

ROAD RULES: Video, Bicycling and Pedestrian Safety

1

LEVEL 1
CLASSROOM

GRADE LEVEL: 4-7

SUBJECT AREA: Physical Education, Health

SKILL SET: Safety, Human Anatomy, Social Studies



Purpose

Introduce traffic laws, the basics of bicycling in traffic, proper cycling conduct, and pedestrian basics.

Activities in this Lesson

- Legal and Safe
- Traffic Laws Introduced
- Difference between a pedestrian, bike, and car
- Bicyclists and Walkers must follow the law
- Common Reasons for Collisions / Hazards
- Riding on the Road
- Riding through Intersections
- Right-of-Way and Intersection Types
- Intersection Simulation
- Traffic Signs

Materials

- Vehicle shapes / cut outs – ensure that they can be seen from the back of the room.
- Large Illustration – Intersection types (make so that they have different vehicles that have the right-of-way and can be identified with a marker. Photos preferred.)
- Worksheet: Who has the right-of-way and intersection types.
- tape or marking chalk
- One Yield sign

- Four Stop signs – can be small or hand drawn if necessary
- a 14' x 14' square area at least- enough room for students to wait in a queue of two to three in line at four stops at the intersection.

Preparation

Know your local laws that pertain to bicycles.

Background

Similar to a driver's education course, this safety program teaches on-street bicycle riding. Most middle school students have a limited knowledge of traffic law, basic right-of-way principles, or experience interacting with vehicular traffic on the street. This lesson offers a multi-media presentation and discussion about traffic safety issues for both bicyclists and walkers. Listening to and discussing the rules is only the first step in the hierarchy of learning used for this curriculum. Lessons 4 –10 provide the next four levels of learning, including simulation, practice, application, evaluation.

Introduction to Road Rules

This in-class lesson covers the basics of traffic law and vehicle operation of roadways. This discussion covers the general topic of individual behavior and if the behavior is legal or safe.

Laws (discussed below) are set to guide behavior, at the same time people must decide for themselves if their behavior is safe.

Write "Legal" and "Safe" on the blackboard. Using a few examples cover the legal and safe concepts.

E.g. Wearing a Bicycle Helmet: discuss the law. Often, the law is not enforced, making it questionable if students really must wear a helmet. Discuss the safety of wearing a helmet. Awareness of the implications of one's decisions is an important key to safety.

This program introduces the legal aspects of cycling and walking, and addresses safe and practical behaviors. Ultimately it is the student's responsibility to choose, we plan to give them the tools.

Traffic Laws Introduced

What: Discussion defining traffic laws, why to follow them, consequences, and liability. This discussion will familiarize students with the importance of and specific traffic laws.

Question: What is a law?

Answer: A rule or regulation set up by a government to be followed by all of the people. There are many different types of laws. Some are made to prevent people from committing a crime; others are to help keep people safe and healthy.

A law is a set of rules that everyone is supposed to follow and they are generally written to define safe and socially acceptable behavior and common practice. These rules, like the rules of a sport, often set conditions upon which people will interact. Traffic laws create a game-like situation, and it is important to follow those rules. Just like a sport, there are consequences for breaking laws, and they are much more severe than foul shots / yellow card.

Ask the students for examples of laws, reasons, potential consequences and punishment for breaking these laws.

Question: Why do different laws have different punishments? If a law has a lesser punishment than another, are they both important?

Answer: Being responsible for your actions is called liability. Each one of us is responsible (liable) for the way we behave. For example, we are required to follow the rules of this class, if you don't, you may go to the principal's office, get detention, etc. Liability protects us from the irresponsible behavior of others. So if you injure someone or their property while breaking the law or rule, you are liable (responsible) for the damages.

Example: You are driving a car and fail to stop at a stop sign then crash into another person or car. The crash is your fault and you are responsible for replacing damaged property, paying doctors, paying a fine for breaking the law, and possibly for criminal charges if you injure or kill someone. So, laws are put into place to create order, to keep us safe and protect our stuff. In traffic, laws are essential, enabling others to predict what we will do. Bicyclists are required to ride like all other vehicles, to remain both predictable and safe!

