Demonstrate literal comprehension of a variety of printed materials.

- Identify sequence of events, main ideas, facts, supportive details, and opinions in literary, informative, and practical selections.

Demonstrate inferential comprehension of a variety of printed materials.

- Examine relationships, images, patterns, or symbols to draw conclusions about their meanings in printed materials.

#### **Health**

##### *Controllable Health Risks*

Predict short- and long-term consequences of safe, risky, and harmful behaviors.

*Safe and Healthy Environment*

Explain safe physical, social, and emotional environments for individuals, families, schools, and communities.

Apply injury prevention, first aid and emergency skills.

**Resources:**

**The National Center for Injury Prevention and Control** provides information on preventing

**The Riley Hospital for Children** in Indianapolis, Indiana has an excellent online resource manual for teaching children about safety, including a Skateboard Safety Fact Sheet, at

<http://www.rileyforkids.org/safetysmart/professional/skateboard>.

**HANDOUTS**

## *Handout 1 - That Hurts!*

Bicycle, Bus, Car, Skateboard/In-line Skates, Train, Feet

Identify which types of transportation the young people in the stories below were using when they had the collisions. Then suggest how each collision might have been prevented.

### Preventable Collision 1

Some middle school students were horsing around on their way home from school. Waiting for the light to change at an intersection, one of them 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 the young man with its bumper. The blow threw him into the air and back onto the curb. A dental surgeon repaired and implanted his front teeth. An orthopedic surgeon repaired his leg and pelvic bones.

### Preventable Collision 2

They were only three blocks from home. The young man had finished arguing with his brother about whether to tune into KNRK or KISN and was just fastening his seat belt when his brother 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, the young man'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's wearing a neck brace and still in serious pain.

### Preventable Collision 3

The front wheel of the young man's vehicle slipped into the pavement expansion joint on the Morrison Bridge just past the entrance to the I-5 freeway. He was thrown off, but luckily not into traffic. Unfortunately his head bounced against the pavement. Because of his bruises and facial swelling, his parents didn't recognize him at the emergency room.

#### Preventable Collision 4

The young woman spotted her friend waiting at the station on the opposition side of the street. She darted across the tracks. The operator of this quiet mode of transportation did not have time to warn her or apply the brakes. You don't want to know the details.

#### Preventable Collision 5

The young woman thought that jumping the curb wasn't a big deal until a nurse had to pick the gravel out of her kneecap and shin. And then 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.

## TEACHER'S RESOURCE

### *Teacher's Resources 1 - for That Hurts!*

Bicycle, Bus, Car, Skateboard/In-line Skates, Train, Feet

Identify which types of transportation these young people were using when they had the collisions and then suggest how each collision might have been prevented.

#### Preventable Collision 1

Some middle school students were horsing around on their way home from school. Waiting for the light to change at an intersection, one of them 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 the young man with its bumper. The blow threw him into the air and back onto the curb. A dental surgeon repaired and implanted his front teeth. An orthopedic surgeon repaired his leg and pelvic bones.

Transportation: Feet

The collision could have been prevented by:

- Not horsing around on a busy street
- Staying focused on traffic
- Anticipating what drivers might do

#### Preventable Collision 2

They were only three blocks from home. The young man had finished arguing with his brother about whether to tune in KNRK or KISN and was just fastening his seat belt when his brother 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, the young man'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's wearing a neck brace and still in serious pain.

Transportation: Car

The collision could have been prevented by:

- Fastening seat belts before driving
- Not distracting the driver

Preventable Collision 3

The front wheel of the young man's vehicle slipped into the pavement expansion joint on the Morrison Bridge just past the entrance to the I-5 freeway. He was thrown off, but luckily not into traffic. Unfortunately his head bounced against the pavement. Because of his bruises and facial swelling, his parents didn't recognize him at the emergency room.

Transportation: Bicycle

The collision could have been prevented by:

- Using bike lanes whenever possible
- Crossing pavement joints, rails, etc. at a 90 degree angle

Preventable Collision 4

The young woman spotted her friend waiting at the station on the opposition side of the street. She darted across the tracks. The operator of this quiet mode of transportation did not have time to warn her or apply the brakes. You don't want to know the details.

