



let's get there together

**A South Carolina
Bicycle Safety Curricula**

for all audiences, in a classroom setting



About the Safe Streets Save Lives (SSSL) campaign

The Palmetto Cycling Coalition, in collaboration with Bikelaw and the South Carolina Department of Public Safety (SCDPS), is pleased to present Safe Streets Save Lives, a long-term, strategic bicycle-safety campaign in South Carolina to bring public awareness to the need for safer roadways for bicyclists. The campaign began in 2011 with the production of four videos to educate the general public on bike laws and safe riding practices. Each video is 1 minute long and addresses bike law and safety education for both bicyclists and drivers: 1) Bicycle riding in traffic, 2) Signals and safety, 3) Sharing the Road (for motorists), and 4) the new SC Anti-harassment law. Phase 2 of the campaign began in 2012 and launched the videos into various media throughout the state. You can request a hard copy of the videos sent to you by emailing info@pccsc.net.

Two types of curricula were developed to compliment the videos with more direct instruction. What you're reading now is meant for a classroom setting, but it can be taught by anyone, including schoolteachers, community & church leaders, and others. It is also available on the website www.safestreetssavelives.com and on the SCDPS website www.scdps.gov. The second type is a Powerpoint presentation, complete with 44 slides, in circulation with trained Safe Streets Ambassadors for the campaign. For more information on finding an Ambassador near you, please inquire to info@pccsc.net. One near you may be able to present to your class (geared to Grades 6 and above).

Basic Bicycle Safety Facts for South Carolina

Facts

- In one generation, the percentage of U.S. children who walk or bike to school has dropped by 70%. Childhood obesity has tripled.
- The number of people commuting by bicycle in South Carolina rose 62% from 2005 to 2012.
- The U.S. could save 262 million of gallons of gasoline a year by increasing bicycling from 1% to 1.5% of all trips.
- One in 12 U.S. households does not own an automobile.
- South Carolina has some of the most progressive laws concerning bicycle safety, yet according to the Alliance for Biking & Walking 2014 Benchmarking Report, our state reports the 6th highest # of bike fatalities per 10,000 bicycling commuters, in the nation.
- Bike safety Education, combined with improved Engineering and Enforcement, leads to more bike friendly communities.
- Riding a bicycle, for any pursuit, is a whole lot of fun.

Rights and rules for bicyclists sharing the road:

- Bicyclists must always ride in the same direction as traffic.
- Generally, a bike is to be driven like a car, in the right-most lane, and as far to the right in that lane as is practical.
- If a road has a bicycle lane with markings for the exclusive use of bicyclists, these lanes must be used by bicyclists, unless passing another bicyclist or obstruction, or if the intended direction of travel lies outside of that lane.
- A bicyclist must obey all traffic signs and traffic lights and use hand signals.
- South Carolina law dictates that bicyclists can ride no more than two side-by-side.

- When riding at night, bicyclists must have a white light on the front of their bikes that can be seen from a distance of at least 500 feet and a rear red reflector must be visible from at least 50 feet, but a rear red blinking light is safest.

Rights and rules for motorists sharing the road:

- Drivers of motor vehicles must maintain a safe operating distance between the motor vehicle and the bike. Pass with caution, slow down and give at least three feet.
- It is unlawful to harass, taunt or maliciously throw an object at or in the direction of anyone riding a bike.
- Understand and pay attention to bicyclists' hand signals.
- Use caution when driving through intersections. Most car-bicycle collisions occur at intersections where bicyclists are often difficult to see or their actions are hard to predict.

Table of Contents

<u>Duration</u>	<u>Age Range</u>	<u>Content</u>	<u>Page</u>
1 ½ hour	Grades 5-8	Measuring Bicycle Ridership	5
1 hour	All Ages	Bicycle Road Rules	6
45 minutes	All Ages	Right-of-Way Rules	9
30 minutes	Grades 3-12	Bike Laws	13
30 minutes	All Ages	Bike Law Pantomime	14
30 minutes	All Ages	Road Hazards for Bicyclists	15
15 minutes	All Ages	My Get-Around-Plan	18
45 minutes	Grades 5-8	SRTS Strategies for Safer Bicycling	19

Measuring bicycle ridership

- 1½ hour, (Grades 5-8)

Getting Started.

Do our schoolmates ride bikes to school? Do you think it's easy to bike to school or is there too much traffic?

Teach.

