



SMART CYCLING



Bicycling Skills 123 Youth Instructor Manual

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OVERVIEW

This guide outlines 13 stations — four administrative stations and nine activity stations — but not all of the stations will be used at every Cycling Skills Clinic.

Tip: There should be about 10 participants for each course.

CONTENTS



- 4 Administrative Stations**
 - A: Welcome and Registration
 - B: Helmet Giveaway, fit and adjustment
 - C: Bicycle Inspection and Fit
 - D: Celebration

- 8 Activity Stations: Bike Handling**
 - 1: Starting/Stopping/Straight Line
 - 2: Dodging Hazards
 - 3: Scanning, Signaling and Turning
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- 12 Activity Stations: Rules of the Road**
 - 5: Entering and Crossing the Road
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- 16 Activity Station: Decision Making with Complexity**
 - 8: Practice in Traffic

- 18 Activity Station: Learning while Playing**
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Minimum Clinic

Administrative stations A-D should be in every clinic but need not be as formal as presented here. Activity stations 1-4 & 9 should be the minimum course content for every clinic.

Optional Stations

Stations 5-7 are optional and are best if they can be done in a real neighborhood intersection that has been blocked to traffic by law enforcement.

Station 8 is great practice for all ages but the riders 10 and older seem to get the most out of it. It can be excellent for middle-school riders as it is the first real “traffic skills” course they may have gotten. This station can be done by itself if the riders are experienced.

Station 9 can be done by itself or with stations 1-4 for a local health fair or other event that is not exclusively for bicyclists. This station is also good for the middle school riders as it gives them a chance to be competitive and to grasp the reality of traffic principles.

Station Instructions

The instructions in this document have been tested over many years. There are intended to provide guidance and keep the riders and volunteers safe. If you choose to modify these instructions you may be unintentionally adding a level of danger to the drills. Try to stick as close as possible to the instructions at each station.

Emergency Response

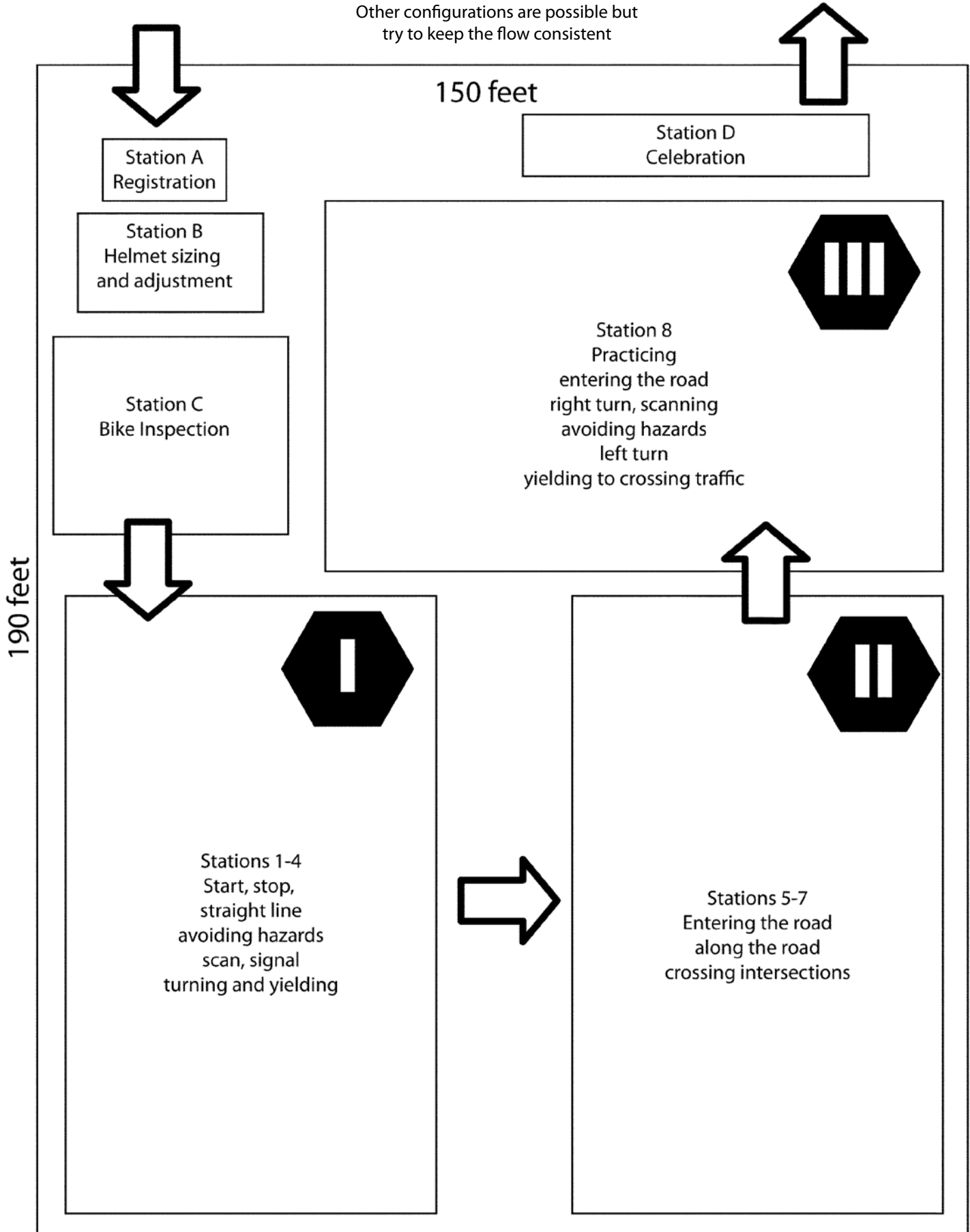
Before any child goes through any station, you should be aware of the steps that have been taken in case of a crash or injury to a child or volunteer. Know who to contact and what steps you are to take in case of an emergency. A waiver, prepared by an attorney, should be signed by a parent or guardian for every rider. As a last resort, be prepared to call 911.

