

Teaching Safe Bicycling



Activities and tips designed to help teach children the skills they need to avoid the most common and severe crashes involving children on bicycles and people driving.

Content developed by



**WISCONSIN
BIKE FED**

in cooperation with the



**Wisconsin Department
of Transportation**

This series of 8 two-minute videos is based on our
8 hour *Teaching Safe Bicycling Train the Trainer* class

Teaching Safe Bicycling



Activities and tips designed to help teach children the skills they need to avoid the most common and severe crashes involving children on bicycles and people driving.

With this TSB series of 2 minutes videos you will learn:

- 1) The most common & severe crash types involving kids on bikes and people driving.
- 2) The skills to avoid these crashes.
- 3) Practice activities to master these skills.

This series of 8 two-minute videos is based on the 8 hour *Teaching Safe Bicycling Train the Trainer* class.

Kids Biking & People Driving: Crash Types



Biking is the 2nd safest mode of transportation in the world. But when crashes do happen, these are the common scenarios.

Driveway or Midblock Rideout

12% of crashes **22%** incapacitating or fatal

Stop Sign/Signal Rideout

17% of crashes **20%** incapacitating or fatal

Sudden Swerve

7% of crashes **25%** incapacitating or fatal

**Wrong way riding is not a separate crash type,
but is a contributing factor in many crashes.**

Why is bike safety for children different?

▶ Kids are not small adults. Children's bicycle crashes are different from adult crashes.

Learning to share the road respectfully keeps kids safe

- Children lack understanding of the world around them. They do not have the experience to comprehend how others will react to their actions.
- Rules of the road and common driving habits have never been taught
- Children have been told to not talk to or even make eye contact with strangers
- Biking on sidewalks and trails is thought to be risk free
- Children feel safer if they are not seen
- Biking skills should be explained as they relate to real life scenarios
- Practice to proficiency (think swim lessons)
- Strong biking skills develop confident and responsible leaders

This series of 8 two-minute videos is based on the 8 hour *Teaching Safe Bicycling Train the Trainer* class.

What influences a child's ability to learn?



Children develop cognitively and physically at their own pace.

Teach them by example, encourage them to ride, help them practice to proficiency

Learning and Life Experiences

- A bicycle give a sense of power
- “Follow the Leader” mentality – Peer pressure riding in groups
- Child's world is a mix of fantasy & reality
- Sense of danger is not developed
- Vehicles seem less threatening than they should be
- Children concentrate on one thing at a time, and they are easily distracted & forgetful.
- Road signs, symbols, rules must be followed but children have no accumulated knowledge.
- Belief that off the street means away from danger

See & Hear Differently

- Kids are unpredictable, reacting to situations.
- Not able to judge speed, distance
- Lack confidence and strength to act on decisions in a split second
- Belief that vehicle reaction time is immediate or like their own
- Hearing is unable to immediately locate the direction of a sound
- Field of vision is narrower – up to 30%
- Belief that they see the car, so the driver sees them
- A child can not relate lessons and skills to real life scenarios they do not understand

This series of 8 two-minute videos is based on the 8 hour *Teaching Safe Bicycling Train the Trainer* class.

How do we use Teaching Safe Bicycling video series?



- Share the QR Codes
- Offer links to the printable materials

Helping families feel confident biking changes your community

- Add the QR codes along trails and paths
- Chalk or paint the practice activities where families will use them
- Get the word out! Talk about it, digital communications, social media, website link, weekly features.
- Involve schools, businesses and clubs
- Introduce with rides
- Participate in Bike Week

Follow up, involve stakeholders to support your efforts

This series of 8 two-minute videos is based on the 8 hour *Teaching Safe Bicycling Train the Trainer* class.

Professionals working together



Keeping kids safe and healthy with great reasons to ride their bikes!

Kids learning to share the road respectfully is good for everyone

- Riding safely builds respect with others on the road.
- Building a sense of community and belonging
- Active children are healthier
- Learning skills for avoiding crashes keeps kids safe
- Going by bike is good for the environment
- Bicycles can fit into any budget
- Mobility develops a sense of adventure
- Bike trips support local businesses

This series of 8 two-minute videos is based on the 8 hour *Teaching Safe Bicycling Train the Trainer* class.