We will go and measure the daily bicycle ridership to school. We are going to launch an investigation to study our school's travel and bicycle behavior. Kids are grouped into sets of 3, with 2 extrovert survey takers and 1 note taker. One must be a leader and responsible. The group will walk around to other classrooms on their hall and conduct a 3 minute survey. Class develops survey questions that will generate both numeric and categorical responses for all types of graphs.

Sample survey questions: How many ride a bike to school? How many ride the bus? How many are dropped off in a car? Is it easy to bike to school or is there too much traffic? What do we need to ride a bike more often? How many own a bicycle helmet? How many are allowed to ride their bicycle to school? How many own a bicycle? How many would like to ride their bicycle to school?

Before sending them into the halls, make sure they know the type of graph that matches each survey question.

(Optional: Have students collect data for the entire school, for a Safe Routes to School program element, identifying specifically 1) who currently bikes, 2) who owns a bike, and 3) who would like to bike to school.)

Demonstrate/Explore.

Analyze Data: Upon return, combine all note takers to add up all data. The survey takers can simultaneously begin drawing their graphs on large paper. Note takers join in.

(Optional: Have students calculate the current percentage of the entire student body that 1) bikes to school, 2) owns a bike, and 3) would like to bike to school. Set realistic and achievable goals for increasing these percentages. Calculate the growth percentages. Devise solutions and strategies for achieving that growth. Explain that we will try to implement some of these solutions during our Bike-to-School Day promotion and by talking with the principal about the need for such changes.)

Summarize.

Verbally quiz kids, through question and answer, on the various things they learned, including summary stats or trends from the graphs generated.

(Optional: Kids present their graphs to class.)

Materials needed.

Large paper with markers for making graphs.

Could use Safe Routes to School Student Travel Tally for questions.

Bicycle Road Rules

- 1 hour (All Ages)

Getting Started.

Get to know the audience.

Are you a bicyclist? What kind of bike do you ride? Where do you ride?

Watch the four one-minute Safe Streets Save Lives videos for bicyclists and motorists, either with your DVD (request one at info@pccsc.net) or stream it live at: www.safestreetssavelives.org/psa-video-loop/

Teach/Demonstrate/Explore.

In all states, bikes generally have to follow the same rules of the road as cars. While a bike doesn't have a steering wheel, how would you "drive" it like a car?

Teach basic bike laws.

Law 1) Ride as a vehicle, ride with traffic, and obey all traffic signs.

Have students come to the board and draw all traffic signs they know. Inquire about why bicyclists should follow the same traffic laws as motorists.

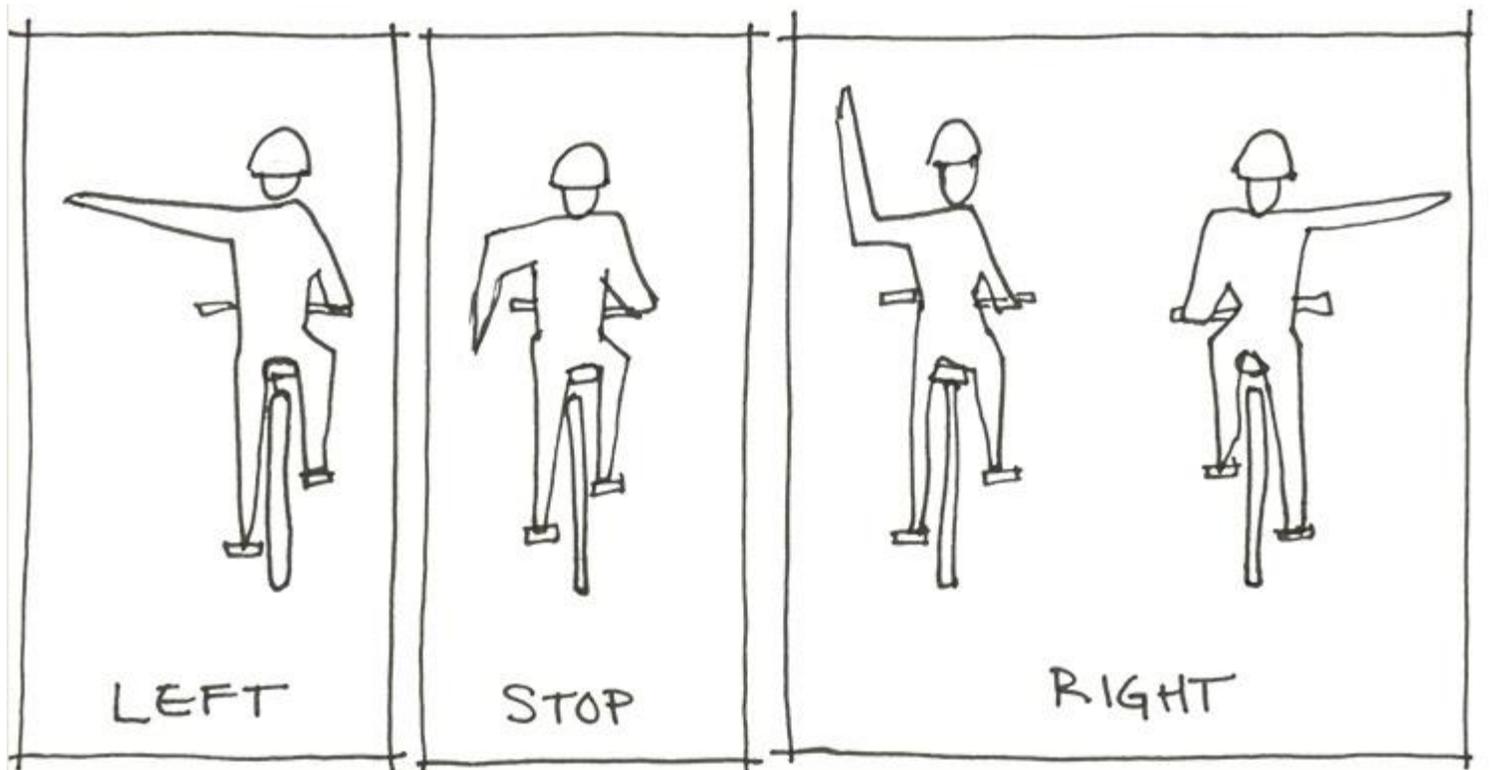
Traffic Signs.