Agenda For Youth Instructors:

0:00 - 0:15	Introductions
0:15 - 0:30	Overview of classes and materials
0:30 - 1:00	Teaching children
1:00 - 2:00	Practice teaching: youth skills

TYPICAL YOUTH SKILLS LAYOUT

Other configurations are possible but
try to keep the flow consistent





WELCOME STATION

As volunteers at the Welcome Station, you are a major part of making this an enjoyable experience for the children and their families. Be happy, upbeat and greet everyone with a smile and cheery welcome.

The first part of your job is to make sure the tables and chairs are set up to ease the flow of people to and past your station. Make sure there are logical ways to move up to one of the welcome station tables and then move to the Helmet Station.

Each child is required to have a parent or guardian who will sign the registration form with included waiver. If you have multiple clipboards and ball point pens, these can be handed out to people who are waiting in line to keep the process moving.

- Once the person completing the form gets to your table, you need to check that everything on the form is complete and

- Write the child's name on the top of a "report card" form and instruct the child to present it to a volunteer at the end of every station for check off.
- Tell the parent/guardian that the card is required for participation at the stations and getting the certificate and "celebration" materials.
- Upon completion of the forms, direct the participants to the Helmet Station

Equipment

Tables and chairs to meet the needs of the expected crowds. Up to three sign-in lines can be accommodated on one six foot table. Allow more than you think you need to keep the lines to a minimum.

Supplies

The minimum is a good supply of registration and report card forms and ball point pens. You should also consider bringing multiple clip boards. If it is a hot day, plan on having bottled water for the volunteers and the participants. If it is cold enough for volunteers to wear a coat consider providing hot coffee or hot chocolate for the volunteers.

SAMPLE REPORT CARD

Rider's Name _____

Bike Handling	Great Job	Need Practice
Starting/Stopping/Straight Line	<input type="radio"/>	<input type="radio"/>
Dodging Hazards	<input type="radio"/>	<input type="radio"/>
Scanning, Signaling and Turning	<input type="radio"/>	<input type="radio"/>
Turning and Yielding	<input type="radio"/>	<input type="radio"/>
Advanced Skills	Great Job	Need Practice
Entering and Crossing the Road	<input type="radio"/>	<input type="radio"/>
Along the Road	<input type="radio"/>	<input type="radio"/>
Intersection	<input type="radio"/>	<input type="radio"/>

Thank you for riding in the _____ **NAME** _____
 _____ **DATE** _____ Youth Skills class. This card will tell you

those things you are can do well and those things you need to practice. Take it home and let an adult help you practice.





HELMET STATION

Every cyclist needs to get in the habit of using a helmet. You can help them by making sure their helmets are properly fitted and adjusted.

This station needs one person trained to fit helmets and at least three volunteers to help get helmets for the children and make preliminary adjustments.

The best way to fit a helmet is to measure the child's head around the widest part just above the eyebrows and ears. Helmets should have a label indicating what size they are. Choose the smallest helmet that will fit the child.

Adjusting a new helmet is easy. First make sure the helmet fits well by adjusting the retaining strap at the back or adding foam pads. The helmet should fit snugly and not be able to rotate on the child's head.

This will help to remember how to adjust the helmet and straps:

- **Eyes:** The child should be able to see the front edge of the helmet.
- **Ears:** The sliders should be moved up to just under the ear lobes.
- **Mouth:** The chin strap should fit snugly enough that opening the mouth widely will move the helmet.

Equipment

A large area to store helmets if you are giving them away. Make this area accessible so children can

see and have a choice of helmets. The helmet fitters will need chairs to be able to sit at the child's height and visually inspect the helmet and adjustments.

Supplies

You need a flexible measuring tape (a sewing tape is ideal) to measure children's heads. Over time you should be able to collect helmet pads to help in fitting older helmets. If you are just beginning to do safety clinics, ask your local bike shop if they have a supply. Extra buckles and rubber bands are handy but you can make helmets fit without them.





BIKE INSPECTION STATION



Children's bicycles tend to be inexpensive and lower quality. They get out of adjustment easily and are normally not well cared for. Almost 7 percent of children's crashes can be attributed to equipment failure of some kind. In addition to the safety aspect, if a child's bike is not in working condition it will not be ridden.

Instead of just checking a bicycle, it is always good to involve the child and parent in the process so they have a better concept of what constitutes a safe, workable bicycle.

Perform an ABC Quick Check

- **A is for Air:** check the air pressure, spin the wheels and make sure the tires are not worn out. Be prepared to pump up the tires. Most children's bikes will have a Schrader valve so have a pump that fits. The pressure is stated on the side wall.
- **B is for Brakes:** check to make sure coaster brakes will stop the

bike by spinning the back wheel and then pedaling backwards. If the bike has hand brakes, check to see that the levers don't hit the handlebars and that the pads are clean, straight and contact the rims properly. Brake pads that contact the tire can cause a blow out. Brake pads that go under the rim and contact the spokes can cause a crash.

- **C is for Cranks, Chain and Cogs:** grab the crank arms and try to wiggle side to side. There should be no movement. Spin the pedals and cranks backwards to see if the chain runs smoothly over the cogs. The chain should look like metal, not rust or black gunk. If the bike has gears check to make sure the gear levers and derailleurs (gear changing mechanism) work to shift the chain between gears.
- **Quick is for Quick Release:** many children's bicycles will not have quick releases on the wheels but may have them on the seat post. Check to make sure they are tight and closed properly. Check to make sure the wheels are seated in the "drops" and that the axle bolts are tight. If there are quick releases on the wheels, check to make sure they are closed properly.
- **Check is for a parking lot check:** after making sure the seat and handlebars are tight, have the child ride the bicycle around in the parking lot and check that everything works well.

Equipment

For a small clinic, a couple of adjustable wrenches are probably sufficient, but a set of socket and Allen wrenches in both English and Metric sizes is better. For a large clinic, a work stand and a good set of bicycle tools is best, especially if you can get a bike shop to donate the time of one of their mechanics or other employee who knows how to use them.