Helmet fit

2

Helmet should be level.
2 fingers touching the helmet and the eyebrow at the same time.



Helmet should not be tipped back, or it will not protect your head and face properly.

It will also be very uncomfortable.



2

The **2 plastic pieces** on the sides should be just below the ears.

Straps:

Front = up & down

Back = front & back



The **2 plastic pieces** on the sides should not be below the chin.

This does not hold the helmet in place.

2

2 fingers should fit under the chin strap.

Flat, not up and down.



If the **2 fingers** can be turned up and down, the chin strap is too loose.

ABC Quick Check

—Check each time before you ride.

A *is for* **Air**

B *is for* **Brakes**

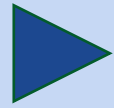


C *is for* **Cranks and Chains**

Quick *is for* **Quick Releases**

Check *is for* **Check it Over**

Station 1: Power Pedal Skills



Crash avoidance: Swerving into traffic.
Learn straight line riding to maintain control of the bicycle.

Beginners:

- Power pedal position just past the top
- Practice pulling pedal up from behind with the top of their foot
- Strong push down gains speed quickly with their feet securely on the pedals
- Avoid unpredictable “scooter starts”

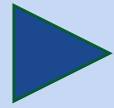


Advanced:

- Practice stopping with pedals in the power pedal position
- Shift down to a comfortable gear for a smooth start
- Bike should fit so rider does not get off the seat at each stop
- No “cowboy” starts

Drivers: Know that kids may not start their bicycles quickly, they do not have good judgement of speed, and may be slow to react to their decision that it is safe to go.

Station 1: Controlled Braking Skills



Crash avoidance:

Stop your bike instinctively, maintain control of the bicycle.

Beginners:

What do we use to *stop our bikes?*

BRAKES (not feet!)

- Smooth steady pressure on brakes to stop
- Avoid a skid by pressing the coaster brake in a rotating motion
- Riders say “stopping” to begin the idea of communicating



Advanced:

- Faster speed with a controlled stop
- Simulate crash scenarios
- Signal and verbalize slowing and stopping
- Hand brakes: Right vs both
- Emergency stop with the hover

Drivers: Know that kids are trusting, often distracted and simply may not stop. Kids do not have good judgement of speed, or their brakes may not work.

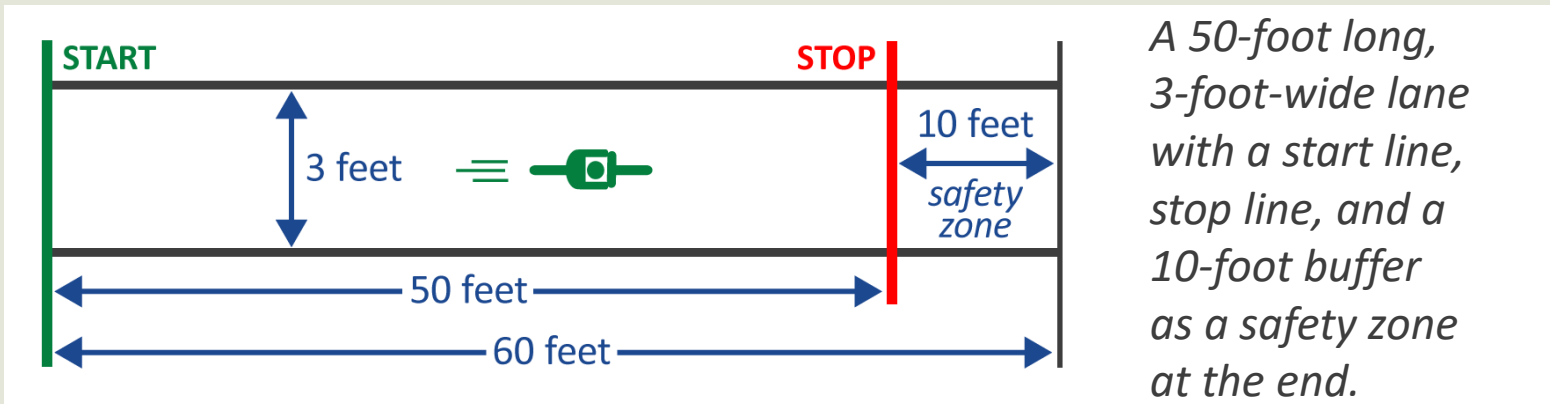
Power Pedal and Controlled Braking – Activity