Law 2) Stay in the bike lane unless your destination lies in a different direction. For instance, if you need to pass another bicyclist, turn left, or if a roadway obstruction exists, you would move outside of the bike lane. **Law 3)** Ride as far to the right as practicable.
Ask a student to define practicable.

Law 4) Signal when turning. Signal right, with a) your right arm extended out straight, or b) by extending your left up into the air, and signal left by extending your left arm out straight.
Ask students: What do you do if you need to turn right? Have a student come to the front of the class and demonstrate the 2 options. Then ask another student to demonstrate the signal for turning left.

Hand Signals.



Law 5) Don't ride more than two abreast, or two side-by-side; **Law 6)** The motorist must maintain a safe passing distance from a bicyclist.

Ask students: What does a safe passing distance mean, and why is it mostly the responsibility of the motorist?

Law 7) Don't ride with someone on your handlebars or the rear of a BMX bike.

Ask students: As much fun as this is, if you have one bike seat, that's the same number of people that should be on your bike.

Law 8) It's unlawful for a motorist to harass you on a bicycle, and it's unlawful for them to throw anything at you maliciously.

Ask students: But what if they just yell at me? What else can they do that breaks the law? How do I turn them into the police?

Law 9) Always have a front bicycle light and rear reflector (though it's best to have a rear light).

Recommended Practice, not a law, and Number 10) It's always a good idea to wear a helmet.

Summarize.

Note this one exception for bikes in SC bike law: if a bike is at a red stop light with no other vehicle for at least 2 minutes and the sensor under the pavement is unable to detect the bike to change the light, the bicyclist can proceed through the intersection when it is safe to do so.

Have students individually write a personal analysis of any of these questions:

- Why do I need to wear a helmet when I bike?
- What reasons are there for bikes having to follow the same traffic laws as cars?
- Why is it up to the motorist to have the most responsibility for maintaining the "safe passing distance" when passing a bicyclist?
- If it's only a law to have a front bicycle light, why is it suggested I should also have one in the rear?
- If a lot more bicyclists ride in the roadway than cars, would we ever need a different type of sign? Draw some examples, and explain where they would be of benefit.
- If you can think of ways to improve on your current bike design to make it better for riding long distances, explain what and how you would make those improvements.

Materials needed.

Draw-erase whiteboard or chalkboard, with either markers or chalk.

To access 4 video PSAs, either use a DVD (request one at info@pccsc.net) or stream it live at: www.safestreetssavelives.org/psa-video-loop/

Right-of-Way Rules

- 45 minutes (All ages)

Getting Started.

What happens if two vehicles (car and/or bike) go through an intersection at the same time? Obviously, we need some Right of Way Rules.

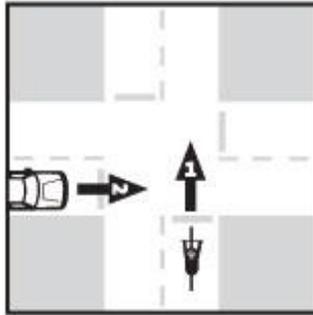
Teach.