Supplies

Have a couple of tubes of the normal sizes for children's bikes (10", 12", 16" and 20"). Chain lube, grease and lots of paper towels or shop rags will keep even rusty bikes running better.



Instead of just checking a bicycle, it is always good to involve the child and parent in the process so they have a better concept of what constitutes a safe, workable bicycle.



CELEBRATION OF SUCCESS



Every child who participates in the Cycling Skills Clinic is a winner. Whatever you have to give out should be given to all riders. Make sure there is something for the parents as well.

At a minimum each rider should get a certificate of participation with his/her name on it. This is a great chance to give your sponsors some recognition.

When each rider brings a completed report card they should get a certificate. Don't be too strict about having all the boxes checked on the report card. Use the name on the report card to complete the certificate and have someone in your organization sign and date it.

If you have collected handouts and have bags, this is the time to give them out. Make a ceremony of the presentation of the certificate and the handouts. Get the parents involved and allow for photographs if the parents want them.

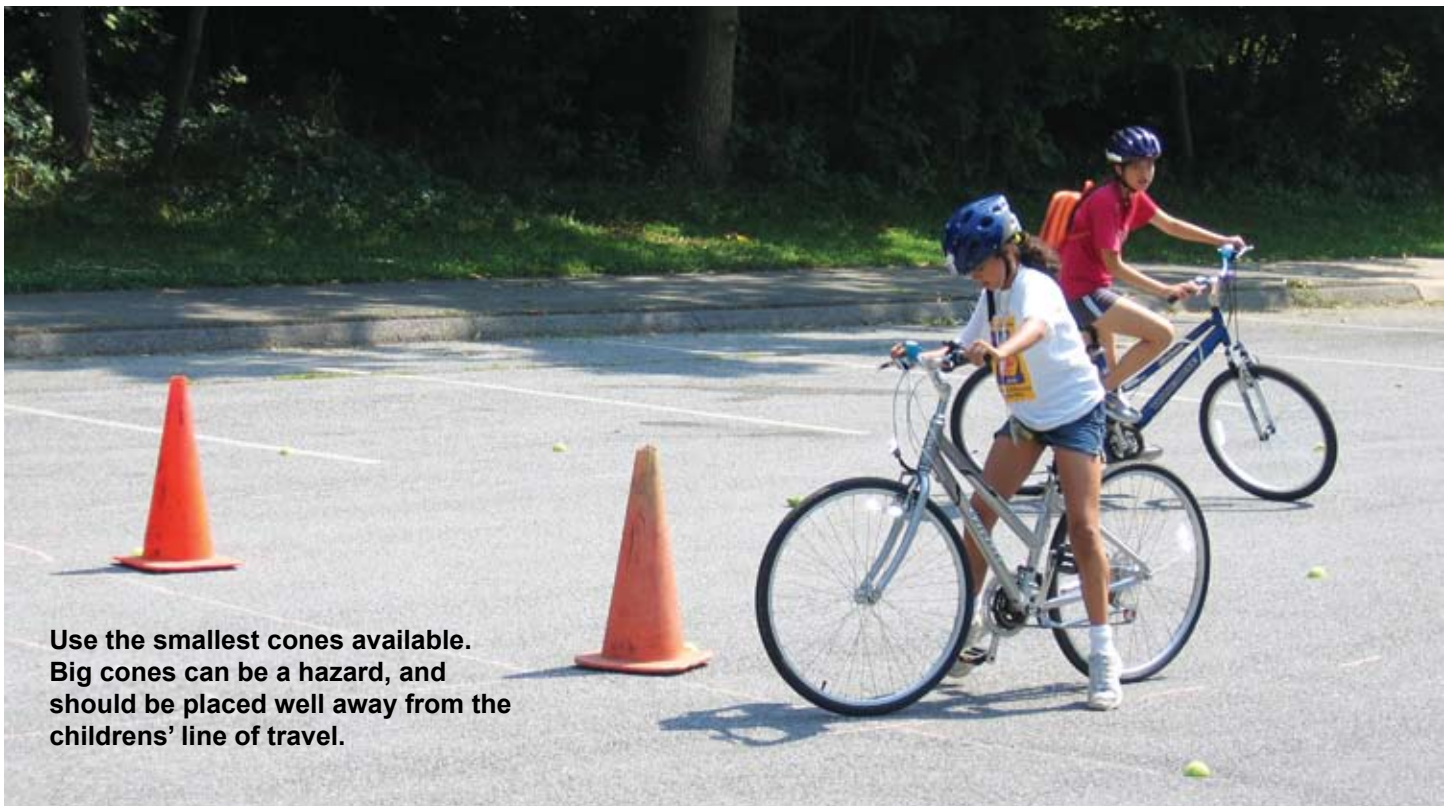
You should have someone taking photographs for publicity reasons. Make sure that you get photo releases if you intend to use the photo in a press release or future publications.

Equipment

Tables and chairs to meet the needs of the expected crowds. Up to three lines can be accommodated on one six foot table. Allow more than you think you need to keep the lines to a minimum. A tent or other covered space is great for this station to provide for the comfort of the volunteers and for protection in case of inclement weather.

Supplies

The minimum is a good supply of certificates and ball point pens. You should also consider bringing multiple clip boards. If it is a hot day, plan on having bottled water for the volunteers and the participants. If it is cold enough for volunteers to wear a coat consider providing hot coffee or hot chocolate for the volunteers.



Use the smallest cones available. Big cones can be a hazard, and should be placed well away from the childrens' line of travel.

Stations 1 and 2 share space and a “parking lot” so they are together in this manual. You should plan on three volunteers: one at the beginning, one at the middle and one at the end of this station.

Equipment: Eight cones, two at each start and two at each end, placed far enough away from the course to keep the children from running over them even with training wheels. Two STOP signs, one for each end placed to the right side.