Transportation: Train

The collision could have been prevented by:

- Looking and listening before crossing tracks
- Taking NO chances, including never trying to beat at train

#### Preventable Collision 5

The young woman thought that jumping the curb wasn't a big deal until a nurse had to pick the gravel out of her kneecap and shin. And then 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: Skateboard, Roller Blades, or Scooter

The collision could have been prevented by:

- Wearing knee pads and shin protection
- Not doing tricks on the sidewalks

#### *Teacher's Resources 2 - Safety Questions*

#### **Bicycles:**

1. Bicycles are vehicles and must follow the same rules as other vehicles. Yes or no?

Answer: Yes

Discussion: This includes coming to a full stop at stop lights and stop signs and signaling for turns. Cyclists can be ticketed and fined for failing to follow the rules.

2. By law, bicyclists must ride on which side of the street?

Answer: Right side

Discussion: Remember bicycles must follow the same rules as motor vehicles.

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

Answer: Bike helmet

Discussion: Head injuries are very dangerous. A helmet is a must, and football or hockey helmets do not work as bike helmets. Buy a helmet that is certified by the American Society for Testing and Materials (ASTM) or the Snell Memorial Foundation. There will be a sticker label on the inside of the helmet or on the outside of the box.

4. Of the 800 people per year in the United States who die from bike crashes, what type of injury do most sustain?

Answer: A head injury

Discussion: Hospital emergency room studies show that a helmet can prevent about 85% of head injuries.

5. How do bicyclists communicate with other drivers?

Answer: Hand signals

Discussion: Demonstrate, or ask students to demonstrate, the hand signals.

6. What type of clothing should cyclists wear to be seen by drivers?

Answer: Bright clothing

Discussion: Neon or florescent colors are good choices.

### **Cars:**

1. One out of how many people will be seriously injured in a car crash sometime during their life? One out of 100? One out of 10? One out of 3?

Answer: One out of 3

Discussion: Have the students figure how many people in the class will be injured according to statistics. If the class has 30 students, for example, 10 of them are likely to be seriously injured in a car crash.

2. What is the first thing you should do when you get into a car?

Answer: Buckle your seat belt.

Discussion: It's essential for safety and it's the law.

3. What's the average time it takes to "buckle up"?

Answer: Three seconds

Discussion: It's a tiny amount of time that could save your life.

4. Within how many miles of home do most car crashes occur? Within 100 miles? 50 miles? 25 miles?

Answer: Within 25 miles of home

Discussion: It's important to fasten your safety belt even for short trips.

5. What is the safety device housed in the dashboard that deploys during a frontal crash?

Answer: The air bag

Discussion: Air bags reduce injuries during crashes; however, young children and very short people should not sit in the front seat where a deployed air bag might injure or

smother them. The safest place for a child is in the middle of the back seat.

6. True or false? You have a greater chance of being killed or injured if you are thrown from a vehicle than if you are contained inside.

Answer: True

Discussion: Your chances of being killed or injured are 25% higher if you are thrown from the vehicle. Some people use the example of fire or being submerged in water during a crash as an excuse not to use seat belts, but only one half of 1% of all traffic crashes involve fire or submersion.

7. Six hundred and seventynine Coloradoans were killed in traffic accidents in 2004. (That's like wiping out a junior high school!) How many of these people died as a result of speeding? Less than half? More than half?

Answer: About 30% – about 193 people

### **Skateboarding or In-line Skating:**

1. Which one is the most common cause of skating injuries: 1) showing off; 2) irregularities in the riding surface; or 3) traveling at high speeds?

Answer: 2) irregularities in the riding surface

Discussion: Skateboards have much smaller and less compressible wheels than, for example, bicycles. As a result they are more easily affected by the interruptions in the riding surface, such as rocks, sticks and cracks. Skateboarders should know the areas where they will be riding and check for holes, bumps, and rocks.

2. What percentage of injured skateboarders are male? 50%, 75% or 90%?

Answer: 90%

Discussion: Ask the students why they think this is true. You might suggest that more skateboarders are male or that males take more risks than females.

