BIKESMART ON-BIKE VERMONT!

Critical Content, Concepts, and Skills for On-Bike Bicycle Safety

In-Field Guide



A Curriculum Supplement

Developed by Center for Health and Learning

in collaboration with Local Motion









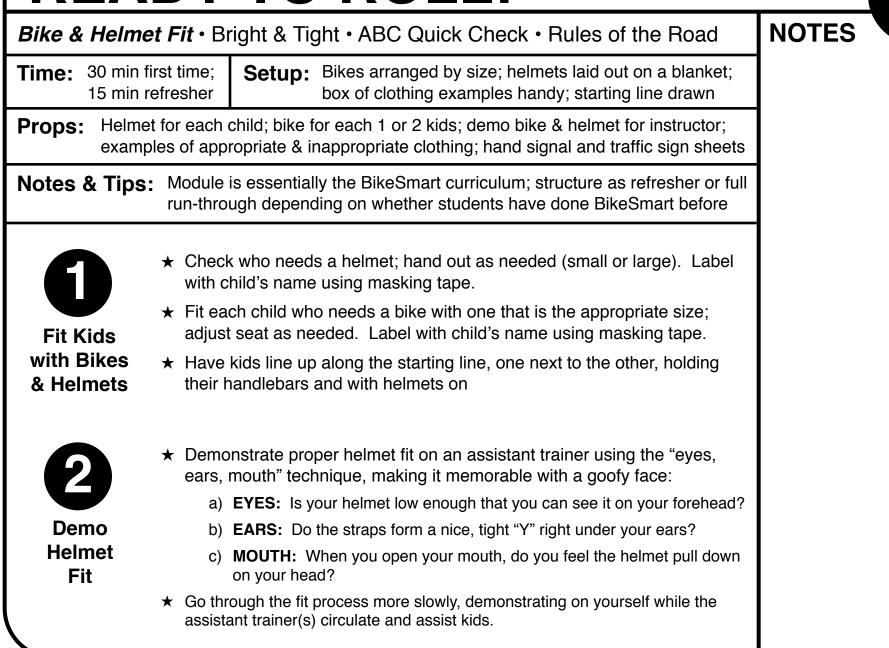
Center for Health and Learning, under funding from the Vermont Department of Transportation and the U.S. federal program called Safe Routes to School, has developed two curricula for safety education in walking and bicycling intended to be used in elementary and middle school classrooms. They are *WalkSmart-BikeSmart Vermont!* and *BikeSmart-OnBike Vermont!* As a result of pilot testing and implementation of the curricula, additional tools were created to assist safety educators in the classroom and in outdoor instructional environments to allow easy access to the key concepts, lessons and skill building exercises. This in-field guide is intended to supplement, and not replace the full curricula.

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Acknowledgements: Many thanks to Local Motion for their work in pioneering these in-field guides as supplements to the *WalkSmart-BikeSmart Vermont!* and *BikeSmart-OnBike Vermont! curricula.*

If you have questions or comments about this material, or would like more information on other health and safety related learning for Vermont and beyond, please contact Center for Health and Learning at (802) 254-6590 or info@ healthandlearning.org.

READY TO ROLL!

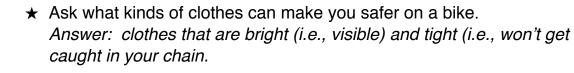


READY TO ROLL! cont'd.

appropriateness for biking.

materials.

Bike & Helmet Fit • Bright & Tight • ABC Quick Check • Rules of the Road



★ Show examples of clothes and have kids rank them by their

Demo Appropriate Clothing

4



★ Ask what important thing on the bike starts with "A." Explain how too little air is uncomfortable and dangerous (bike handles poorly). Demonstrate how to squeeze the tire (push down on tread) to make sure it is firm.