STARTING & STOPPING

Starting

Have children line up in the “parking lot” and instruct them to wait until you touch their helmet before they go. Instruct them on the proper starting procedure, one pedal in an up position (about 2 o'clock) so they can push down hard to start. This will be hard for bikes with coaster brakes so tell them to learn to stop with the pedal in the correct position by braking properly.

Instruct them to ride as straight as possible down to the end with the STOP sign and come to a complete stop and put their foot down. Let riders go one at a time and leave enough space between riders so they don't stack up in the course.

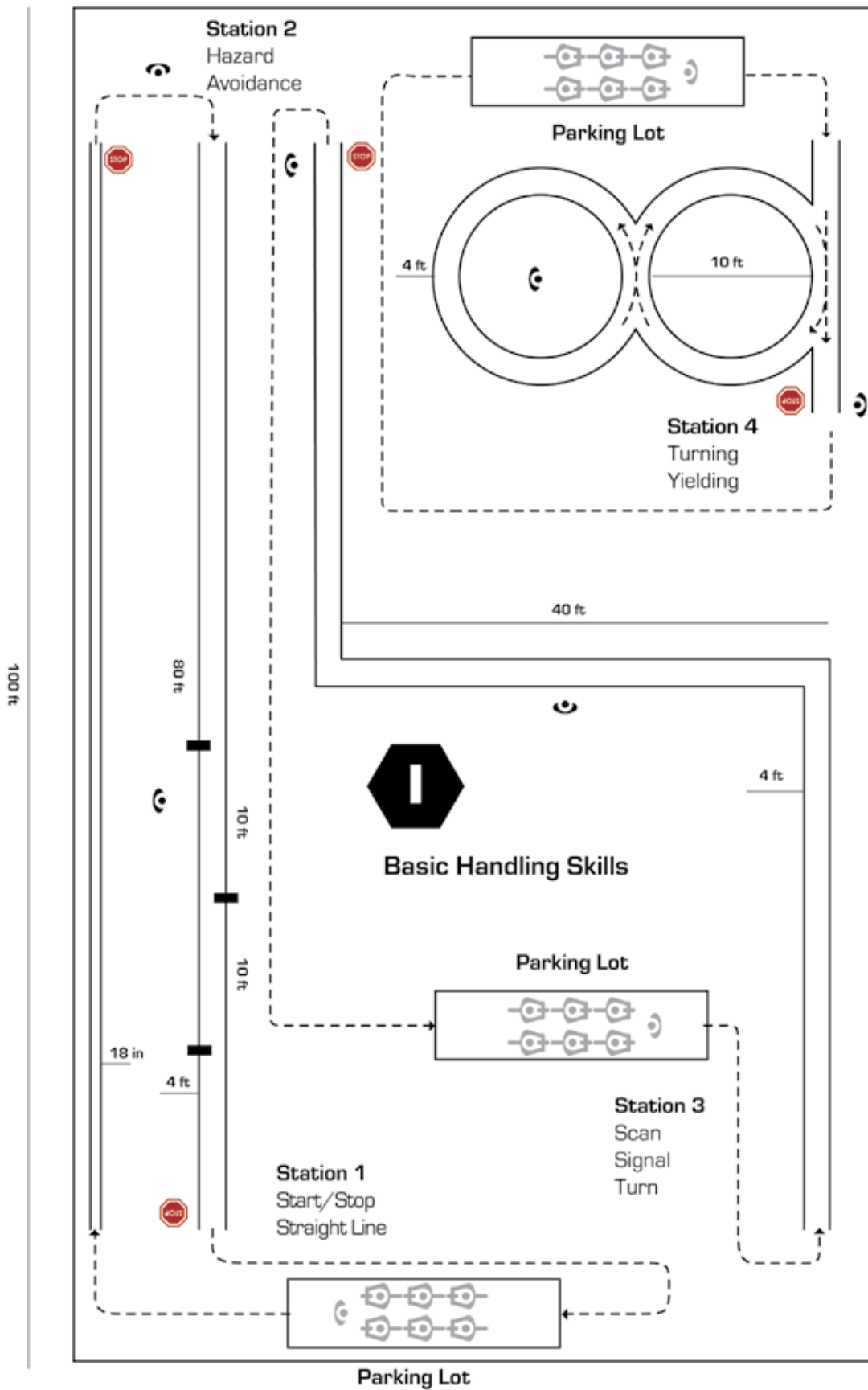
Remind them to come back to the parking lot when they return.

Stopping

Encourage the children to come to a complete stop with their pedals in the correct starting position. Have them start again and return through station two.

STATIONS 1, 2, 3, 4

60 ft





AVOIDING HAZARDS

Starting

Remind them of the proper starting procedure, one pedal in an up position (about 2 o'clock) so they can push down hard to start. This will be hard for bikes with coaster brakes, so tell them to learn to stop with the pedal in the correct position by braking properly.

Instruct them to ride to the STOP sign, going between the "hazards" but without going outside of the lines. For older children who appear to be competent cyclists you can give them optional instructions to go outside of the markers on a second or third pass.

Stopping

Encourage the children to come to a complete stop with their pedals in the correct starting position. Have them start again and direct them back to the parking lot. After three times through the first two stations, direct the children to the parking lot for station three.



BALANCE, SCANNING & SIGNALING

Equipment

Eight cones, two at the start, two at each turn and two at the end, placed far enough away from the course to keep the children from running over them even with training wheels. Four markers to delineate the area for scanning and signaling. One STOP sign for the end placed to the right side.

Starting

Have children line up in the "parking lot" and instruct them to wait until you touch their helmet before they go. Remind the children to use the proper starting procedure.

Instruct them to ride to the STOP sign, staying between the lines. Ask them to scan behind (look over their shoulder), signal the turns early for a count of two and get their hands back on the handlebars before they turn. Remind them to signal the stop as well. Have the volunteer in the middle of the station encourage them in each of the actions.

If younger children are not able to take their hands off the handlebars, have them practice scanning and making the turns within the lines.