▶ **Crash avoidance:** A fast start helps you ride in a straight line. Practice so you know exactly what it takes to stop your bike. Stay within the 3-foot lane.

Power Pedal Start: Teach kids to position power pedal with the top of their foot under the pedal. Start without scooting the bike with a walking motion.

Stopping: Practicing controlled braking by having the child ride down a 3-foot-wide lane and stop, as close to a line as possible, without going over.

Advanced: 1st-right brake, 2nd-both brakes, 3rd-emergency stop hover.



Make it fun: Mark where the front tire is when they stop so kids can see progress in their practice! Skid length is added to the end of the final stop.

Drivers: Take your foot off the accelerator when passing kids on bikes. Give a minimum of 3 feet when passing. Slow down and anticipate kids to be unpredictable.

Station 2: Signals and scanning skills

▶ **Crash avoidance:** Sudden swerve
Understanding signs and habits in traffic.

Beginners:

- Scanning – Put your chin on your shoulder to stay steady
- Signal with arm away from your body so your intent is very clear
- Hand should be back on the handlebar before beginning the turn
- Smile at everyone!



Advanced:

- Scanning – Remove your left hand from the handlebars to stay steady
- Signal with “Jazz hands” — movement is more noticeable
- Learn and use signals for road hazards and slowing
- Thumbs up and thank you wave

Drivers: Slow down, wait until it is safe to move over and pass. Be prepared for kids to swerve and turn unpredictably.

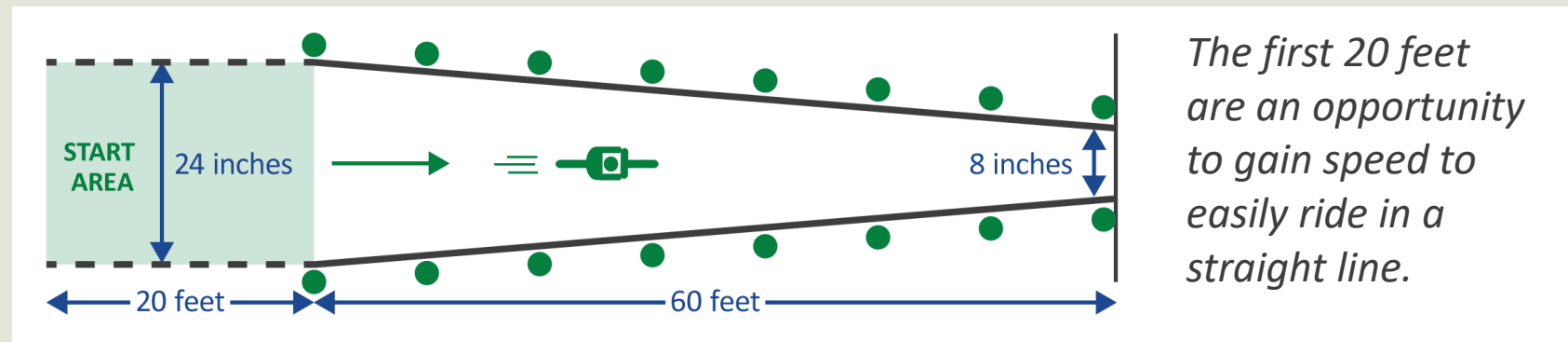
Station 2: Signals and scanning activity

▶ **Crash avoidance:** Before signaling, always look into traffic for a safe time to move out of your predictable pattern. Practice develops the habit of looking before going.

Tap kids on the left shoulder to remind them which way to look. Stand by the start area, hold up your arm(s) away from your body and say “LOOK.” Participant will shout out how many arms you are holding up.