★ Show a reflective vest and ask how far away they think it can be seen. Show chart with distances for various colors of clothes vs. reflective

- ★ Then ask about "B." Demonstrate what happens when brakes are too tight (they rub on the rims) or too loose (they don't provide maximum stopping power). Show how to do quick adjust of brakes.
- ★ Then go to "C." Ask what should go on the chain when they say "oil," explain why oil is no good (dirt sticks to it). Show them how to apply lube and wipe off the excess.
- ★ End with "Quick Check." Show them what to look for on their bike to ensure it is in good working order (seat, handlebars, quick releases, etc.).
- ★ WRAP-UP. Run through all elements quickly to show them how fast the ABC Quick Check can be once you know it well.
- ★ PRACTICE. Have participants walk through the ABC Quick Check on their own bikes. Circulate and assist as needed.

MODULE

NOTES

READY TO ROLL! cont'd.

Bike & Helmet Fit • Bright & Tight • ABC Quick Check • Rules of the Road

★ Ask what is meant by "rules of the road." They will say things like "stop at stop signs" and "use hand signals." Affirm that this is correct and emphasize that bikes have to follow all the same rules as cars. Emphasize that these are the rules of the <u>road</u> — which means that anyone using the road has to follow them.

- ★ Show some of the common signs and ask what a bike rider should do at each one. Use this to reinforce the fact that bike riders have to follow the same rules as drivers. ("Stop sign means stop. Yup — same as cars!")
- ★ Demonstrate hand signals and have participants do them with you. Use right arm straight out for right turn.
- ★ For older students, introduce the idea that riding by the rules means different things under different circumstances. For example, when a bike rider is on the sidewalk, riding by the rules means behaving like a pedestrian: going slowly, walking across crosswalks, and so on. But when a rider is on the street, riding by the rules means behaving like a car: stopping at stop signs, signaling turns, and so on.

Rules

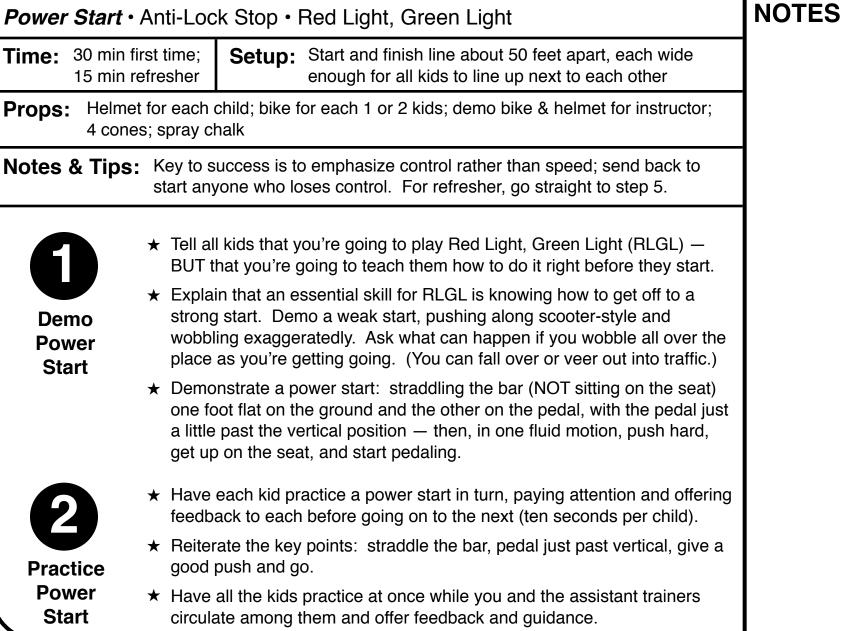
of the

Road

MODULE

NOTES

RED LIGHT, GREEN LIGHT



RED LIGHT, GREEN LIGHT MODULE

Power Start • Anti-Lock Stop • Red Light, Green Light

NOTES



Describe Anti-Lock Stop need to learn for the red light part of the game. ("How to stop!")
★ Ask them, "So do you want to learn how to lock up your brakes and leave a line of burnt rubber on the pavement 50 feet long?" They will of course say YES! Tell them they're in the wrong class, because when you do that kind of stop, most of the time, you crash. Tell them that you are going to teach them how to give their bikes anti-lock brakes — that is, how to stop quickly AND remain in control.