Stopping

Encourage the children to come to a complete stop with their pedals in the correct starting position. Have them start again and direct them back to the beginning of the station. After three times through the station, the volunteer at the end should direct the children to the parking lot for station four.



You should plan on three volunteers, one at the parking lot, one in the middle and one at the end of this station.



You should plan on two volunteers, one at the parking lot and one in the middle of the upper circle. If you have extra people, one at the end to direct the children to the next exercise can be helpful.

TURNING & YIELDING

Equipment

You need six cones and a STOP sign. The cones are placed two each at the start and end and one each in the center of the circles.

Starting

Have children line up in the "parking lot" and instruct them to wait until you touch their helmet before they go. Remind the children to use the proper starting procedure. Instruct them to ride twice through the "Figure Eight" and then exit to the STOP sign and come to a complete stop.

Younger riders

After they have had two turns doing the drill send them on to the parking lot for station five.

Older riders

After all the riders have been through the station once, instruct the entering riders to keep riding the "Figure Eight" until you tell them to exit. Keep adding riders until you have four all riding the course at the same time. Instruct them that they must YIELD to the rider on their right side. After all the riders have had a chance to YIELD a few time have that group

exit and put more in. If parents have bicycles you may ask them to take part in this exercise.

Stopping

Encourage the children to come to a complete stop with their pedals in the correct starting position. Have them start again and direct them back to the parking lot. After three times through the station direct the children to station five.





ENTERING THE ROAD

For Stations 5 – 8 you should plan on eight volunteers, one at each parking lot, one at the “driveway,” one at the “hazard” and three at legs of the intersection “road.” The eighth volunteer can either walk or ride a bike through the course with a sign that depicts a car or a truck to simulate traffic.



All riders should go through the entire drill three times. If you can get law enforcement support to shut down a real intersection for this drill it is much better.

Younger Riders

Young riders, age 9 and under, should ride on the sidewalk and walk their bicycles across the crosswalks.

Equipment & Supplies

You need 10 cones and four STOP signs. The cones are placed

two each at the start and two each at the end of each roadway segment. The STOP signs are placed at the four corners of the intersection facing on-coming traffic. You also need a graphic to put on the front of a bicycle or for a pedestrian to carry. You may choose to provide cover for the parking lots. Provide water for the volunteers and children.

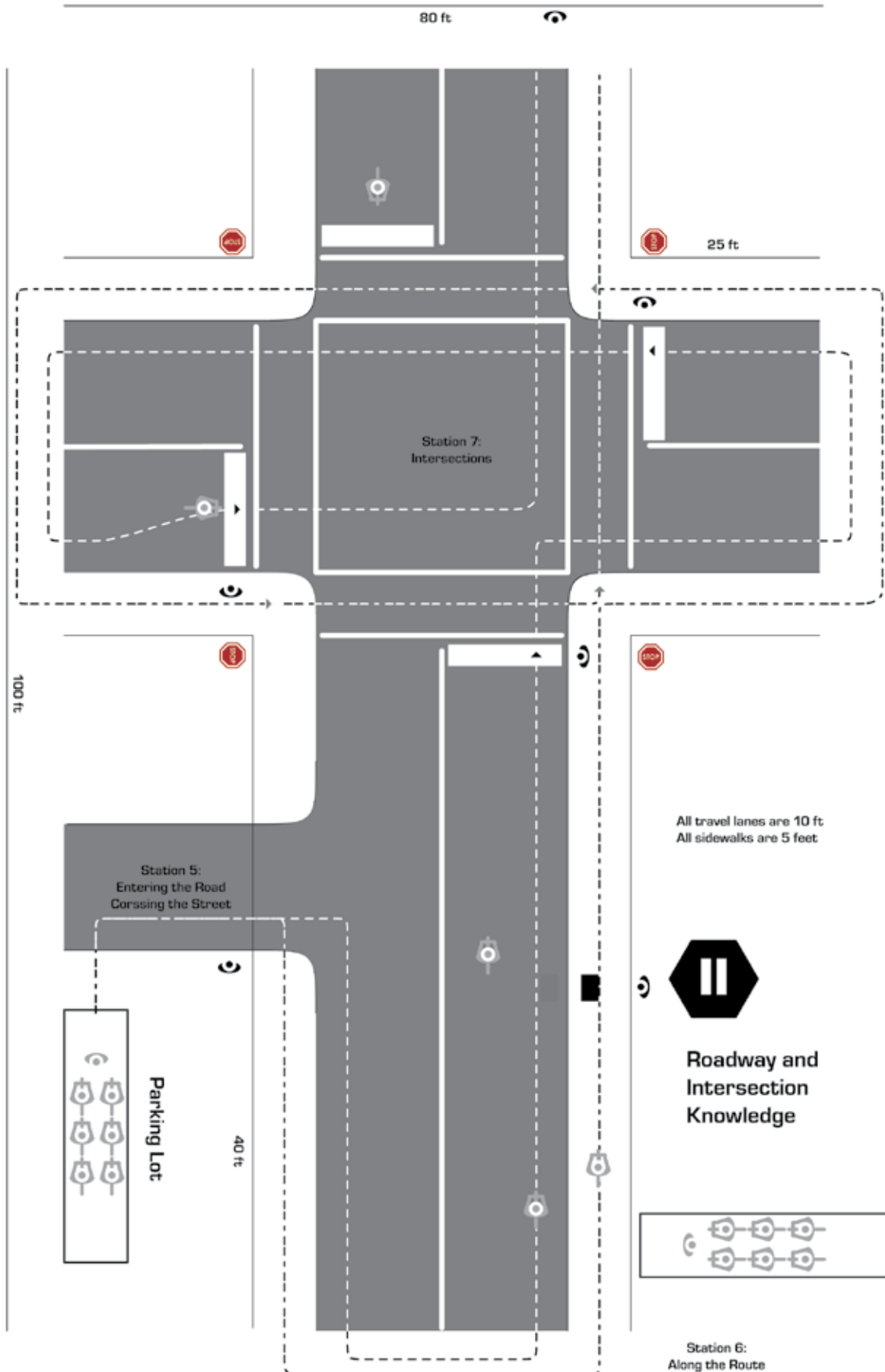
Starting

Have children line up in the “parking lot” and instruct them to wait until you touch their helmet before they go.

