# BIKE SMART ON BIKE CURRICULUM GUIDE

A Guide to Teaching Essential Bike Skills to Children Ages 8 to 14

Prepared by

The Center for Health and Learning and Local Motion

Copyright 2011

www.healthandlearning.org

www.localmotion.org

#### **READY TO ROLL!**



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

Time: 30 min first time;

15 min refresher

**Setup:** Bikes arranged by size; helmets laid out on a blanket;

box of clothing examples handy; starting line drawn

**Props:** Helmet for each child; bike for each 1 or 2 kids; demo bike & helmet for instructor;

examples of appropriate & inappropriate clothing; hand signal and traffic sign sheets

Notes & Tips: Module is essentially the BikeSmart curriculum; structure as refresher or full

run-through depending on whether students have done BikeSmart before

Fit Kids

with Bikes

& Helmets

★ Check who needs a helmet; hand out as needed (small or large). Label with child's name using masking tape.

- ★ Fit each child who needs a bike with one that is the appropriate size; adjust seat as needed. Label with child's name using masking tape.
- ★ Have kids line up along the starting line, one next to the other, holding their handlebars and with helmets on

2

Demo Helmet Fit

- ★ Demonstrate proper helmet fit on an assistant trainer using the "eyes, ears, mouth" technique, making it memorable with a goofy face:
  - a) **EYES:** Is your helmet low enough that you can see it on your forehead?
  - b) **EARS:** Do the straps form a nice, tight "Y" right under your ears?
  - c) **MOUTH:** When you open your mouth, do you feel the helmet pull down on your head?
- ★ Go through the fit process more slowly, demonstrating on yourself while the assistant trainer(s) circulate and assist kids.

#### READY TO ROLL! cont'd.



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

**NOTES** 

- Demo **Appropriate Clothing**
- ★ Ask what kinds of clothes can make you safer on a bike. Answer: clothes that are bright (i.e., visible) and tight (i.e., won't get caught in your chain.
- ★ Show examples of clothes and have kids rank them by their appropriateness for biking.
- ★ 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 materials.

Demo & **Practice ABC** 

- ★ 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.
- ★ 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 guickly 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.

#### READY TO ROLL! cont'd.

MODULE

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



## 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.

## RED LIGHT, GREEN LIGHT

MODULE

NOTES

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

Time: 30 min first time;

15 min refresher

**Setup:** Start and finish line about 50 feet apart, each wide

enough for all kids to line up next to each other

**Props:** Helmet for each child; bike for each 1 or 2 kids; demo bike & helmet for instructor;

4 cones; spray chalk

**Notes & Tips:** Key to success is to emphasize control rather than speed; send back to

start anyone who loses control. For refresher, go straight to step 5.



Start

- ★ Tell all kids that you're going to play Red Light, Green Light (RLGL) BUT that you're going to teach them how to do it right before they start.
- ★ Explain that an essential skill for RLGL is knowing how to get off to a strong start. Demo a weak start, pushing along scooter-style and wobbling exaggeratedly. Ask what can happen if you wobble all over the place as you're getting going. (You can fall over or veer out into traffic.)
- ★ Demonstrate a power start: straddling the bar (NOT sitting on the seat) one foot flat on the ground and the other on the pedal, with the pedal just a little past the vertical position then, in one fluid motion, push hard, get up on the seat, and start pedaling.

2

Practice Power Start

- ★ Have each kid practice a power start in turn, paying attention and offering feedback to each before going on to the next (ten seconds per child).
- ★ Reiterate the key points: straddle the bar, pedal just past vertical, give a good push and go.
- ★ Have all the kids practice at once while you and the assistant trainers circulate among them and offer feedback and guidance.



Describe Anti-Lock Stop

- ★ 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 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.
- ★ 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 Cont'd.

**NOTES** 

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



Play Red Light, Green Light

- ★ 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.

#### **SLOW RACE**

#### Track Stand · Slow Race · Dab

**Time:** 20 min slow race only; 30 min w/dab

**Setup:** Same as Red Light, Green Light for slow race; large

circle for dab (size dependent on number of kids)

**Props:** Helmet for each child; bike for each 1 or 2 kids; demo bike & helmet for instructor;

about 20 cones; spray chalk

Notes & Tips: Slow race uses the same setup as Red Light, Green Light, and it builds on

the same skill set. It works very well as a follow-up to module B.

0

Demo

Track Stand

- ★ NOTE: This element is appropriate only for older kids. For younger kids, go straight to Slow Race.
- ★ Explain to kids what a "track stand" is: when you keep your feet on the pedals and balance even when your bike isn't moving. Demonstrate a track stand from a slow roll to a stop. Pedals should be horizontal.
- ★ Ask kids to think about when it might be useful to be able to balance like this. Lead them to the idea that you can start much more smoothly from a stop (say, at a stop sign) if you don't put your feet down. Demo again using a stop sign and showing how it works in practice.