★ Get the kids back on the starting line. Tell them they just learned the

"green light" part of the game: how to do a power start. Ask what they

- \star Describe and demonstrate the key features of the anti-lock stop:
 - a) Shift your weight down and back as far as possible
 - b) Squeeze the rear brake until just before the tire locks up, and front brake hard but not hard enough to lock the wheel
 - c) Continue in a straight line while braking, and only put your foot down once stopped



Practice Anti-Lock Stop

- ★ Demo the anti-lock stop in action. Get going moderately fast and have an assistant yell "stop!" Lean back, put on the brakes, and come to a stop BEFORE putting your foot down. (Practice this in advance!)
- ★ Emphasize again the importance of CONTROL. Tell them to go easy at the start, and work up to shorter stops as they get the hang of it.
- ★ As with the power start, have students do anti-lock stops one at a time with feedback, then have everyone practice at the same time. (Leave plenty of space in between!)

RED LIGHT, GREEN LIGHT MODULE

Power Start • Anti-Lock Stop • Red Light, Green Light

NOTES

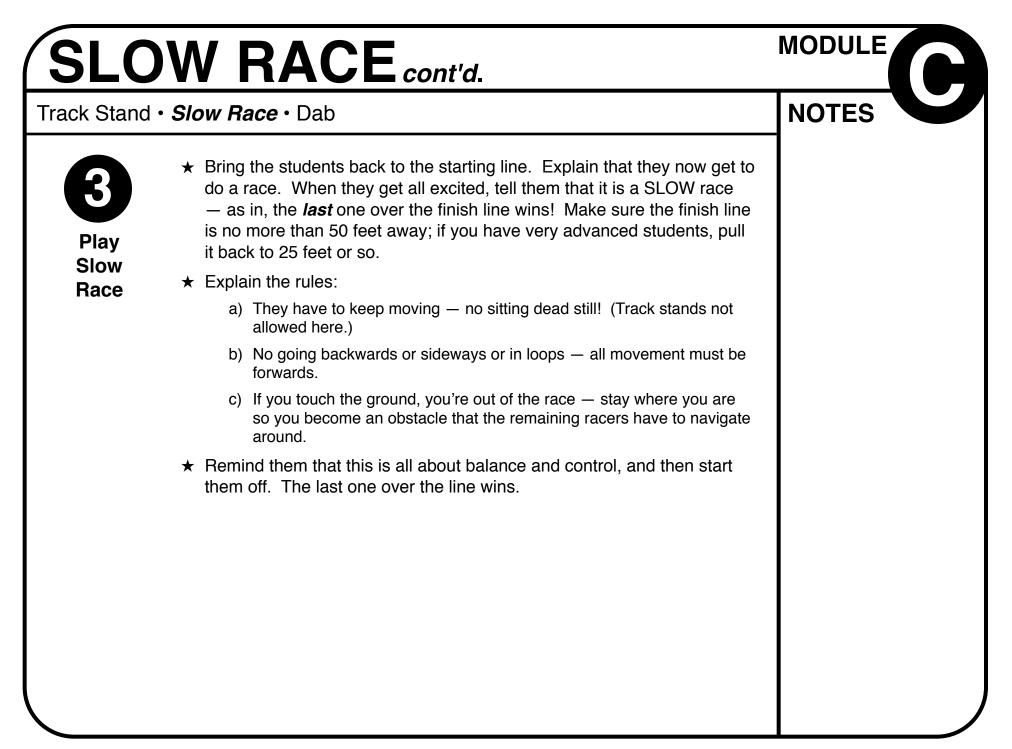
★ Once everyone has the hang of the anti-lock stop, line them back up at the starting line and tell them they are now ready to play RLGL. Explain the rules:

- a) "Green Light" means power start anyone doing a hopping/coasting start has to go back where they started for that round and try again.
- b) "Red Light" means anti-lock stop anyone who swerves, crashes, or puts their foot down before coming to a stop has to go *all the way back to the starting line*. Emphasize that it doesn't pay to go faster than you can control.
- ★ Start the game and play until someone crosses the finish line. Be ruthless about sending people back. The fastest, most aggressive rider should NOT be the one who wins. Once you have a winner, emphasize to the group how that person won: by staying in control.
- ★ Tell the kids that they will need to use power starts and anti-lock stops throughout the training, and that you will be watching for who keeps at it.