New riders look in the widest section, helper stands far to the left to make it easy.

Experienced riders look in the narrow section, helper stands directly behind the rider.



Make it fun: Use colors or any object to help their observation skills. Use fingers (instead of arms) and do math to challenge older kids and work on multi-tasking, very much like a real-life situation.

Drivers: Slow down, wait until it is safe to move over and pass. Be prepared for kids to swerve and turn unpredictably.

Station 3: Obstacle avoidance – Slalom skills

▶ **Crash avoidance:** Sudden swerve. Avoiding obstacles and maintaining control of your bicycle **when you see the obstacle coming** and are able to plan ahead.

Beginners:

- Focus far ahead, not on the obstacle
 - Start slow, but some speed makes this easier
 - Practice avoiding obstacles
 - Learn to recover from a sudden loss of control
- Mistakes are ok!**



Advanced:

- Lean to steer – Don't use your handlebars to steer your bicycle
- Maintain as straight of line as possible
- Scan and signal a turn at the end

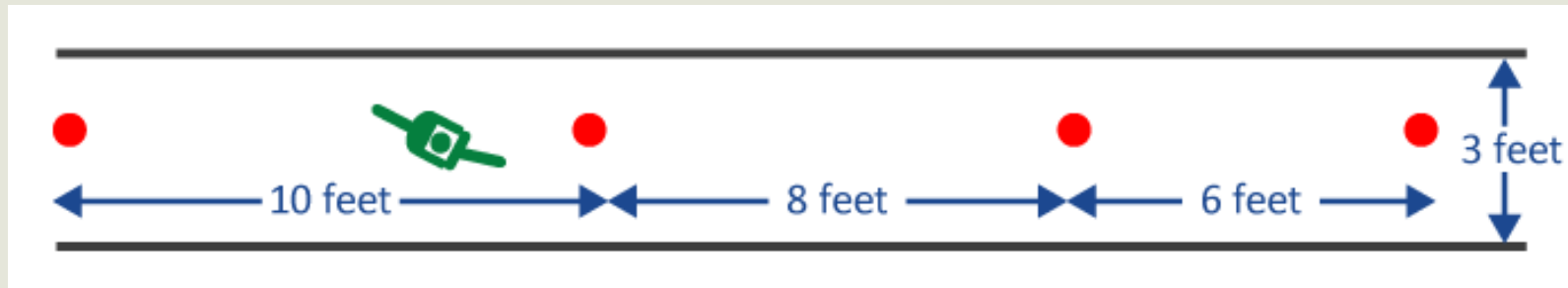
Drivers: Slow down, wait until it is safe to move over and pass, allowing a minimum of three feet. Be prepared for kids to swerve and turn unpredictably.

Station 3: Obstacle avoidance – Slalom activity

Crash avoidance: Maintain control of your bicycle, avoid a sudden swerve into traffic. Ride in as straight of line as possible.

Build the slalom with tennis balls cut in half so they know they hit the obstacle, or mark with chalk for simplicity. Watch for traffic and make drivers aware of the course as they approach from any direction. Make sure kids are looking for cars before they cross the street to circle back.

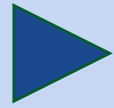
Set up on the right side of the road, participants must pedal the same direction as traffic.



Make it fun: Count the number of successful weaves out loud together as they pedal through. Take one cone off the longer end and add it to the shorter end after they make a few successful passes. Use this station to return kids to the line after completing any station.

Drivers: Slow down, wait until it is safe to move over and pass. Be prepared for kids to swerve and turn unpredictably.

Station 3: Obstacle avoidance – Rock dodge skills



Crash avoidance: Sudden swerve. Avoiding obstacles and maintaining control of your bicycle **when you don't see the obstacle** until the last second.

Beginners:

- This is a very fast motion, think “FLICK away-FLICK back” in one second
- Start your motion as close to the obstacle as possible.
- Your goal is to avoid the obstacle with your front wheel, which controls your steering.
- Some speed makes this easier.