CRIME AND PUNISHMENT

| Example of a Law | Reason | Potential consequences of breaking laws | Punishment |
|--|--|--|----------------|
| Mandatory use of bike helmet | Protect our heads | Could injure or kill us if head is hit | fine |
| Stop at red light | Avoid crashes at traffic lights | Could injure or kill ourselves or someone else | fine to prison |
| Driving while under influence of alcohol | Prevent crashes due to intoxication | High risk of injuring or killing someone | fine to prison |
| Jaywalking | Protect walkers from getting hit by cars | Walker may get hit and killed by a vehicle | fine |

Who is Traffic? What are the Differences Between Cars, Bikes, and Walkers?

Every state has a unique vehicle code that assigns laws and rules for using the roadways. Generally cyclists are considered operators of vehicles and must follow the same rules as automobile drivers. Walkers, however, have a different set of rules because they are not considered operators of vehicles. To confuse things more, bike riders can be pedestrians under the law, and in practice, by abiding by a complex set of rules of how to ride on the sidewalk. Generally though, bicyclists don't fare well under the law when riding on the sidewalk.

Learning the rules of the road for bicycling is basically the same as learning to drive a car. We will ride our bikes on the street, like cars.

Generally riding on the street is safest for a cyclist, because:

- Bicyclists are not predictable when they ride on the sidewalk, and bicyclists skirt the legal classification of bicyclist and pedestrian, usually at fault in any crash type. e.g., when passing curb cuts, bicyclists are generally required to ride the speed of walkers, 2-3 miles per hour. That's slow!
- Conflicts with driveways and vehicle access points are very dangerous, and car drivers are not looking for cyclists.

In locations where street cycling is too dangerous, sidewalk riding may be suitable. But if the sidewalk crosses shopping plazas and busy destinations, cycling may not be a viable option until the cyclist becomes very skilled at traffic riding principles.

Question: What is the difference between a pedestrian, bike and car?

Answer: Define the difference between modes of travel and how they differ legally. Hold a participatory discussion among the class of the differences logistically, and then legally, between walking, bicycling, and driving. To start, it may be easiest to just discuss walkers and drivers.

Question: What is difference between a pedestrian and driver?

Answer: There are many differences between a walker and a driver. A bicyclists can be either, but a cyclist generally fares best when he or she rides a bike as one would operate a motor vehicle.

Bicyclists Must Follow the Rules of the Road

Bicyclists must act like drivers when riding on the road. A common sample statute says "Every person riding a bicycle upon a public way is subject to the provisions applicable to and has the same rights and duties as the driver of any other vehicle."

Riding with traffic/like an automobile includes:

- Riding in same direction as traffic.
- Following all traffic signs, lights, and regulations
- Follow the right-of-way rules
- Using hand signals
- Use proper equipment including lights at night

Reasons:

- PREDICTABILITY! Following the laws helps us predict what other drivers will do. (See optional Chaos Box activity on page 44.)
- Motorists do not expect to see traffic coming in the opposite direction or on the sidewalk. In

order to be predictable and visible, bicyclists must ride where motorists expect to see traffic.

- Wrong-way riding results in nearly one fourth of all car/bike crashes.
- Traffic control devices (i.e. stop signs and traffic lights) face the normal flow of traffic. Wrong-way riders cannot see signs and signals.
- Wrong-way riders may create a hazard of a head-on collision with cyclists riding on the right, or pedestrians.

Pedestrians Must Follow the Rules of the Road (Not Vehicle Rules)

Pedestrians are not considered operators of vehicles under the law, and must abide by a different set of general rules. Generally, the pedestrian has the right-of-way, or right to go without yielding, in most situations. However a walker is very vulnerable and must be careful when faced with difficult situations. Walking principles include:

- Walk on the sidewalk or path.
- Walk in the opposite direction as traffic when there are no sidewalks.
- Follow all traffic signs and lights. Stop and look at all stop signs, cross with the green at intersections.
- Try to find marked crossings. Be very careful when you can't.
- Wear bright clothing to help you be seen, especially at night.