Play Red Light, Green Light

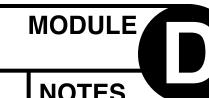
SLOW RACE

Track Stand	ace · Dab NOTE	s	
Time: 20 min only; 3	n slow race 80 min w/dab	Setup: Same as Red Light, Green Light for slow race; large circle for dab (size dependent on number of kids)	
	net for each ut 20 cones;	child; bike for each 1 or 2 kids; demo bike & helmet for instructor; spray chalk	
Notes & Tip		ce uses the same setup as Red Light, Green Light, and it builds on ne skill set. It works very well as a follow-up to module B.	
A		E: This element is appropriate only for older kids. For younger kids, raight to Slow Race.	
Demo Track	pedals	in to kids what a "track stand" is: when you keep your feet on the s and balance even when your bike isn't moving. Demonstrate a stand from a slow roll to a stop. Pedals should be horizontal.	
Stand	this. I a stop	tids to think about when it might be useful to be able to balance like Lead them to the idea that you can start much more smoothly from o (say, at a stop sign) if you don't put your feet down. Demo again a stop sign and showing how it works in practice.	
Practice	slowly have t	kids attempt a track stand one by one. They should start by riding y, then go more and more slowly until they lose their balance and to put a foot down. Many will not be able to balance at a full stop. s okay. The main point is getting them practicing slow riding.	
Track Stand	count they w	have them all try it together in a line. Get them all pedaling, then down from five, with the understanding that, when you get to zero, will all have come to a stop. See who can last the longest, alifying any who keep moving after zero.	