Using the Right-of-Way Rules graphic, explain the order in which each intersection participant should pass through the intersection. Have students volunteer to act out each scenario in class.

Demonstrate/Explore.

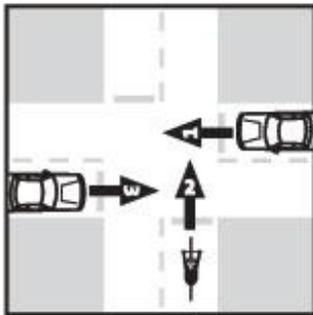
Then put people into groups, and have each group look at the Right-of-Way Worksheet graphic of hypothetical intersections. They discuss which intersection participant should pass through first, in each graphic. Walk around and guide each group towards the right conclusion, using the Additional Class/Group Discussion Questions and Right-of-Way Answer Key. Make sure groups know it well enough to act out a chosen intersection situation to the full class.

Right-of-Way Rules.



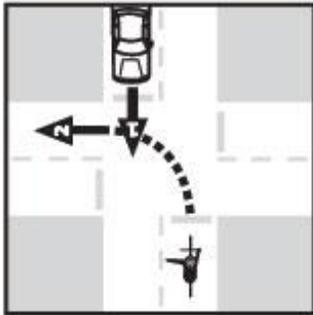
First to stop.

The first person at the intersection goes through the intersection first.



Right goes first.

When two cars get to the intersection at the same time, the person on the right goes first, they have the RIGHT OF WAY.



Straight goes first.

When two people are directly across from each other, and one is going straight and the other is turning left, the one that is going straight goes first.

Optional

Additional discussion questions are found on the answer key in the Handouts and Worksheet section of the curriculum.

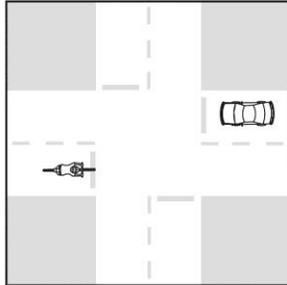
Right-of-Way Worksheet.

DIRECTIONS:

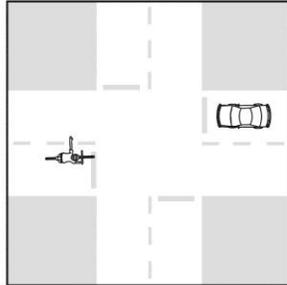
Label each intersection either 2-way or 4-way stop (pay attention to the stop lines). Circle the vehicle that has the right-of-way (the vehicle that gets to go first). See example.



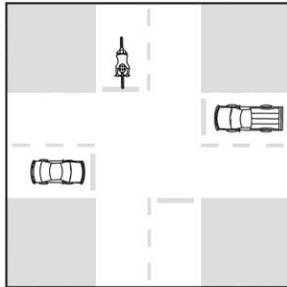
1. _____



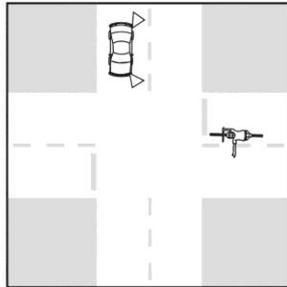
2. _____



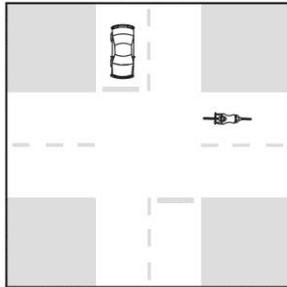
3. _____



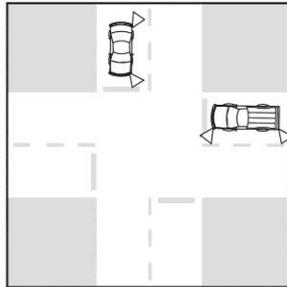
4. _____



5. _____



6. _____



Additional Class/Group Discussion Questions (for each intersection, or add your own):

1. Q: What would happen if the car and bicycle arrived at the intersection at the same time?
A: Both vehicles would stop, look for traffic and continue through the intersection at the same time.
2. Q: What would happen if the car was also taking a left turn? Can both vehicles go at the same time?
A: Both vehicles could go at the same time after stopping and checking for traffic.
3. Q: What would happen if the vehicle at the 9:00 position were turning left instead of going straight?
A: The vehicle turning left has the right-of-way because it is still the vehicle that is furthest “right” of the other vehicles. Next the vehicle in the 12:00 position would go, followed by the vehicle in the 3:00 position.
4. Q: What would happen if an additional car heading straight (from the 6:00 position), opposite the car turning left, was included?
A: The car coming straight would go first, then the turning car would turn left, and finally the bicycle would turn left.
5. Q: Who would have the right-of-way if this was a 4-way instead of a 2-way intersection?
A: The car would have the right-of-way because it is on the “right” of the bike.
6. Q: Who would have the right-of-way if both vehicles arrived at the intersection at the same time?
A: The car because it is on the “right” of the pick-up.