Reasons:

- The sidewalk is a safe, dedicated place for pedestrians.
- When walking against traffic, you should step aside if needed to avoid cars, as you do not have the right-of-way in the road. **Do not ride a bike in the opposite direction.**

Common Reasons for Collisions / Hazards

What: Discussion of the hazards and reasons for collisions for bicyclists and pedestrians. Discuss the top causes for bicycle and pedestrian crashes with vehicles, often causing severe injury or death. This discussion will increase the awareness of the hazardous situations and intersection types of collisions that most regularly affect students.

The worst bicycle crashes typically occur when crashing with a car, however only 17% of all bicycle crashes involve a motor vehicle. There are many types of hazards that lead to the other 83% of crashes.

In traffic collisions between youth cyclists or pedestrians and automobiles, youths are at fault the majority of the time. Therefore basic traffic smarts can prevent most life-threatening crashes. This curriculum will talk more about road rules, and how to get through intersections, emerge from driveways, and properly cross the street.

CRASHING WITH CARS

Children between the ages of 10-14 have the highest rate of bicycle crashes with cars; while ages 5-9 have the highest crash rate while walking in traffic.

Question: Why do you think our age group has the highest bicycle crash rate? Why might younger kids have higher crash rates as pedestrians than our age group?

Answer (Ages 10-14):

- Take more risks
- Don't look for traffic
- Don't know the rules
- Haven't developed riding skills.
- Think they are invincible

MOST COMMON CAUSES OF BIKE/PEDESTRIAN CRASHES FOR YOUTHS

BICYCLING:

- Cyclist come out of a driveway, doesn't stop and collides with a car
- Cyclist fails to comply with the right-of-way rules at intersections, such as running stop sign
- Cyclist is riding the wrong way, against traffic

WALKING:

Younger children are involved in more pedestrian car crashes.

For all children, concerns include:

- Walker darts out mid-block
- Walker is not visible to auto driver and emerges into the street
- Speeding by the auto driver

What are young cyclists doing wrong while cycling?

- Don't follow traffic laws
- Don't look for traffic
- Ride on wrong side of the road
- Don't use lights at night
- Don't stop at the edge of driveways or intersections for traffic

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

- Failure to yield when changing lanes, or swerving into traffic.
- Bicyclists ride the wrong way on a street and crash with a car
- When a motorist turns left
- Sidewalk cycling - conflicts with other users failure to yield at intersections
- When motorists turn right
- When motorists restart from stop sign.

What are youths doing wrong while walking?

- Not looking, dart out
- Youths are less visible because they can be smaller
- Youths are not choosing the safest places and times to cross

Riding like a car driver (i.e. following the laws and driving rules) will help avoid crashes with cars. Other crashes can only be prevented with increased cycling skills (example: avoiding glass and hazards). We will teach some of those things next in the lesson and later during this curriculum.

Answer (Ages 5-9):

- Walk more, bike less
- Are less aware
- Lack of ability to perceive speeds and depth accurately
- Have less knowledge of a basic thing like crossing the road
- Don't bike as far as we do so don't crash as much

Question: Why do kids have higher crash rates than adults?

Answer:

- Bike more per person
- Have less knowledge, skill, and practice
- Are smaller and move faster and more unpredictably

OTHER COLLISIONS / HAZARDS

Youths actually crash a lot. Even though car crashes cause the most damage and injury, there are other hazards that lead to crashes of all types.

There are three main types of hazards: surface, collision and visual.

Surface hazards include glass, storm grates, potholes, railroad tracks, rain, ice, or leaves. Pay attention to road conditions and surfaces. Look ahead in addition to around you for potential hazards.

Collision hazards include turning cars, other bikers, pedestrians, dogs, and trains. Also included are parked cars with opening doors. Obey the rules of the road, avoid door zones, and pay attention for dogs and other hazards.

Visual hazards block the view. They include bushes, fences, other cars, buildings, and too little light at night; they affect both cyclists and pedestrians. Use lights at night and visible colors during the day. Ride predictably so that drivers will see you coming. Position yourself so that you can see around fences,

bushes, and parked cars when entering a street or leaving a driveway.