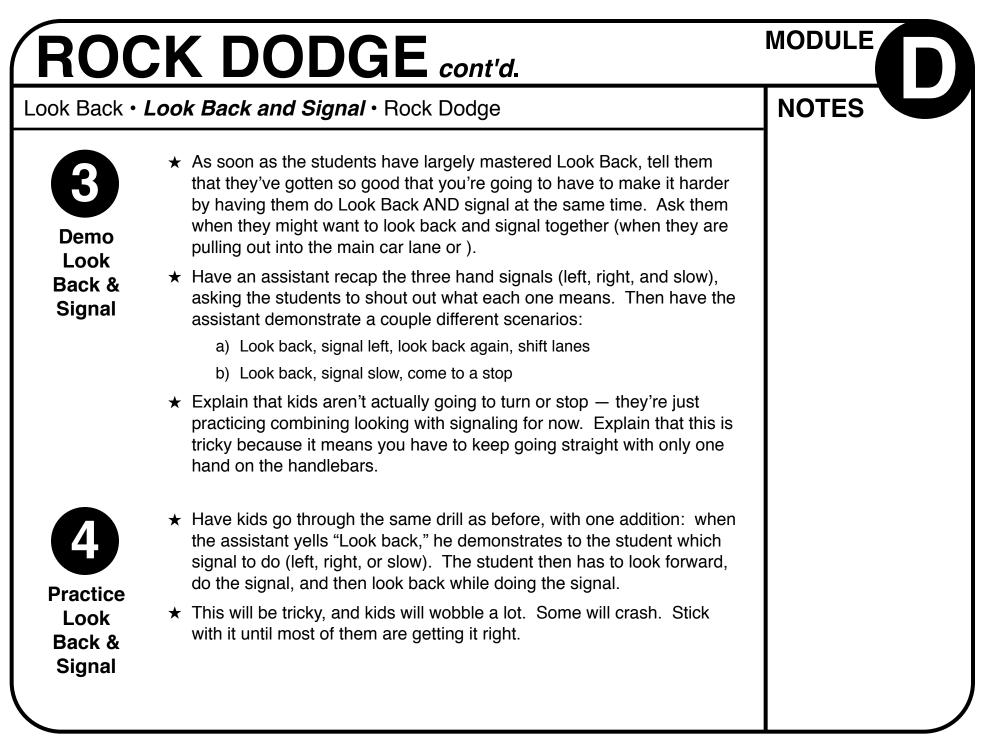


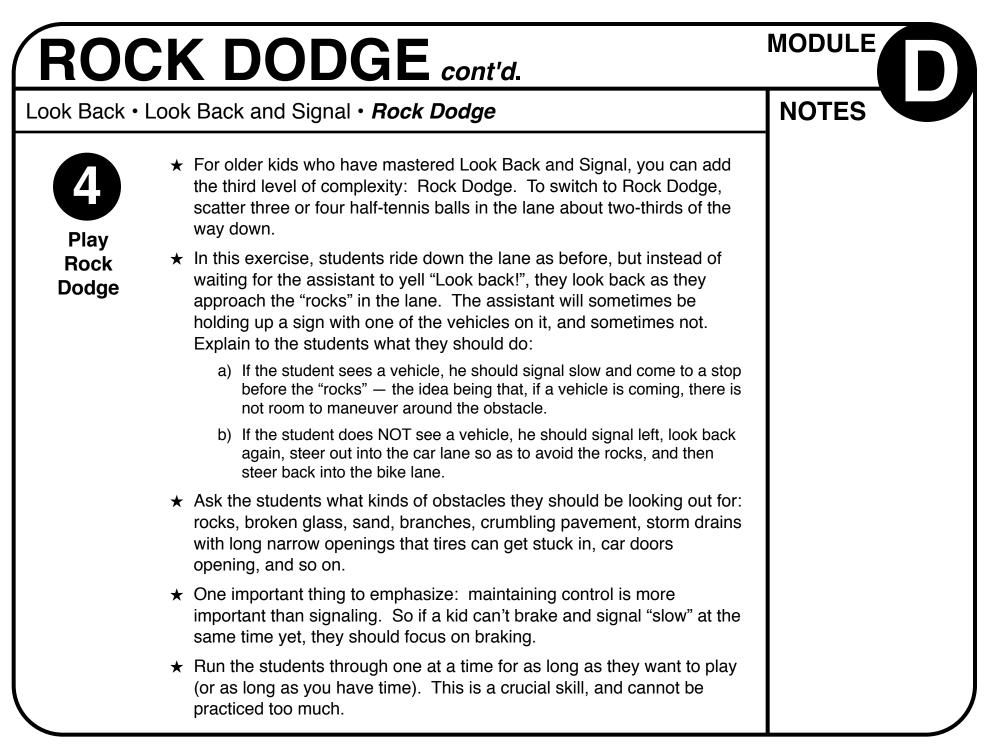
MODULE SLOW RACE cont'd. **NOTES** Track Stand • Slow Race • Dab ★ Set up a circle of cones, varying the size of the circle based on the number of kids. As a rule of thumb, start with a ten-foot diameter circle for up to ten kids, then add a foot for each additional kid. You may need to make the circle larger for younger kids (which makes the game Play easier), or smaller for older kids. Dab ★ Have everyone get in the circle and get ready to ride. Explain the point of the game: to keep riding as long as possible without "dabbing" that is, without touching the ground with your foot. If you dab, you stop where you are and become an obstacle. The last one still riding wins. \star Start them off. Watch closely for dabs — they will try to sneak them in. If you get to the point where the remaining kids are riding without any problems, move the cones inward until they start to get cramped. Don't let it go more than 30 seconds or so without someone dabbing, or the game will start to drag. ★ Note that dab is a really great game to play when you've got five minutes to fill or when kids need to burn some energy. Insert a quick game of dab at every opportunity. (Keep a circle of cones set up for this purpose.)

ROCK DODGE



Look Back •	k and Signal • Rock Dodge NOTES		
Time: At leas	st 10 min can be more	Setup: 100' line of cones spaced 10 feet apart, with a spray chalk line running parallel to the cones 3' to their left	
		child; bike for each 1 or 2 kids; demo bike & helmet for instructor; chalk; tennis balls cut in half; 11x17 pictures of bus, truck, and car	
Notes & Tip		e elements of this module build on each other. Each is more than the last, so you may not want to do them all for young kids.	
Demo Look Back	the lan his hea head b ★ Then a Assista exagge ★ Ask wh	an assistant ride down the lane. Explain that the goal is to stay in ne while looking back. Ask how the rider should look back. ("Turn ad!") Have the assistant demonstrate effective technique, turning but not body. ask students what happens if the rider moves more than his head. ant should demonstrate as you are talking, turning whole body eratedly and swerving out into the road. hat can happen then. ("You'll get hit!") Impress upon them the tance of being able to look back without swerving.	
Practice Look Back	they he and ca up eith ★ Run al	in what they'll be doing: riding one at a time down the lane until ear "look back!" at which point they will look over their left shoulder all out what kind of vehicle they see. (An assistant will be holding her the car, truck, or bus picture.) Il the students through the drill at least once. Pick up the pace (i.e., one student before the previous kid is out) as they get better at it.	