2 Practice

Practice Track Stand

- ★ Have kids attempt a track stand one by one. They should start by riding slowly, then go more and more slowly until they lose their balance and have to put a foot down. Many will not be able to balance at a full stop. This is okay. The main point is getting them practicing slow riding.
- ★ Then have them all try it together in a line. Get them all pedaling, then count down from five, with the understanding that, when you get to zero, they will all have come to a stop. See who can last the longest, disqualifying any who keep moving after zero.

#### SLOW RACE cont'd.

MODULE NOTES

Track Stand • Slow Race • Dab

3

Play Slow Race

- ★ Bring the students back to the starting line. Explain that they now get to do a race. When they get all excited, tell them that it is a SLOW race

   as in, the *last* one over the finish line wins! Make sure the finish line is no more than 50 feet away; if you have very advanced students, pull it back to 25 feet or so.
- ★ Explain the rules:
  - a) They have to keep moving no sitting dead still! (Track stands not allowed here.)
  - b) No going backwards or sideways or in loops all movement must be forwards.
  - c) If you touch the ground, you're out of the race stay where you are so you become an obstacle that the remaining racers have to navigate around.
- ★ Remind them that this is all about balance and control, and then start them off. The last one over the line wins.

#### SLOW RACE cont'd.

MODULE NOTES

Track Stand • Slow Race • Dab



Play 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 easier), or smaller for older kids.
- ★ 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.
- ★ 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**

MODULE NOTES

Look Back • Look Back and Signal • Rock Dodge

Time: At least 10 min

each; 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

**Props:** Helmet for each child; bike for each 1 or 2 kids; demo bike & helmet for instructor;

13 cones; spray chalk; tennis balls cut in half; 11x17 pictures of bus, truck, and car

**Notes & Tips:** The three elements of this module build on each other. Each is more

advanced than the last, so you may not want to do them all for young kids.



Demo Look Back

- ★ Have an assistant ride down the lane. Explain that the goal is to stay in the lane while looking back. Ask how the rider should look back. ("Turn his head!") Have the assistant demonstrate effective technique, turning head but not body.
- ★ Then ask students what happens if the rider moves more than his head. Assistant should demonstrate as you are talking, turning whole body exaggeratedly and swerving out into the road.
- ★ Ask what can happen then. ("You'll get hit!") Impress upon them the importance of being able to look back without swerving.

2

Practice Look Back

- ★ Explain what they'll be doing: riding one at a time down the lane until they hear "look back!" at which point they will look over their left shoulder and call out what kind of vehicle they see. (An assistant will be holding up either the car, truck, or bus picture.)
- ★ Run all the students through the drill at least once. Pick up the pace (i.e., start one student before the previous kid is out) as they get better at it.

**NOTES** 

Look Back • Look Back and Signal • Rock Dodge

3

Demo Look Back & Signal

- ★ As soon as the students have largely mastered Look Back, tell them that they've gotten so good that you're going to have to make it harder by having them do Look Back AND signal at the same time. Ask them when they might want to look back and signal together (when they are pulling out into the main car lane or ).
- ★ Have an assistant recap the three hand signals (left, right, and slow), asking the students to shout out what each one means. Then have the assistant demonstrate a couple different scenarios:
  - a) Look back, signal left, look back again, shift lanes
  - b) Look back, signal slow, come to a stop
- ★ Explain that kids aren't actually going to turn or stop they're just practicing combining looking with signaling for now. Explain that this is tricky because it means you have to keep going straight with only one hand on the handlebars.

4

Practice Look Back & Signal

- ★ Have kids go through the same drill as before, with one addition: when the assistant yells "Look back," he demonstrates to the student which signal to do (left, right, or slow). The student then has to look forward, do the signal, and then look back while doing the signal.
- ★ This will be tricky, and kids will wobble a lot. Some will crash. Stick with it until most of them are getting it right.

**NOTES** 

Look Back • Look Back and Signal • Rock Dodge



#### Play Rock Dodge

- ★ For older kids who have mastered Look Back and Signal, you can add the third level of complexity: Rock Dodge. To switch to Rock Dodge, scatter three or four half-tennis balls in the lane about two-thirds of the way down.
- ★ In this exercise, students ride down the lane as before, but instead of waiting for the assistant to yell "Look back!", they look back as they approach the "rocks" in the lane. The assistant will sometimes be holding up a sign with one of the vehicles on it, and sometimes not. Explain to the students what they should do:
  - a) If the student sees a vehicle, he should signal slow and come to a stop before the "rocks" the idea being that, if a vehicle is coming, there is not room to maneuver around the obstacle.
  - b) If the student does NOT see a vehicle, he should signal left, look back again, steer out into the car lane so as to avoid the rocks, and then steer back into the bike lane.
- ★ Ask the students what kinds of obstacles they should be looking out for: rocks, broken glass, sand, branches, crumbling pavement, storm drains with long narrow openings that tires can get stuck in, car doors opening, and so on.
- ★ One important thing to emphasize: maintaining control is more important than signaling. So if a kid can't brake and signal "slow" at the same time yet, they should focus on braking.
- ★ Run the students through one at a time for as long as they want to play (or as long as you have time). This is a crucial skill, and cannot be practiced too much.