Ask the students for the other ways in which students get into crashes. They generally can name many of the scenarios and can identify the hazards.

Riding on the Road

What: A discussion of specific rules for bicyclists. This discussion helps teach the specific road rules necessary for cycling.

FOLLOW THE RULES

Bicyclists must follow same traffic rules as vehicles. This helps make them *predictable* and *visible*.

Bicycle Helmet Laws

Some states have laws that require the use of helmets. Know the law in your state. As discussed in Lesson 1, helmets are an essential piece of safety equipment that should be used on every ride.

Bike Positioning

Bicyclists are required to ride on the right side of the road (generally, as far to the right as practical.)

Speed Positioning Rule

This rule says that slower vehicles stay further right. Think about driving on a highway: In general, the fast-moving cars stay to the left and slower cars keep to the right. The same principles apply for bikes, and this is the reason that bikes generally ride in position 3, the right one-third of the lane.

Bike lanes

While in a bike lane, bicyclists possess additional right-of-way privileges. In fact, bicyclists can legally pass on the right side of cars and cars are not allowed to turn in front of bicyclists in bike lanes. Bicyclists should remain very cautious of vehicles when in bike lanes. Specifically, avoid the "right hook," when passing a car on the right in a bike lane. A driver may not expect a straight moving cyclist moving up on the right, and may accidentally turn and collide with the cyclist.

Multi-use path

While a bike lane is for bikes, a multi-use path is for both bikers and pedestrians. These off-street facilities can be safe ways to travel;

**SIDEWALK VS. STREET**

Discuss the difference of riding on the street versus the sidewalk. The sidewalk has many potential obstacles, such as poles, fire hydrants, walkers, dogs, etc. The street does not have these types of obstacles but has vehicle traffic.

In Lesson 3 the class will hold another discussion about location preferences for riding. This discussion will include street types, bike paths, sidewalks, and the perceptions that students have of the safety, fun, and usability of these facilities.

however important rules apply here. Most multi-use paths have two-way traffic, so all users must stay to the right. Cyclists and skateboarders must always yield to pedestrians and give an audible signal, such as a bike bell or calling out “passing,” when passing them. It’s important to be careful around small children and seniors. Small children may unpredictably dart out and seniors are slow to react. Multi-path users must be especially careful of places where the path crosses a road. Most often road users have the right-of-way and so the path users must stop and wait until the traffic is clear. (Right of way is explained in greater detail below.)

Riding through Intersections

What: An introductory discussion of bicyclists maneuvering through intersections. This discussion teaches

the basics of riding through intersections. Bicyclists must ride on the right, but what happens when they travel through intersections? We will draw the proper road positions for each type of turn.

Teachers should draw intersections on the board to label proper turning positions. Each lane of travel should be labeled with three positions, 1 (inside), 2 (middle), 3 (outside or right) and the direction of traffic flow: demonstrating each turn, starting from Position 3 and moving to the proper turn position.

INTERSECTION 1 - STRAIGHT

The bicyclist normally rides in position 3, about 3 feet from the curb. And 4 feet from parked vehicles to avoid car doors (the door zone.) Bicyclists can move into position 2 on a narrow street.

INTERSECTION 2 - RIGHT TURN

The bicyclist normally rides in position 3 and remains in position 3 when turning right through an intersection. Look for pedestrians crossing the street.

INTERSECTION 3 - LEFT TURN

The bicyclist is riding in Position 3 but must move to Position 1 when turning left. Before moving to Position 1, cyclists must look back and check for traffic, signal left, merge to Position 1, and then signal again to indicate a left turn. Cyclists must then yield to oncoming traffic and to pedestrians before turning. Complete the turn in Position 3. (See lessons 4 and 6 for detailed information on turns.)