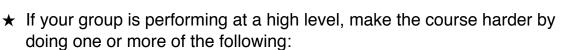
OBSTACLE COURSE



Obstacle Course • Left, Right, Left, Behind					
Time: 15-30 min — timing is flexible		Setup: 150'-200' lane about 30-50' wide (adapt to markings on pavement, if available); cones set up in slalom fashion			
Props: Helmet for each child; bike for each 1 or 2 kids; demo bike & helmet for instructor; about 25 cones; spray chalk for start & finish lines and for arrows					
Notes & Tips: Kids love this module. The trick is to get them to focus on turning smoothly, NOT on tearing through at top speed. Emphasize this throughout.					
Demo Obstacle Course	them contro and n brake ★ Use s directs Have they a	nble all the kids one behind another at the starting line. Explain to the goal of the obstacle course: to learn how to make smooth, olled turns. Have an assistant demonstrate how to run the course, arrate the assistant's moves as she progresses. ("See how she d and swung wide for that really tight turn?") pray chalk to paint a large curving arrow just past the finish line that s students to return to the starting line OUTSIDE the slalom course. the assistant come back this way, and emphasize to the kids that all have to use this return route. Otherwise, some will turn around y to come back up the slalom itself.			
Practice Obstacle	allowi cours and g	ids through one at a time at first, waiting until one is out before ng the next to start. Position yourself a third of the way along the e, then run parallel with each kid, talking them through each turn iving them immediate, specific feedback. With younger kids, you need to direct them to the next cone, running ahead and pointing.			
Course		most kids are doing the course relatively smoothly, start allowing kid to start when the preceding one is two-thirds of the way through.			

OBSTACLE COURSE cont'd.

Obstacle Course · Left, Right, Left, Behind



- a) Scatter some of the tennis ball "rocks" along the course for students to navigate around
- b) Make the spacing of the cones tighter so students have to make very sharp turns
- c) Have students signal each turn around a cone
- ★ Consider doing "time trials" only if almost all students have really mastered the course. Treat time trials as a privilege that they earn once they attain a certain level of competence, not as the "standard" way to do the obstacle course. In addition, have students compete only against themselves, not against each other; the goal should be to improve their own times while maintaining the smoothness of their turns, NOT to compete against the others.



Add

More

Complexity

Add Left, Right, Left, Behind

- ★ As an alternative to adding complexity to the run, consider adding a signaling drill at the finish line. This may be a better option for younger or less skilled kids.
- ★ Station an assistant at the finish line. As each student approaches the line, have the assistant call out "left" or "right." The student then has to signal the appropriate direction as she comes across the finish line, then turn that direction and return to the start.
- ★ Of course, this variation requires return lanes on both sides of the course, so be sure to set these up in advance.

MODULE

NOTES

INTERSECTION ACTION

Eve Contact • Right Turns • Left Turns



Lye Contact • Hight runns • Leit runns					
Time: 20-30 m timing is	nin — s flexible	Setup: Four-way intersection sprayed on the pavement, complete with crosswalks, centerline, and stop bars			
Props: Helmet for each child; bike for each 1 or 2 kids; demo bike & helmet for instructor; cones for corners of intersection; spray chalk for marking out all elements above					
Notes & Tips		dule can be very complex. It is important to adjust it to the skill your participants. Review the various options listed in the text.			
A		er the kids together. Have them put down their bikes and sit on the nent. You want them all looking at you.			
Discuss Eye	There	o a scenario for them. "Say you're at an intersection on your bike. e's a car there too. How do you know it's safe to go?" Start a ssion and elicit their ideas.			
Contact	<i>conta</i> see yo	them to the conclusion that you have to <i>wave and make eye</i> act with the driver — <i>and</i> get some sort of confirmation that they ou. Just because a driver's head is pointing your way doesn't mean tually sees you. Discuss ways you can <i>know</i> you are seen:			
	a)	The driver looks at you and waves			
	b)	The driver flashes his lights at you			
Ω	\star Revie	ew the key rules of the road related to intersections:			
		Four-way stops: whoever gets to the intersection first goes first			
Boviow	b)	Crosswalks: people in crosswalks always go first (even before bikes)			
Review Rules	c)	Traffic signals: bikes have to stop for red lights just like cars			

INTERSECTION ACTION Cont'd.