This is NOT a weave, it is an avoid and correct, to maintain a straight line.

Advanced:

- Start the motion as late, and close to the obstacle, as possible
- Ideally the obstacle will pass between your front and back wheels without touching either
- Strong fast “flick-flick” at about a 45-degree angle
- Maintain as straight of line as possible

Drivers: Slow down, wait until it is safe to move over a minimum of 3 feet and pass when safe. Be prepared for kids to swerve and turn unpredictably.

Station 3: Obstacle avoidance – Rock dodge activity

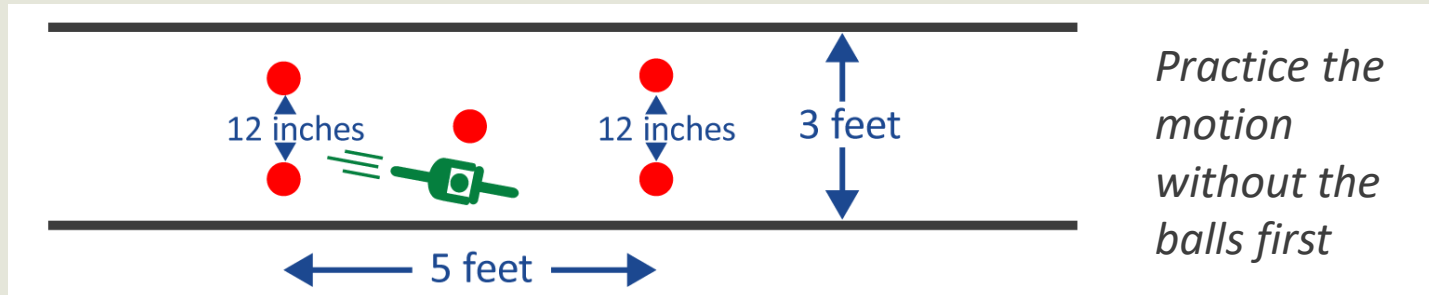
▶ **Crash avoidance:** Maintain control of your bicycle, avoid a sudden swerve into traffic, ride in as straight of line as possible.

Use tennis balls cut in half so they know they hit the obstacle, or mark with chalk for simplicity.

Practice this activity while walking their bike and flicking their handlebars quickly to avoid, then quickly correct. The bicycle maintains a straight-line motion.

Leave the corner balls 12 inches apart for beginners.

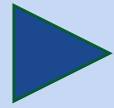
Weaving around is not a successful completion.



Make it fun: Tally successes, give more points for the center ball going between the front and back wheels. Stand close to the course or run by to simulate traffic and the need for this maneuver.

Drivers: Slow down, wait until it is safe to move over and pass. Be prepared for kids to swerve and turn unpredictably.

Station 4: Driveway/Mid-block pullout skills



Crash avoidance: Riding into traffic. Stop completely, enter the road into the proper lane position, be predictable, learn driver habits.

Beginners:

- Let kids say when they think it is safe to go, adults remove barrier and give verbal confirmation
- Stop, with two feet on the ground, in a place where they can easily see all traffic
- Pull out carefully along right side of the road about three feet from the curb without swerving into the traffic lane



Advanced:

- Kids can decide in pairs if it is safe to go, adults give a verbal confirmation
- Slowly pull up close to the road entrance with a clear view of all traffic. Can you be seen?
- Pull out carefully into your lane
- Thumbs up and thank you wave

Drivers: Slow down. Expect kids to be everywhere. Kids often feel safe when they can't be seen, between parked cars or behind bushes, away from the road entrance. Know that younger kids often follow far behind older kids onto the street.