A common mistake is to turn left from Position 3. Turning left from Position 3 is very dangerous because the cyclist is required to



NAVIGATING INTERSECTIONS

| | |
|--|---|
| Driveway and Alleyway – Stop sign | Yield to pedestrians, stop to oncoming traffic. Important to get good position to see oncoming traffic. |
| Four Way Intersection with 0, 2, 3, or 4-way stop signs. | Vehicles with the stop signs must stop and ones without can go through. Three intersection rules apply. |
| Flashing Red Intersection | Treat as a four-way or two-way stop. |
| Intersection with Stop light | Green has right of way and left turning vehicles yield to straight vehicles. Drivers must watch out for yellow lights and pedestrians on turns. |
| Round About | Requires traffic coming into roundabout to yield to traffic already in the roundabout. (Only teach in communities with these treatments.) |

cut in the front of cars approaching from behind.

Right-of-Way and Intersection Types

What: Discussion and activity where students learn about right of way rules and intersection types.

PRIMARY RIGHT OF WAY RULES

Introduce the concept of right-of-way.

Question: Who can tell me what they know about right-of-way? Who goes first at an intersection with a 4-way stop?

Answer: Traffic laws establish a set of rules called right of way that effectively inform vehicle users of who goes first. Here are some steps and rules to help you learn right of way.

Think about other activities that have rules that create an order: cafeteria lines, skiers, boaters, and hallways (a hallway analogy is used below).

IDENTIFY INTERSECTIONS

Identifying the type of intersection you are approaching is the first step to determining right of way. Some intersections have stoplights and others stop signs. These traffic controls determine the right of way rule scheme – intersections with two-way or all-way stops signs have different right of way rules; intersections with stop lights have yet a different right of way.

STOP LIGHTS, STOP, YIELD FLOW

Right of way is easier to determine in intersections that have traffic lights and signs. Review the right of way rules of the intersection types below:

- Traffic lights are straightforward: green, yellow, and red.



- Stop and yield signs require a vehicle to stop or yield to traffic without any sign, for example:
 - four-way intersections with two stop signs.
 - four-way with four stop signs.

Demonstrate traffic light intersections and four-way intersections types with illustrations or photos. Larger streets have the right of way over small streets, alleys and driveways.

Many intersections do not have traffic signs. In this case, a larger street with free flowing traffic has the right of way over a smaller street or driveway.

Think of a crowded school hallway. The students in the hallway have the right of way over a student

who wants to leave a classroom to enter the hallway. Even though there is no sign, it is implied that the hallway students can keep moving and you have to wait for them. The same is true with driveways. When leaving the school, you have to wait for traffic to clear on the street before turning out of the parking lot driveway. (A student running through the hallway is a good comparison to a car speeding through a neighborhood.)

THREE INTERSECTION RULES

Often, intersections have either four stop signs or no signs but are all similar size streets (usually low-traffic neighborhood streets). In these cases, vehicle users must obey the three intersection rules.

The three intersection rules:

- The first person at the intersection goes through the intersection first.
- When two cars get to the intersection at the same time, the person on the right side 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.

PEDESTRIAN RIGHT OF WAY

Pedestrians in the crosswalk or crossing the street at a corner have the right of way over vehicles going straight and turning. However walkers must look for oncoming traffic and walkers are not allowed to jump out in front of traffic. Crossing at a street light is a good idea, be sure to cross with the green. Pedestrians still must watch for turning cars that are not looking for walkers. Walkers crossing at intersections must make eye contact with oncoming drivers. Use a hand signal, such as the straight arm and palm to the driver, if you are unsure if a driver is stopping. Even if you have the right of way, playing it safe is better than crossing in front of car that is not going to stop.

Bicyclists may opt to become pedestrians, especially when facing a dangerous intersection or left-hand turn. To become a pedestrian, simply get off the bike and walk it.

DISPLAY AND DEMONSTRATION

Display aerial pictures of intersection and street types from the previous page. Try to develop an understanding of the concepts of major and minor streets. Mark the vehicles that have the right of way.

Using the intersection you’ve drawn and intersection (bicycle, car and pick-up truck) pieces, demonstrate the basic right of way rules at a four-way intersection. Start with

two stops and then a four way stop. Discuss and demonstrate an uncontrolled intersection. Include pedestrian right of way rules.