Right-of-Way Answer Key:

1. 4-way stop, and bike has right-of-way
2. 4-way stop, and car has right-of-way
3. 4-way stop, and car at 9:00 position has right-of-way
4. 2-way stop, and car has right-of-way
5. 2-way stop, and bike has right-of-way
6. 4-way stop, and car has right-of-way

Summarize.

Have each group act out each intersection activity with their bodies, pantomiming which type of vehicle they are by using their hands – either with a steering wheel or handle bars. Teacher instructs the class after each demonstration, to guess which vehicle should move first. The actors make the right decisions, and the audience verifies which answers are right.

Materials needed.

For each group, print out one set of Right-of-Way Rules and Right-of-Way Worksheets.

Bike Laws

- 30 minutes (Grades 3-12)

Getting Started.

How is a bike different from a motor vehicle? How is a bike the same as a motor vehicle?

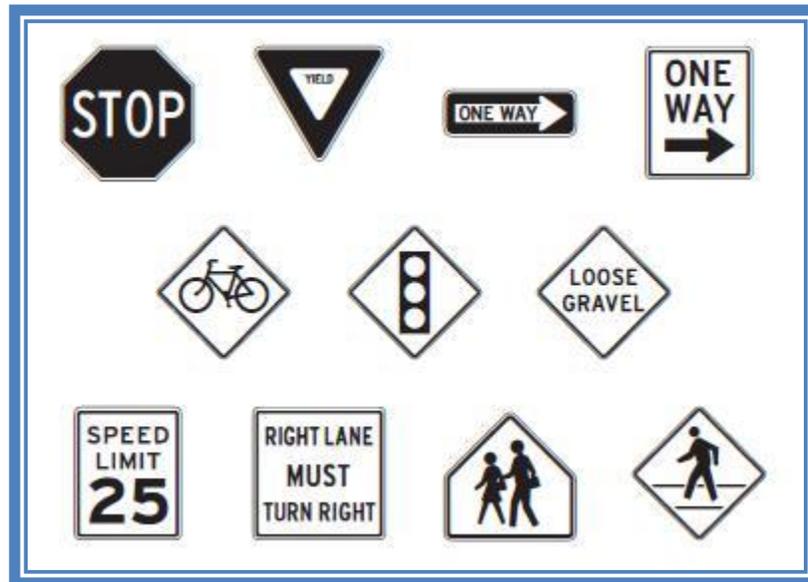
Lead to: "A bike is a vehicle."

Teach.

The first bicycle law in SC is that "a bike is a vehicle", and more exactly that "A person riding a bicycle upon a roadway must be granted all of the rights and is subject to all of the duties applicable to the driver of a vehicle." What are examples of laws for a vehicle?

Demonstrate/Explore.

Students come to the board and draw images of traffic signs in roadways that tell us the rules. Make sure to discuss: stop signs, yield signs, one way signs, traffic lights, speed limit signs, school crossing signs, no right/left turn signs, and signs indicating that multiple lanes must turn a specific direction. Some of these are pictured below.



Another set of students write the rule below each image. After a couple of minutes, have them sit down and discuss each sign.

Ask: What are other road rules, not seen in traffic signs, that all vehicles must follow?

Summarize.

Reiterate this basic concept: "A bicycle is a vehicle."

Materials needed.

Draw-erase whiteboard or chalkboard, with either markers or chalk.

Bike Law Pantomime

- 30 minutes (All ages)

Have groups pantomime (or do charades) of the various bike laws. First, review SC Bike Laws, using the cards, with the full group. Then provide a shuffled stack of SC Bike Law Cards to each group. Make sure stacks are print side down so they cannot see the words.

Divide stack evenly into two (2) groups of five (5). Each group should then act out, or pantomime, the various bike laws in their stack. Take turns miming the bike laws to the team members. Each group will assign a different person in their group each time to pantomime the bike law from the paper. The person performing the pantomime will pick up the bike law card on the top of the upside-down stack and not show it to the rest of his/her group. If the person performing the pantomime successfully convinces their group of the correct bike law within one full minute (no more than 60 seconds), then the group earns one point. As both groups work through their stack of five (5) bike laws each, the winning group is the one that earns the most points.