Eye Contact • Right Turns • Left Turns

NOTES

★ Have kids line up one behind the other about 50 feet back from the intersection you've drawn on the pavement. (Make sure to put a cone at each corner of the intersection for visibility.)

Demo Right Turns

- ★ Stand at the intersection. Have one assistant be a "car" coming from the left. (Use the printed sheet with the corresponding picture.) Have the other assistant ride up to the intersection and arrive just after the "car," come to a stop and wait for the car to go through, and then signal right, look all directions, and turn.
- ★ Ask students what would have happened if the bike had arrived at the intersection first. ("He would have gotten to go first!") Have the assistant demonstrate this, using conspicuous eye contact and waiting until the driver acknowledges the rider and waves her through.
- ★ Call the kids' attention to this dynamic, and reinforce that even if they have the right of way they always have to make sure they're seen.



- ★ Have kids go through one at a time. Vary whether the "car" arrives before or after the bike. If the bike rider either fails to yield or fails to make eye contact, have the driver "crash" into them. The kids will laugh, but make this as serious as possible.
- t ★ Let each kid go through at least two or three times, until everyone gets it right.



INTERSECTION ACTION Cont'd.

Eye Contact • Right Turns • Left Turns

NOTES



Demo Left Turns reinforcement of the key principles of signaling, eye contact, and the like.
For younger kids, demonstrate a "crosswalk" left turn: the assistant coasts to the curb and dismounts; crosses the street as a pedestrian

★ Run through a demonstration similar to what you did for right turns, with

- coasts to the curb and dismounts; crosses the street as a pedestrian (making eye contact with drivers as above); crosses the second leg the same way; and remounts and keeps going.
- ★ For older kids, demonstrate a "take the lane" left turn: as the assistant approaches the intersection, she looks back, signals left, looks again, then moves to the center of the lane; interacts with motorists and signals her turn as for a right turn; does a power start and turns left in the center of the lane; and shifts back to the right hand side of the lane and keeps going.
- \star The car should arrive from the right instead of from the left.



Practice

Left

Turns

- ★ As for right turns, have kids go through one at a time. Vary whether the "car" arrives before or after the bike. If the bike rider either fails to yield or fails to make eye contact, have the driver "crash" into them. The kids will laugh, but make this as serious as possible.
- ★ Let each kid go through at least two or three times, until everyone gets it right.

MODULE **MOVIN' OUT NOTES** *Trip Preparation* • On the Road • Recap and Celebrate Time: 1¹/₂ to 2 hours, but Setup: A bike path, quiet neighborhood, or low-traffic country can be longer road Helmet for each child; bike for each kid; bike & helmet for each instructor; **Props**: emergency kit; snacks and water; cellphone **Notes & Tips:** Kids LOVE the final ride. Drill skills throughout — treat it as an opportunity not only to have fun, but also for them to show off what they have learned. \star Pick a route that presents challenges but little danger. A bike path is ideal. A guiet neighborhood works well. A country road can work if it has shoulders and/or VERY little traffic. Scout the route yourself in advance. Look for danger points, teachable locations, and so on. **Prep and** ★ Assemble an emergency bag: first aid kit, basic repair kit, snacks and **Review** water, sunscreen, cellphone, map, and anything else you might need. Route ★ Arrange to have someone on call who can drive and meet you if you need assistance. Make sure you both know the best meeting points. ★ Designate assistants as lead and sweep and prep them on their responsibilities: stop at all danger points and keep track of all kids. \star No one passes the leader. When the leader stops, everyone stops. \star Practice respectful riding throughout — give other riders space. ★ Helmets on whenever you are on your bike. No exceptions. **Review Rules**