Discuss:

- Type of intersection.
- Responsibility of vehicle user / tasks to navigate.
- Difference and similarities.

Questions: At which intersections do you always have to stop and wait for traffic? Which ones you can just slow down and wait for traffic? In what situations you are free to go through the intersection without yielding?

INDOOR INTERSECTION SIMULATION

(Activity designed by Jason Agar)

What: a simulation to demonstrate intersection principles and right of way issues.

- Tape or marking chalk
- One Yield sign
- Four Stop signs – can be small or hand drawn if necessary
- A 14’ x 14’ square area at least-enough room for students to wait in a queue of two to three in line at four stops at the intersection.

To demonstrate the three intersection rules, set up a simple simulation. Create a masking tape intersection on a carpet; design the intersection so that students can walk through it to simulate an intersection right of way process. Wait to put out stop signs on the corners. Create a variety of intersection scenarios to better explain the 3 intersection rules. Have the students practice pointing to the person on their right to determine who goes first. Repeat the exercise with two

other students. Have the kids that are watching the demonstration help the volunteers figure out who goes first.

Question: What does yield mean? What do you do when you see this?

Answer: Elicit responses from students. “Yield means stop; wait. Yield means to surrender your right of way.”

Question: What is Right of Way?

Answer: Elicit responses from students. “Right of way means a couple of things, one is that when you see this sign you surrender your right of way, or your turn to go.”

Put out stop signs on the intersection. Students will watch and wonder what is going to happen next.

Orient students to the intersection. Tell them which directions the lanes go so they can recognize what they have already seen on the street.

Split the group up into four groups and turn it into a game show. Rotate calling on student volunteers in the intersection and teams that are watching. Keep track of points if you want.

Situation 1 – one student

- One student volunteers to approach the intersection and stops before the limit line (or crosswalk line). There’s nobody else there. Who has the right of way?

Situation 2 - two students.

- One student gets there first. Who has the right of way?

- They get there at the same time. Who has the right of way?
- Driver on the right. Demonstrate one vehicle/student going followed by the other.

Situation 3 – four students

- We said that if you get there at the same time then the person on the right goes first.
- How about if everyone gets there at the same time? This is a trick question because everyone is on the right of everyone else. Demonstrate.
- What do we do? Everyone take a deep breath. Let it out. Now wave someone across like you see the adults you drive with doing at intersections. People breathe and then they figure it out. Someone goes. Wait for a student to go and then guide them in taking turns until all have gone.
- Practice with new students.

Situation 4 – Left turn with oncoming traffic

- Two students facing each other. One is going left, one is going straight. Who has the right of way?
- The one going straight has the right of way. If not, everyone would be trying to cut everyone else off all the time and it wouldn't work well on the road.
- The point of all the signals and signs at intersections is to keep people from crashing into one another.
- Continue with everyone else until all students have gone through with different variations. Include yield sign, configure intersection differently with the number of stop signs ... etc.

Traffic Signs

What: An activity that teaches students the shapes and meanings of traffic signs. Allow students to come to the board and draw any street sign that they know. After a couple of minutes, have them sit down and discuss each sign. 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.



2

LEVEL 2
OUTDOOR

GRADE LEVEL: 4-7

SUBJECT AREA: Intersections

SKILL SET: Safety

Purpose:

Teach walking across the street, including navigating intersections, busy streets, and streets with inadequate facilities.

Activities in this Lesson:

- Walking Across the Street
- Skills: Walking Across the Street
- Dealing with Unsafe Conditions
- Gauging Traffic and Crossing Speeds and Times

Materials

- Pictures of street types and edges
- Chairs
- Megaphone (used on walk)

Background

Walking along and across the street varies based on community conditions. In order to explore these issues, this lesson provides a walking field trip for students to discuss and practice walking along and crossing the street in and around the school. The basic concepts of walking should have been covered in Lesson 2.

Learning pedestrian skills helps students understand safe vehicular cycling skills. Students begin to understand the difference between walkers and bicyclists and that bicyclists have to yield to walkers. Bicyclists will encounter similar threats as walkers, and sometimes

bicyclists become walkers (when taking certain types of left turns), so it makes sense to learn pedestrian skills and behaviors.