3. The most common skateboard injury is to the 1) head, 2) elbows, or 3) wrist.

Answer: 3) Wrist

Discussion: Skateboarders often try to break their fall by extending their arms. Rolling, trying to land on the fleshy parts of the body and relaxing instead of keeping stiff can help prevent injuries during a fall.

4. One reason kids below the age of five should not ride skateboards is because they have big heads. True or false.

Answer: True

Discussion: Young children have disproportionately large and heavy heads, so when they lose their balance, they tend to lead with, and land on, their heads. Also their muscle coordination is not developed and they don't have the strength to break their fall with their arms.

### **Feet:**

1. Are more males or more females killed in pedestrian accidents?

Answer: Males

Discussion: In 1999, more than two thirds of the pedestrian fatalities were male. Statistics don't show why this is true, but ask the students to consider whether they think males take more risks.

2. If there is no sidewalk, should a pedestrian walk facing or not facing the traffic?

Answer: Facing the traffic

Discussion: This way, you can see cars coming and jump out of the way if a car is swerving toward you.

3. 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

Discussion: Drivers are often focused on the traffic. They can overlook or look past pedestrians who might be trying to cross the street.

4. What should you do if the Don't Walk signal begins to flash once you have started to cross the street—return to the curb or keep walking?

Answer: Keep walking

Discussion: The signals are set to allow enough time for you to cross safely. If you hesitate, change your mind or turn back, you might confuse the drivers.

5. What is the word for crossing the street at any point other than a marked crosswalk or corner?

Answer: Jaywalking

Discussion: Not only is jaywalking dangerous, it is illegal. You could be fined for jaywalking.

*Handout 2 - Safety Surveillance*

Example: BUS/TRAIN SAFETY

<p>Unsafe Behavior Observed</p> <p>Where: <b>downtown bus</b></p> <p>When: <b>around noon on Saturday</b></p> <p>Who: <b>older woman</b></p> <p>Description: <b>She kept talking with the driver while driver was trying to drive.</b></p>	<p>Safe Behavior Observed</p> <p>Where: <b>NE Broadway/24th</b></p> <p>When: <b>8:15pm</b></p> <p>Who: <b>Group of Fort Collins HS students</b></p> <p>Description: <b>Waited on the curb until bus came to a full stop.</b></p>	<p>MY SAFE BEHAVIOR</p> <p>Where: <b>Downtown bus station.</b></p> <p>When: <b>after movie/Friday night</b></p> <p>Description: <b>Started to step on track/ remembered it takes a train 5 blocks to stop.</b></p>
--	--	--

BUS/TRAIN SAFETY

<p>Unsafe Safe Behavior Observed</p> <p>Where:</p> <p>When:</p> <p>Who:</p> <p>Description:</p>	<p>Safe Behavior Observed</p> <p>Where:</p> <p>When:</p> <p>Who:</p> <p>Description:</p>	<p>MY SAFE BEHAVIOR</p> <p>Where:</p> <p>When:</p> <p>Description:</p>
---	--	--

**CAR SAFETY**

<b>Unsafe Safe Behavior Observed</b>  Where:  When:  Who:  Description:	<b>Safe Behavior Observed</b>  Where:  When:  Who:  Description:	<b>MY SAFE BEHAVIOR</b>  Where:  When:  Description:
---	--	--

**PEDESTRIAN SAFETY**

<b>Unsafe Safe Behavior Observed</b>  Where:  When:  Who:  Description:	<b>Safe Behavior Observed</b>  Where:  When:  Who:  Description:	<b>MY SAFE BEHAVIOR</b>  Where:  When:  Description:
---	--	--

**SKATEBOARD SAFETY**

<b>Unsafe Safe Behavior Observed</b>  <b>Where:</b>  <b>When:</b>  <b>Who:</b>  <b>Description:</b>	<b>Safe Behavior Observed</b>  <b>Where:</b>  <b>When:</b>  <b>Who:</b>  <b>Description:</b>	<b>MY SAFE BEHAVIOR</b>  <b>Where:</b>  <b>When:</b>  <b>Description:</b>
---	--	---