Instruct them to ride into the “driveway” and stop at the edge. Have each child look to the left, to the right and to the left again for traffic and then signal before they turn to the right and ride along the right side of the roadway. Have the riders go to the parking lot for station six.

After each child has had a chance to enter the road twice to the right, have them turn left by crossing the street and proceed to enter the intersection for the third time through the intersection.

STATIONS 5, 6, 7





ALONG THE ROAD & SIDEWALK

Children who are unable to ride in a straight line or are not consistently paying attention should not be allowed to ride on the roadway. Children younger than 10 frequently fall into this category, so have them ride slowly on the sidewalk and stop and walk their bikes across intersections using the cross walks.

Equipment & Supplies

Equipment is the same as station five, with the addition of a bath mat to simulate a road grate. The simulated grate can be anything that will not cause a rider to slip if they do happen

to run over it. Also, water for riders and volunteers.

Starting

Remind each rider of the proper starting procedure and then have the rider ride along the right side of the road. Watch to make sure they are riding a straight line an arm's length away from the curb. If they are riding on the sidewalk they should ride slowly and stay to the right half without swerving.

Use a bathmat or similar device to move in and out so that each rider has to make a decision about whether

Children who are unable to ride in a straight line or are not consistently paying attention should not be allowed to ride on the roadway.

to scan and swerve around the grate. Make sure the riders understand the need to scan over their shoulder before they swerve to the left to miss the simulated grate.

Riders will only go through this station twice, as the third time through they will turn left out of the driveway and go to station seven.





INTERSECTION



Moving through an intersection in different directions requires different actions on the part of the young cyclist. The station starts with a simple right turn, then a straight through maneuver and finally a left turn.

Equipment & Supplies

Equipment is the same as station five. Also, provide water for riders and volunteers.

Intersection

Riders will be coming into the intersection from Station 6.

Have each rider signal a right turn; signal a stop and then stop at the stop bar; then, when it is clear, make a right turn.

Have the riders make a U-turn, signal a stop and stop at the second

stop bar. When it is clear, have the riders proceed through the intersection.

Have the riders make a U-turn, signal a left turn, signal a stop and stop at the third stop bar.

The left turn should be done as a box turn for the youngest riders. Have the rider ride directly through the intersection and stop at the far side. After turning the bike, the rider should then ride in the new direction.

For older and more experienced riders, the left turn should be done by scanning, signaling and moving to the

center or left side of the lane before stopping. The rider should proceed from the stop into the turn and finish on the right side of the new lane.

When it is clear, have the riders proceed through the intersection.

After the first two times through the stations, the rides should be directed to return to the parking lot at station five. The third time through the rides should be directed to the parking lot for station eight.



PRACTICE IN TRAFFIC

You should plan on five volunteers in this station. One at the parking lot, one in the center median near the right/left turn area, one near the STOP sign, one near the hazard, one near the YIELD sign and one riding a bicycle as traffic.

The volunteer riding a bicycle is in a position to talk with the young riders and give them advice and make sure they are paying attention.

In this station, the riders will have a chance to practice all of the handling drills and basic intersection knowledge they was learned in the first seven stations. It is designed so that a rider has to make good decisions while dealing with complexity.

The maneuvers work best when there are six riders using the station at one time. That means that some riders may have to either wait or do something else while a group is working in the station.

Young riders enjoy this station but generally do not get a lot of learning from the exercise. It is best to separate the riders by age/experience before putting them in the station.

Equipment & Supplies

There are three signs needed in this station, one STOP sign, one YIELD sign and one ONE WAY (to the right) sign. A bath mat or other device to act as a simulated hazard is also necessary. Water for the volunteers and the riders.

Activities

There are six activities at this station; each one is designed to give young riders practice in one of the skills they need to avoid the major causes of children's bicycle crashes.

1. Entering the road (midblock ride out): Have each rider stop at the edge and look left, right and left again.



Tell them that they should wait until it is clear and then enter the traffic flow. They need to be instructed to ride at a moderate pace but stay in the loop unless told to do something else. Tell them there is no passing.

2. Turning right: Once all the riders get into the station, start having riders make a right turn into the side street. Remind them that they need to signal and return hands to the handlebar before turning. Have every other rider

or every third rider do the right turn in sequence. Otherwise they will get congested at the STOP sign and not get the full effect of the drill.

3. Stopping at a STOP sign: As riders approach the STOP sign, they should signal a stop and come to a complete stop and put a foot down. Remind them of the proper way to start and tell them to enter traffic when it is clear.

4. Scanning before swerving: A volunteer should move the “hazard” in and out, so riders will have to make a decision about scanning, signaling and swerving. If the volunteer riding the bicycle is close behind them, they should slow down and wait, scan again and then move out and around the “hazard.”