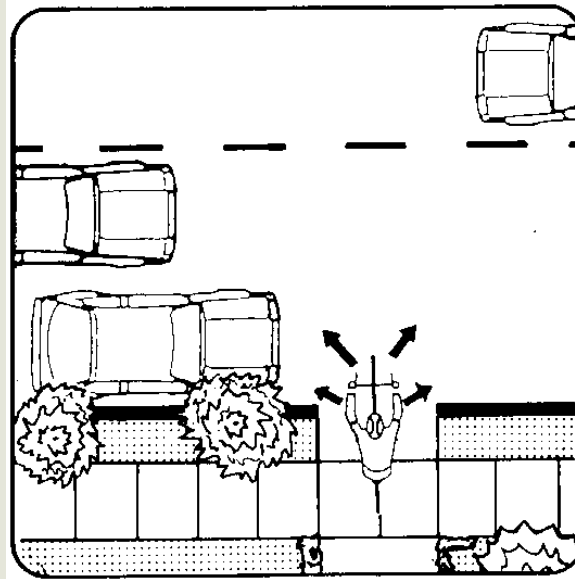
Station 4: Driveway/Mid-block pullout activity

▶ **Crash avoidance:** Do not enter the road when traffic is approaching. Be seen and predictable, do not swerve into traffic lanes, stay three feet from the curb.

Use a driveway on a quiet street, or a path that spills out of a park into the street.

Check to ensure:

- A complete stop
- Visibility of themselves
- Sightlines to see vehicles
- Look all ways: Left-right and left again, in front and behind
- Don't enter the road if one driver motions



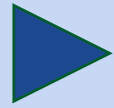
Discuss:

- Show kids the difference of waiting where they can see and be seen vs hiding where they may feel safe
- Timing varies, judging speed is difficult
- Discuss driver habits, good AND bad

Make it fun: Use real vehicles parked to block the view. As a parent driving, show kids how it can be difficult to see. have kids help watch for others playing in driveways or parks and alert you to possible mid-block pullouts.

Drivers: Slow down. Expect kids to be everywhere. Kids often feel safe when they can't be seen, between parked cars or behind bushes, away from the road entrance. Know that younger kids often follow far behind older kids onto the street.

Station 5: Traffic Signs and Intersections Skills



Crash avoidance: Learn traffic signs and lights, colors and shapes. Communicate with other road users. Be ready in your power pedal and always prepared to stop!

Beginners:

When do we stop at a stop sign? **ALWAYS**

Look all 4 ways:

- Left
- Right
- In front
- Behind

Wave to make sure they see you. They will wave back if they do!

Take turns with other vehicles

ROAD TRIP BINGO

As you are driving, look for different road signs. Mark the signs you see.
The first player to get 5 spaces in a row, wins!



Advanced:

Make eye contact with others on the road

If one person motions you to go, still look all 4 ways before going

Lane positioning – be visible in your space

Don't hide or ride too close to the curb or hazards

Thumbs up and thank you wave!

Drivers: Slow down, know that children do not understand or have experience with traffic rules or driving habits. Stop at all crosswalks. DO NOT stop in the middle of the street and motion for kids to cross.

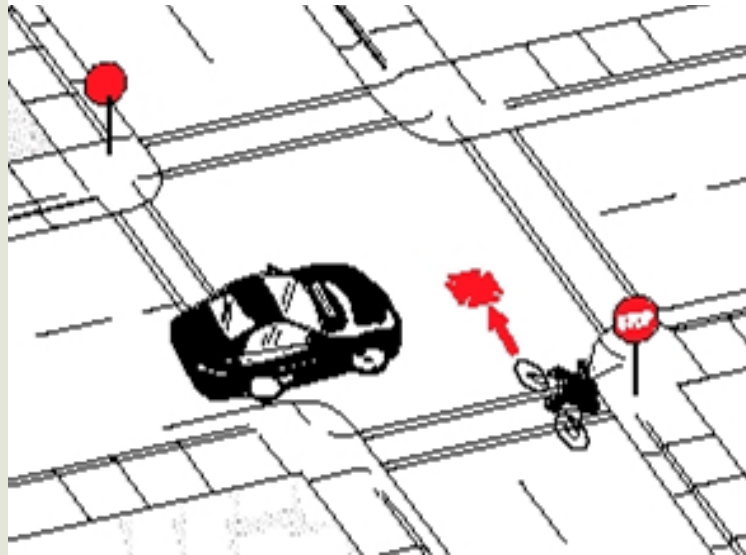
Station 5: Traffic signs and intersections activity

Crash avoidance: Understand traffic and driver habits, pedal predictably. Practice good habits at quiet intersections to develop confidence for busier intersections with more lanes.