Materials needed.

One set of SC Bike Law Cards cut into 10 pieces, for each group.
Timer or watch

SC Bike Law Cards.

Law 1) Ride as a vehicle, ride with traffic, and obey all traffic signs.	Law 2) Stay in the bike lane unless your destination lies in a different direction. For instance, if you need to pass another bicyclist, turn left, or a roadway obstruction exists, you would move outside of the bike lane.
Law 3) Ride as far to the right as practicable.	Law 4) Signal when turning (Signal right, with a) your right arm extended out straight, or b) by extending your left up into the air, and signal left by extending your left arm out straight.
Law 5) Don't ride more than two abreast, or two side-by-side.	Law 6) The motorist must maintain a safe passing distance from a bicyclist.
Law 7) Don't ride with someone on your handlebars or the rear of a BMX bike.	Law 8) It's unlawful for a motorist to harass you on a bicycle, and it's unlawful for them to throw anything at you maliciously.
Law 9) Always have a front bicycle light and rear reflector (though it's best to have a rear light).	Recommended Practice, and Number 10) It's always a good idea to wear a helmet.

Road Hazards for bicyclists

- 30 minutes (All ages)

Getting Started.

Ask how they think most crashes occur.

Teach.

Discuss how crashes occur. Many crashes are with cars, but most are just falls. Explain the problems and threats that these hazards pose.

Demonstrate/Explore.

Place people into no more than 5 groups. Distribute the hazards handout sheets (titled “Where are the road hazards?”). Have the group work to circle the hazards and list them on the side of the sheet. Groups compete to name the most # of hazards within the hazards sheet. The group with the most # of correct hazards wins.

Optional: Make a prize available for the winning group.

Guide them to the final conclusion: Generally, riding like a car (i.e. following the rules of the road) will make you safer, because everyone following the known road rules adds to predictability in traffic flow, regardless of the presence of many different road users.

Summary.

Determine a winning group. Review answers in the process. Discuss avoidance of all of the hazards with the class, from those in the Answer Key.

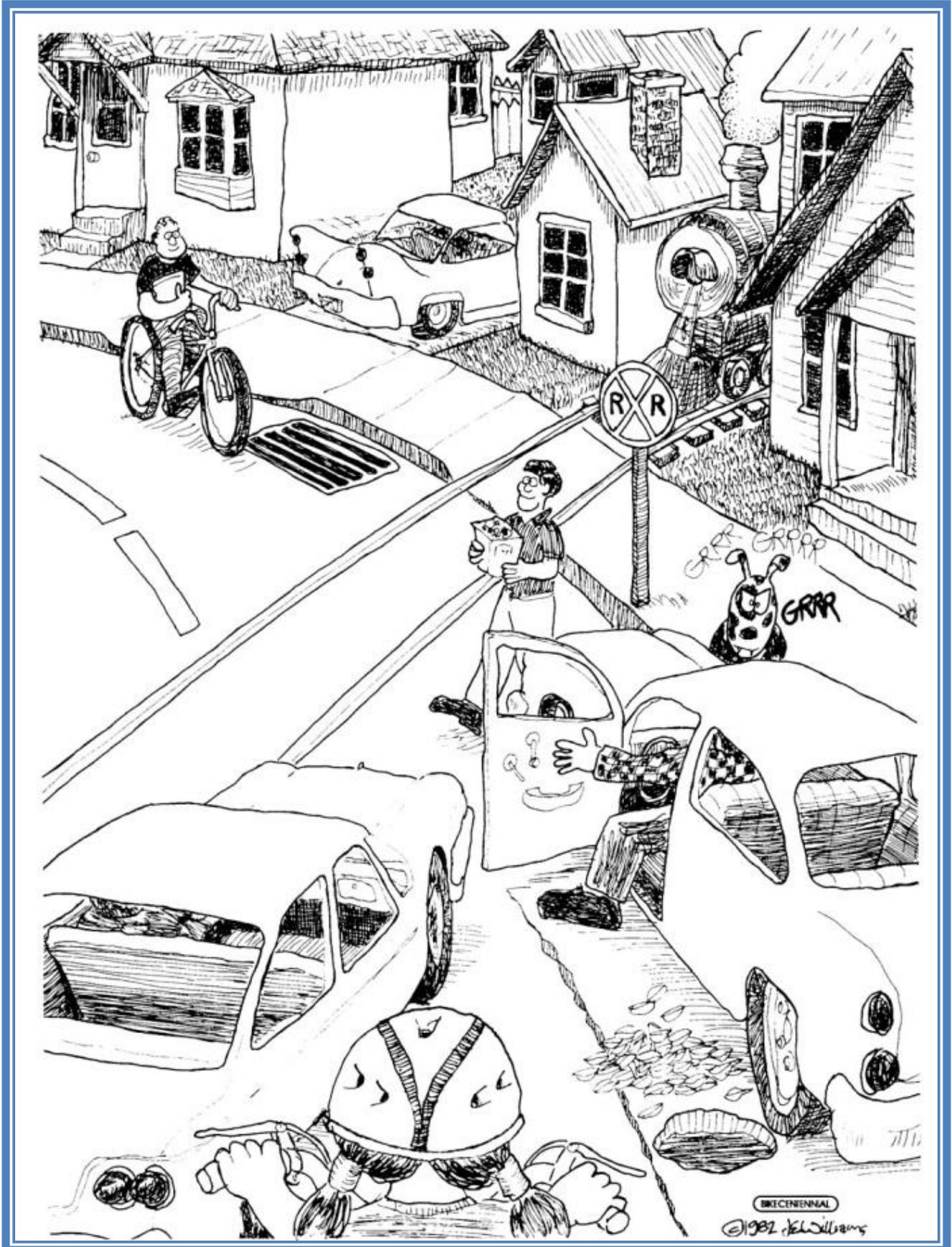
Brainstorm other ideas about why bikes crash, and why bikes crash into cars:

- failure to yield when changing lanes, or swerving into traffic.
- not paying attention
- bicyclists ride the wrong way on a street and crash with a car
- when a motorist turns left
- sidewalk cycling
- when motorists turn right
- when motorists restart from stop sign
- others?...

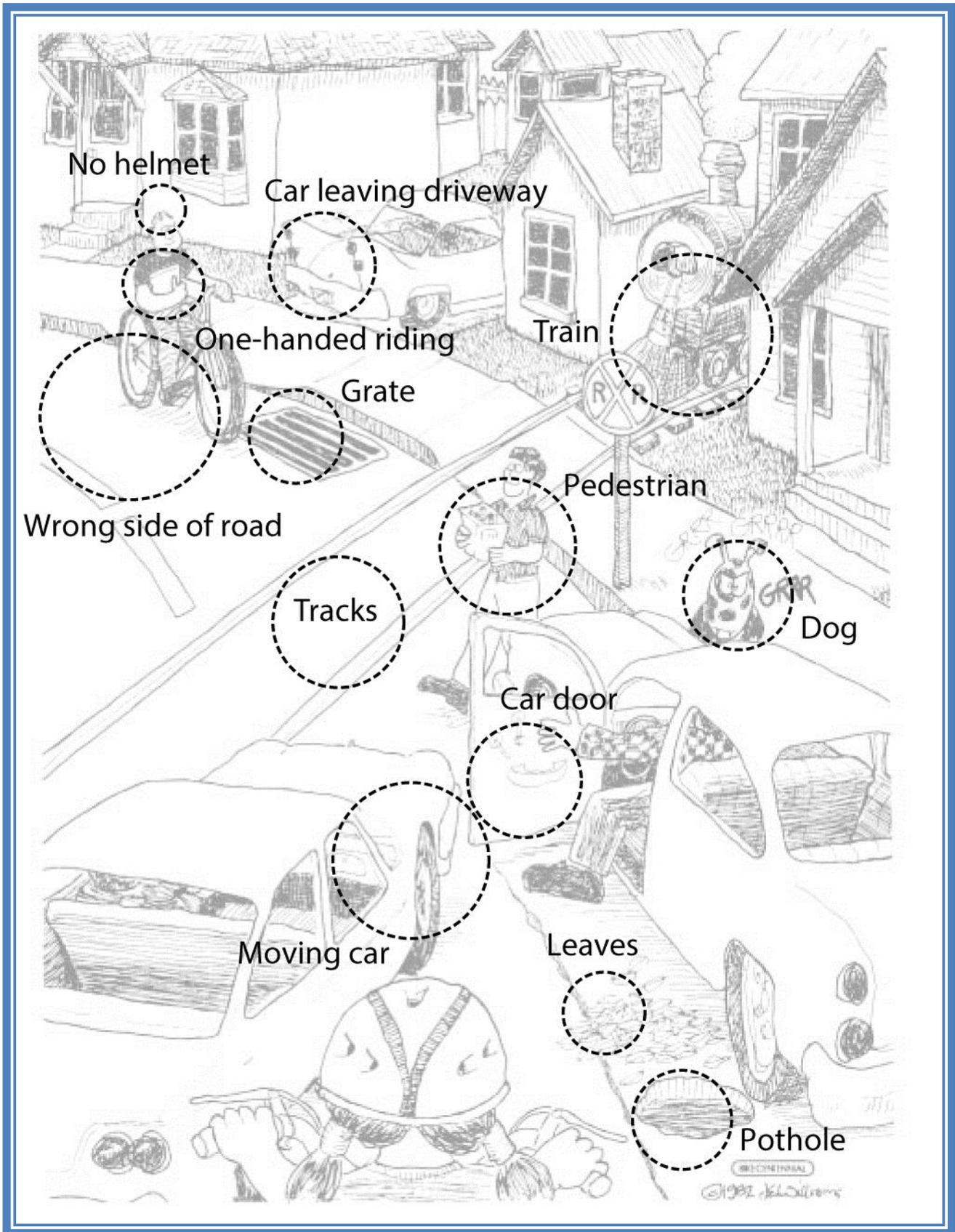
Materials needed.