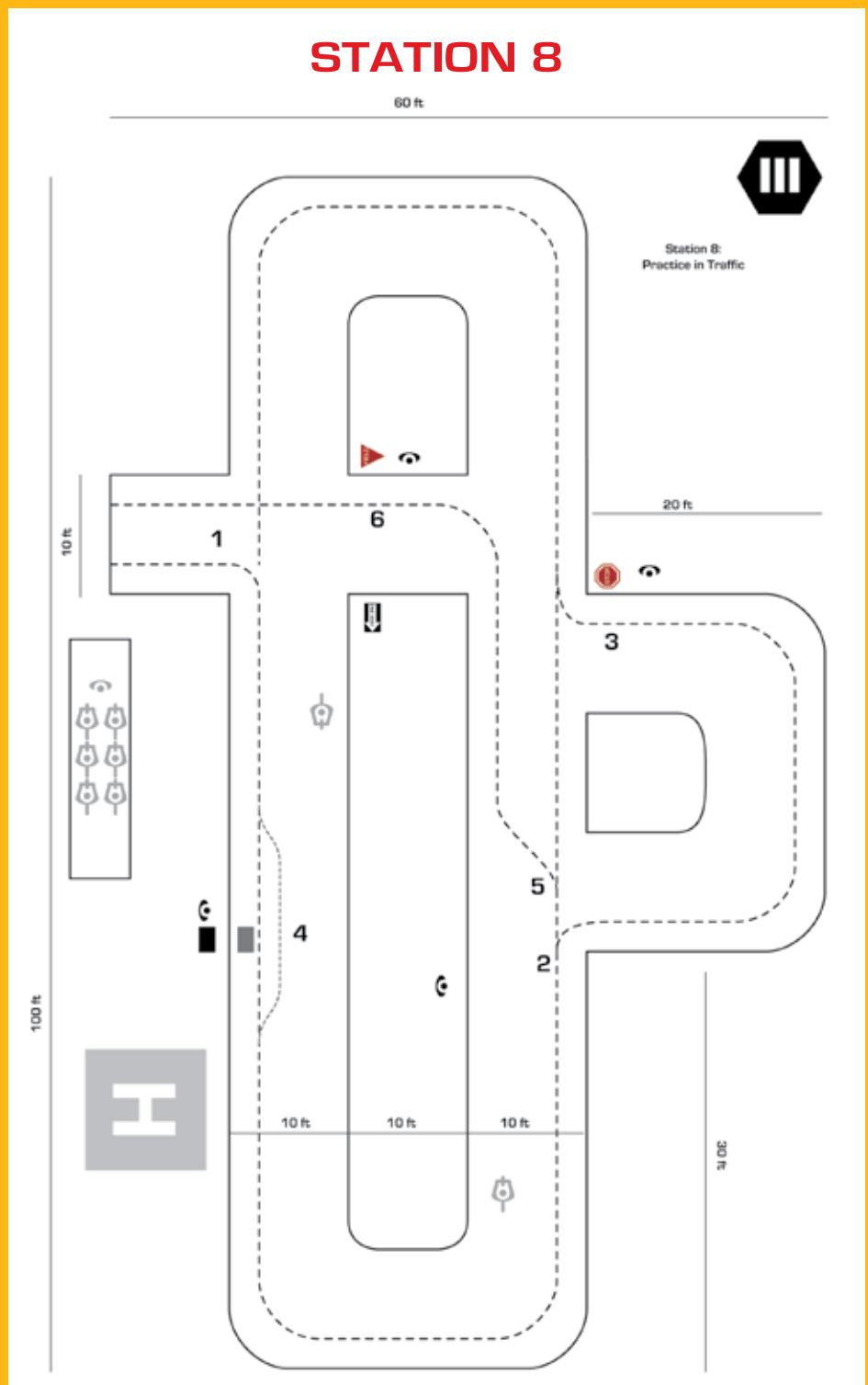
5. Scanning before turning left: After each rider has had a chance to go through the first four activities a few times, it is time to start the left-turn maneuver. As the group rides around the loop, ask the last rider to make a left turn through the median and exit via the driveway. Make sure they scan, signal and move to control the lane before turning.

6. Yielding to crossing traffic: If you ask the last person in the group to make the left turn, the rest of the group should be coming around the corner as the turning rider gets into the median. Make sure the rider yields before exiting to the driveway. Each rider should re-enter from the driveway until everyone has had a chance to do at least two left turns.

Option: Hospital

With older children, they learn these lessons better when there is a consequence for making a mistake in traffic. If one of the riders doesn't scan or signal and turns or swerves in front of the volunteer or the other riders, you may choose to have them sit out a few

rounds in the H hospital space. With children in middle school or higher this becomes quite a game and you may want to have someone volunteer to be a doctor in the hospital to talk with the rider about the causes and results of bicycle crashes.





FUN & GAMES

Chaos Box

Put one rider in at a time with instructions to: ride anywhere they want, not touch a foot to the ground, and just have fun. Keep adding riders until one of two things happen:

If gridlock occurs, have all the riders stop where they are and ask them what happened. Ask what would happen on the road if all the car drivers could go anywhere they wanted. Then have them all start going in circle staying to the right.

If they all start flowing in the same direction, have all the riders stop where they are and ask them what happened. Ask them if this is the way that traffic works on the road.