Teachers that want to discuss route finding can start to do so in this walking lesson.

Introduction

Teachers should have two to four adults for this walking lesson. In selecting a route, teachers should find streets that have a variety of walking conditions including: Traffic signals, stop signs, marked and unmarked crossings, mid-block crossings, sidewalks, no sidewalks, and other issues that might typically be found in the community. Walking across the street is an important concept that will be integrated in the bicycling lessons for the left-hand turns and used during the on-street rides when crossing the busiest of streets.

Walking Across the Street

What: A discussion and activity to teach pedestrian safety and comprehension using an on-street environment. Hold a (short) introductory discussion with the class, discussing the basics of walking safety including interacting with vehicles, crosswalks, pedestrian walk/don't walk signals and strategies such as eye contact and signaling intention to drivers.

Hold a walking field trip to cover and practice all of the strategies and scenarios in depth. It is easier for students to understand specific traffic safety measures when on the street and while confronting actual intersection and crossing situations. To practice proper walking tech-

niques in a real scenario, allow for maximum time on the walking field trip. See introduction to this lesson for types of features that should be visited.

HOW WALKING PERTAINS TO ME

We all walk, where do you like to walk? Where do you walk? Where would you like to walk independently?

Discuss the difference between walking and biking.

As a bicyclist, you are expected to act like and follow the rules for vehicles. However sometimes the situation requires walking and then you are a pedestrian under the law. Or other times you are just walking, and have different rules, including



TEACHING IDEA

Teach multiple vehicle threat in the classroom with a demonstration. Set up two chairs with students sitting in them representing two vehicles going the same way in different lanes. The first student sees you and waves you on, so you start walking. The second doesn't see where you are and drives into you because you too weren't looking. Emphasize stopping at every edge and using parked or stopped cars as a shield.

| | |
|-------------------------------------|--|
| Turning Movements | When a walker crosses |
| Speeding | Speed of the car when colliding with a pedestrian is a key factor in crash severity. |
| Not stopping for walkers | Often car drivers do not see walkers or are not paying attention to them. Make eye contact. |
| Running red lights | People in a rush run red lights. This dangerous behavior is one reason why it's not necessarily safe to cross simply because the walk signal has appeared. |
| Turning without looking for walkers | Many car drivers are not looking for walkers when turning or exiting a driveway. This is a key issue to discuss on the walk. |
| Distracted driving | Many drivers are talking on phones, eating, drinking, and doing other activities. Identify these people and their behaviors while walking. |



TEACHING IDEA

Use walking in the hallway as an example of walking order (and chaos). If the hallway is filled with people, someone entering the hallway from a classroom must look and find a gap in traffic that they can merge into, or cross. Discuss the difference between bumping into a student and a car.

walking on a sidewalk rather than riding on a road. However many of the activities are the same, e.g., look left, right, and left.

WALKING LAW AND PRACTICE

In most states, cars and bikes must yield the right of way to pedestrians in intersections and when they are crossing the street. Pedestrians are often required or encouraged to cross at intersections or designated crossings. Interestingly, most pedestrian crashes happen at intersections and when crossing the street. Often children are found at fault in pedestrian crashes because they were not visible or they darted into the street. Preadolescents are often hit because they encounter more difficult and complex traffic situations, high speed and high volume traffic.

Most pedestrian traffic fatalities happen when the motorist is traveling at 30 mph or higher. High-speed pedestrian crashes are much more likely to result in death and youth must be alerted to crossing strategies so that they can safely navigate their community and safely reach the new and more distant locations they are traveling to.