Prepare

- Chalk a safe four-way stop intersection with two-lane roads
- Demonstrate and help each kid practice
- Then have kids walk and communicate on their own while using hand signals

Use a quiet neighborhood intersection, recruit families to be “drivers”



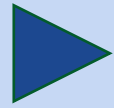
Teach

- Have kids on bikes practice together
- Let kids make their own decisions when to go
- Help them clarify their communications
- Make sure kids learn from “crashes” that happen in this safe low speed activity

Make it fun: Have an advanced child “break the rules” let the kids talk about what happens. Talk about where they can go on their bikes, what they will bring and how to carry it.

Drivers: Slow down, know that children do not understand or have experience with traffic rules of habits, protect them while they are learning. Expect kids to be everywhere. Please DO NOT stop in the middle of the street and motion for kids to cross.

Station 6: You Go First skills



Crash avoidance: Do not suddenly swerve around obstacles. Control your bicycle pedal predictably in as straight a line as possible. Share the road respectfully.

Beginners:

- Plan ahead. Look as far as you can see at where you are going
- Before passing, look behind you. Only move over if no cars are coming
- Signal and look again
- Stay three feet from any obstacle. Do not move over in front of cars
- Smile at everyone!



Advanced:

- Look, look and signal, look signal and go if safe
- Plan ahead. Don't get pinched out
- Practice judging distance and speed of vehicles
- Do not ride up the sidewalk and back into the street
- Thumbs up and thank you wave. Earn the respect of people driving

Drivers: Slow down, allow safe space for kids to move over, they often do not look before moving around obstacles. People biking should not have to stop and wait while you pass from behind.

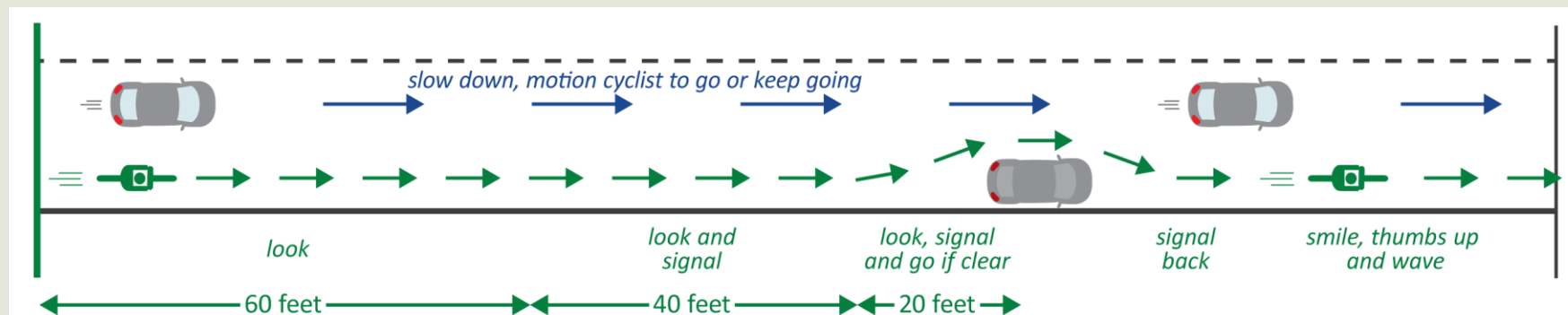
Station 6: You Go First activity



Crash avoidance: Before you signal, always look behind into traffic for a safe time to move out of your predictable pattern. Scanning is a very important skill to master.

Stand behind the child, let them start pedaling three feet from the curb. Run from behind pretending to be a car.

The “driver” should simulate scenarios, sometimes let them go, sometimes pinch them out, sometimes distracted!

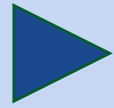


It is important to make this course long enough to teach how early kids should begin looking.

Make it fun: Kids love this and learn quickly but do not do it consistently. They have trouble in groups and with any distractions. Practice on all rides to become proficient.