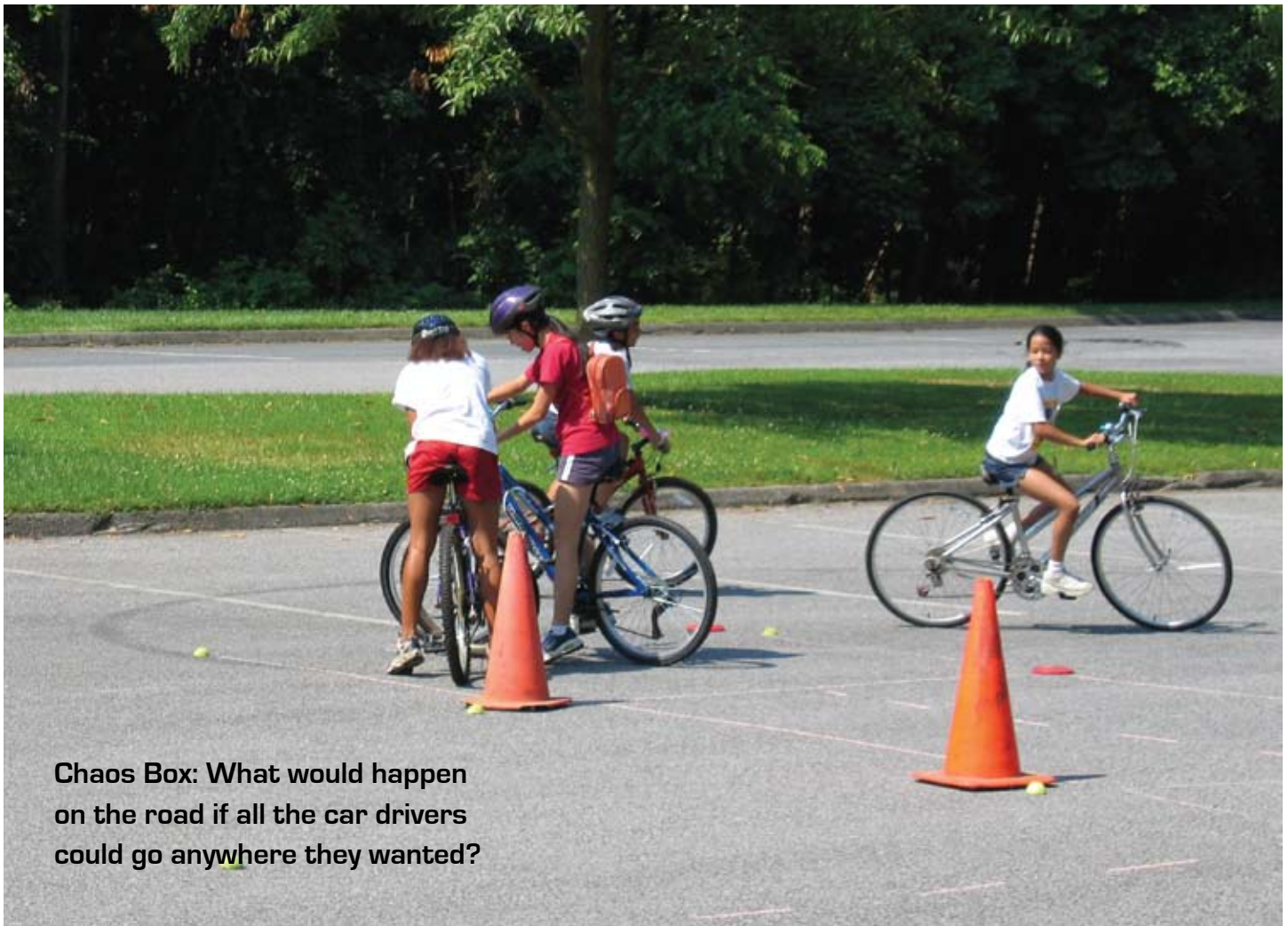
Snail Race

Have riders line up with their front wheels on the start line. Tell them that the last person to the finish line is the winner. They can't stop, put a foot on the ground or turn around. When you say go they must take their feet off the ground. Have them get a pedal in the power pedal position and then give them the signal to go. If you have lots of riders, you can do heats and have the winners "race" each other until you have an overall winner. Everyone should get some sort of prize for competing.

This station is usually added near Station D: Celebration to give young riders something fun to do and to give a place for riders to compete without compromising safety.

The Chaos Box is designed to teach children why we have traffic laws and the importance of obeying the rules. Although logically it should come first, it is only used after riders have had a chance to practice bike handling skills.

The Snail Race will help young riders to gain better balance and do it in a spirit of competition.

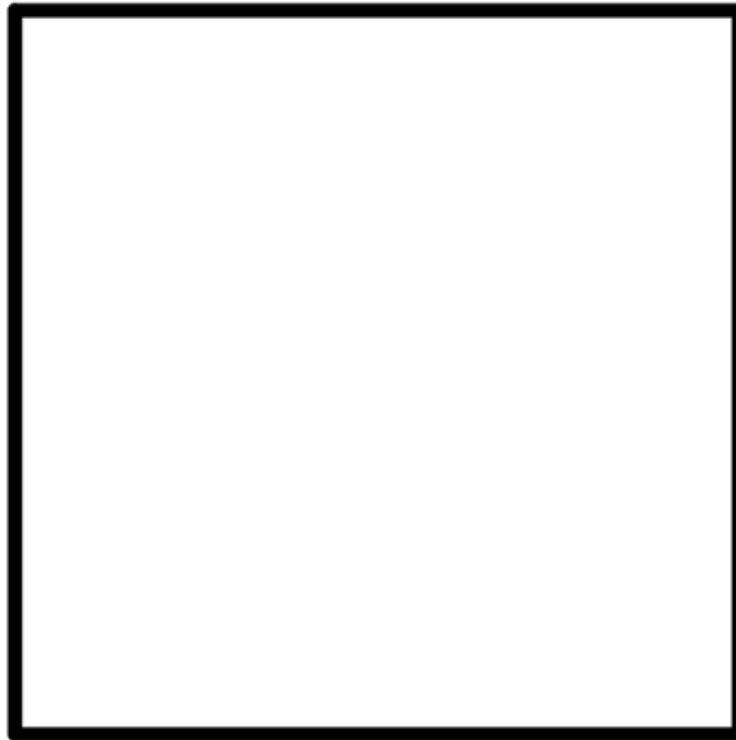


Chaos Box: What would happen on the road if all the car drivers could go anywhere they wanted?

STATION 9

50 ft

Chaos Box



30 ft

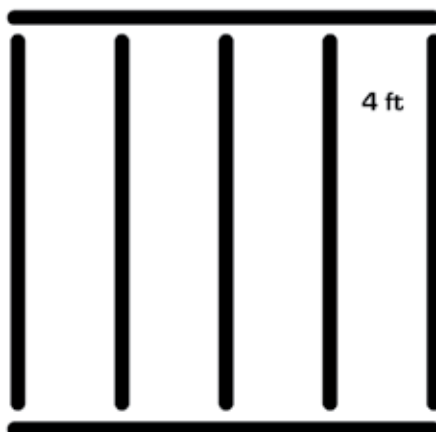


Station 9:
Fun and Games

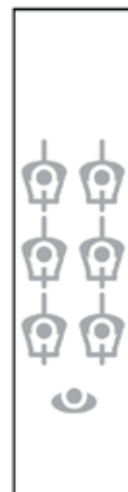


Snail Race

15 ft



4 ft



60 ft



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