CROSSING STRATEGIES: SUCCESSFULLY CROSSING THE STREET

1. Assess your surroundings
 - Assess intersection: What type of intersection are you

at and what is the flow? What signs are controlling things — who must stop and why, who is turning? (some examples of signs are on the right)

- Assess turning hazards
 - Things in our favor
 - Things that are working against us: speed, distracted drivers
2. Develop a strategy depending on the intersection types and our assessment. E.g. – wait for the light and cross; wait for cars to slow down and cross
 3. Implement
 - Consider mid-block strategy: If light starts blinking, what will you do? If the second lane of traffic doesn't stop, what will you do?
 - Position Yourself: find the edge and be visible: drivers will not stop until they see you. Some drivers (walkers and bicyclists) are more aware of their surroundings than others. Find the edge

ASSESS YOUR SURROUNDINGS

- **Assess your surroundings.** Look behind you, too – survey your surroundings.
- **Look left, right and left again.** Discuss why we generally focus first and last on the traffic coming from the left (it's the first threat) and then traffic from the right.





Railroad tracks can be dangerous for pedestrians and cyclists

- **Looking around gives you the information required** to assess your safety, hazards, opportunities, and barriers. Practice this while walking.
- **Gauge your hazard:** Traffic speed and distance are factors of the threat of oncoming cars.
- **Walk into safe environments,** use stopped cars, bicyclists, and fixed items as shields: use a parked car as a shield and make yourself visible, use a car stopping for you in the crosswalk as a shield
 - Cross at intersections or crosswalks
 - Discuss the walk signal. Start walking when the signal is white, don't enter the intersection when the signal is blinking red, if there is a pedestrian refuge stop mid-way when the signal is blinking red.
- **Make eye contact.** Make and maintain eye contact with oncoming vehicle drivers. Drivers will only stop if they see you.
- **Use hand gestures.** Hand gestures will signal your intention.
- **Complete your crossing** before returning for something you might have dropped.
- **If there is no sidewalk, walk facing traffic.** You don't have to look back if you are facing traffic. If you are walking with traffic, you have to give shoulder checks to see if cars see you and are clearing you. It is safer to walk with traffic when there is a sidewalk.

Dealing with Unsafe Conditions

What: A discussion about the conditions or factors that may create an unsafe walking environment.

- **Lack of Sidewalks** – walk facing traffic and be extra careful at places where cars may be turning in or emerging from, such as driveways.
- **No Street Crossing** – many walkers are hit not by the first lane of traffic, but by the second, third or fourth. If there is no signalized place to cross the

street, find a visible spot, with good sight distance, and make sure you gauge traffic from both directions. Move quickly across the road.

- **Limited Visibility** – many pedestrian crashes result because the walker emerges and drivers do not see them. First find the edge of the roadway, and then walk to the point where car drivers can visibly see you, out from bushes, parked cars, etc. Also wear bright clothes if possible to increase visibility.
- **Parking Lots** – drivers are distracted, driving too fast, backing-up, and visibility is limited. Take care in lots.
- **Driveways** – auto drivers are generally only looking one way when turning right out of a driveway. It's a dangerous spot to cross, make sure the drivers see you. It's also a dangerous place to bike past.

Gauging Traffic and Crossing Speeds and Times

What: An activity where the class stands on the side of the street and counts /estimates how long it will take a car to reach the spot where students want to cross and the amount of time the student will need to cross the street.

In order to properly judge the safety of crossing the street, students must estimate the time that it takes to cross the street and the time it will take for an oncoming car to reach the point where you are crossing the street. At railroad intersections, the speed of trains also has to be considered. Have students count the time it takes for a car to travel a certain distance and how long it takes them to cross the street. How does this vary as we

walk quickly or as the cars are driving faster?

In addition to closing speed, what other threats do fast traveling automobiles pose?

- Takes longer to stop
- The faster an auto is traveling, the more likely it will injure or kill a person.

Notes: Many pedestrian crashes do not occur in the first lane, but the second or third lane of traffic at which they cross.

The wider the street the longer it will take to cross, wider streets are often harder to cross

The faster the cars are traveling, the quicker that they will reach your point over a fixed distance. Therefore it is important to estimate the speed of the cars coming relative to the distance at which they must travel to reach you.

TOP CAUSES FOR YOUTH PEDESTRIAN INJURIES

- **Crossing away from an intersection**
- **Improperly crossing a roadway or intersection**
- **Darting into traffic / unseen**
- **Walking along roadways**