Drivers: Slow down, wait until it is safe to move over and pass. Be prepared for kids to swerve and turn unpredictably.

Station 7: Balance skills



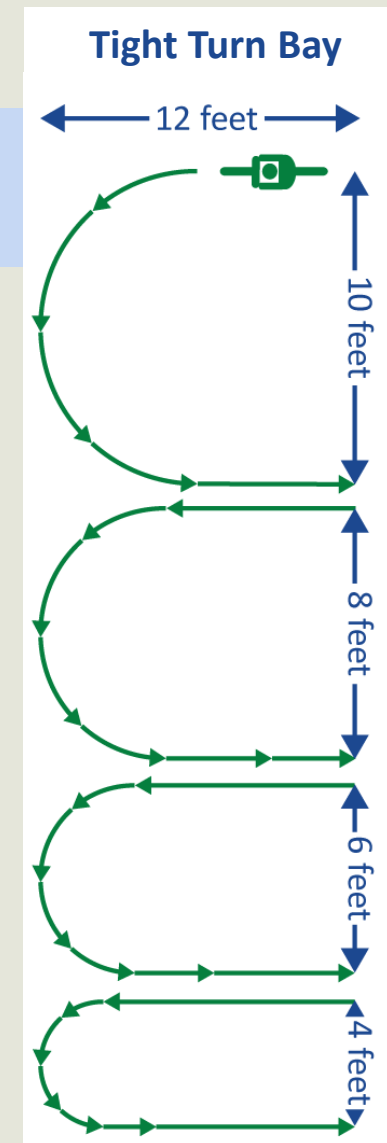
Crash avoidance: Sudden swerve. Maintaining control of your bicycle and development of instinctive reaction.

Beginners:

- Kids have fun with and learn these skills quickly
- Smaller bikes help new riders
- Learning from their mistakes strengthens familiarity with their bike
- Smile while you pedal!

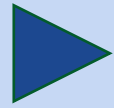
Advanced:

- Ride the balance activities from both directions
- Put two riders in the activity at the same time
- Pedal while looking up, incorporated distractions
- Ride drills one handed
- Imagine hazards and reacting to them



Drivers: Slow down, wait until it is safe to move over and pass. Allow a minimum of three feet between the right most part of your car and the left-most part of the bicycle. Be prepared for kids to swerve and turn unpredictably.

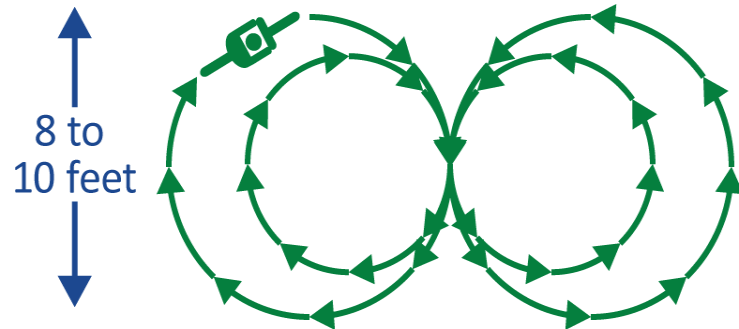
Station 7: Balance Skills Activity



Crash avoidance: Sudden swerve. Maintaining control of your bicycle and development of instinctive reaction.

Give lots of positive feedback and encourage new riders. Help them understand that mistakes help them get better, ask questions, walk through improvements. Notice each child's ability and offer additional challenges when they begin mastering a skill.

Figure Eights



slowest bike ride ever.

Slow Race

- Draw several 3-foot-wide and 10-foot-long lanes, with start and finish lines, like a track.
- Pedal as slowly as possible.
- Leave your lane or touch the ground and you are out.
- The last one to cross the finish line wins!

Make it fun: Time kids and have contests. Intentionally distract kids, stand close to the edge of the activity area, hold up fingers for them to count, add an obstacle.

Drivers: Slow down, wait until it is safe to move over and pass. Prepare for kids to swerve and turn unpredictably, expect the unexpected. Be patient and understanding.