Print out a set of both sheets for each group: “Where are the road hazards?”, and “Answer Key”.

Where are the road hazards?



Answer Key.



My get-around plan

- 15 minutes (All ages)

Inquiry.

How do you get around town? If you could bike more, which way would you go? Could you ride your bike to school? To work? Your friend's house? To the park? Could you ride your bike to the bus, then take the bus, and then bike again? Which way do you like best? Why? Why are some ways not preferable?

Teach.

Explain basic bike laws: 1) ride as a vehicle and obey all traffic signs, 2) stay in the bike lane unless you need to pass another bicyclist or a roadway obstruction exists, 3) ride as far to the right as practicable (or safe), 4) signal when turning, 5) don't ride more than 2 abreast, 6) the motorist must maintain a safe passing distance from a bicyclists, 7) don't ride with someone on your handlebars or the rear of a BMX bike, 8) it's unlawful for a motorist to harass you on a bicycle, and, 9) always wear a front head lamp and rear reflector (though it's best to have a rear light), and it's a great idea to wear a helmet.

Explore.

Using one sheet of blank paper, each person should draw a map from home to school, or work, or the grocery store. On that paper, draw out those roads you would take to bike. If you cannot bike the entire way, leave some sections out. If you can take the bus, assuming it has a bike rack attached you can use while not on your bike, then note those street sections separately. Also note those areas more suitable for walking than biking, where you would walk your bike. For those areas that are neither bikeable, walkable, or accessible via transit, note those as areas for future Complete Streets treatment.

Note: A Complete Streets treatment is an area in need of improvement, so the single occupancy automobile is not the only transportation option.

Materials needed.

One piece of blank paper and pencil/pen for each student.

Safe Routes to School (SRTS) Strategies for Safer Bicycling

- 45 minutes (Grades 5-8)

Inquiry.

Ask how they think they could get more students walking and bicycling to school.

Teach.

Define the five “E”s: Engineering, Encouragement, Education, Enforcement, and Evaluation.

- Engineering - infrastructure that connects people, whether they are driving, walking, or bicycling, such as sidewalks, streets, roads, or bicycle lanes and paths.
- Encouragement - activities that get students excited and interested in riding bicycles.
- Education – lessons taught to get more people comfortable with the idea of riding bikes.
- Enforcement - strategies that help enforce safe behaviors.
- Evaluation – a method of determining if any of these efforts are making a difference.

Explore.

Break class into small groups of five students. Have students brainstorm Safe Routes to School (SRTS) strategies to increase the numbers of students who bike to school by coming up with at least one strategy to address each SRTS "E". Assign a note taker in each group to write down strategies.

- Engineering - what infrastructure and bicycle connectivity needs improvement?
- Encouragement - what activities will get students excited and interested in riding bicycles?
- Education - what types of education efforts should take place to get more people comfortable with the idea of riding bikes?
- Enforcement - what strategies can help enforce safe behaviors?
- Evaluation - how can you determine if these efforts are making a difference?

Summarize.

One student from each group presents the final notes on strategies to the class.

Materials needed.

Paper and pencils.

Content created by:

Palmetto Cycling Coalition

Using this Reference:

Bicycle Transportation Alliance (Oregon's) Safe Routes for Kids Bicycle Safety Curriculum

2008 SC Bike Law updates advocated by:

BikeLaw.com

Palmetto Cycling Coalition