#### **OBSTACLE COURSE**

MODULE NOTES

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

- ★ Assemble all the kids one behind another at the starting line. Explain to them the goal of the obstacle course: to learn how to make smooth, controlled turns. Have an assistant demonstrate how to run the course, and narrate the assistant's moves as she progresses. ("See how she braked and swung wide for that really tight turn?")
- ★ Use spray chalk to paint a large curving arrow just past the finish line that directs students to return to the starting line OUTSIDE the slalom course. Have the assistant come back this way, and emphasize to the kids that they all have to use this return route. Otherwise, some will turn around and try to come back up the slalom itself.

Practice Obstacle

Course

- ★ Run kids through one at a time at first, waiting until one is out before allowing the next to start. Position yourself a third of the way along the course, then run parallel with each kid, talking them through each turn and giving them immediate, specific feedback. With younger kids, you may need to direct them to the next cone, running ahead and pointing.
- ★ Once most kids are doing the course relatively smoothly, start allowing each kid to start when the preceding one is two-thirds of the way through.

#### OBSTACLE COURSE cont'd.

**MODULE** 

Obstacle Course · Left, Right, Left, Behind



- Add More Complexity
- ★ If your group is performing at a high level, make the course harder by doing one or more of the following:
  - 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 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.

### **INTERSECTION ACTION**

MODULE NOTES

Eye Contact • Right Turns • Left Turns

**Time:** 20-30 min —

timing is 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: This module can be very complex. It is important to adjust it to the skill

level of your participants. Review the various options listed in the text.



Discuss Eye Contact

- ★ Gather the kids together. Have them put down their bikes and sit on the pavement. You want them all looking at you.
- ★ Set up a scenario for them. "Say you're at an intersection on your bike. There's a car there too. How do you know it's safe to go?" Start a discussion and elicit their ideas.
- ★ Lead them to the conclusion that you have to wave and make eye contact with the driver and get some sort of confirmation that they see you. Just because a driver's head is pointing your way doesn't mean he actually sees you. Discuss ways you can know you are seen:
  - a) The driver looks at you and waves
  - b) The driver flashes his lights at you



Review Rules

- ★ Review the key rules of the road related to intersections:
  - a) Four-way stops: whoever gets to the intersection first goes first
  - b) <u>Crosswalks</u>: people in crosswalks always go first (even before bikes)
  - c) Traffic signals: bikes have to stop for red lights just like cars

**NOTES** 

Eye Contact • Right Turns • Left Turns



Demo Right Turns

- ★ 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.)
- ★ 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.

6

Practice 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.

Eye Contact • Right Turns • Left Turns





Demo Left **Turns** 

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

#### **MOVIN' OUT**

#### *Trip Preparation* • On the Road • Recap and Celebrate

Time: 1½ to 2 hours, but Setup: A bike path, quiet neighborhood, or low-traffic country

can be longer road

**Props:** Helmet for each child; bike for each kid; bike & helmet for each instructor;

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.



- ★ Pick a route that presents challenges but little danger. A bike path is ideal. A quiet 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.
- ★ Assemble an emergency bag: first aid kit, basic repair kit, snacks and water, sunscreen, cellphone, map, and anything else you might need.
- ★ 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.

2 Review

**Rules** 

- ★ No one passes the leader. When the leader stops, everyone stops.
- ★ Practice respectful riding throughout give other riders space.
- ★ Helmets on whenever you are on your bike. No exceptions.

Trip Preparation • On the Road • Recap and Celebrate



- ★ As you head out, emphasize that everyone should be using all their skills: power starts, anti-lock stops, smooth turns, signaling, and so on. This is a chance to show off what they have learned.
- Head Out
- ★ You should ride back and forth among the group to check on everyone, correct mistakes, and praise good form. Praise kids especially who are verbalizing the ride and helping others ("Car back!").
- ★ At each major crossing or other danger point, the lead should stop all the kids until you reach the crossing, then you should serve as a "crossing guard" until the sweep comes through.

Stop, Review. Recharge

- ★ Ride at least 30 minutes to a pre-selected resting point. (Treat it as the turn-around point if your ride is out and back.) Have everyone pull over, set down their bikes, and sit in a circle.
- ★ Invite them to break out snacks and water.
- ★ Give some specific praise for kids who were trying especially hard to use their skills.
- ★ After 10 or 15 minutes, saddle up and head back home.

Trip Preparation • On the Road • Recap and Celebrate





#### Recap and Debrief

- ★ Position yourself to give each rider a high five as he dismounts his bike. Offer lots of praise, and make it as specific as possible — try to focus on one specific thing that each kid did well.
- ★ Ask them what they liked best about the ride. Let at least four or five kids share their thoughts.
- ★ Ask them where their first ride will be to when they get home.
- ★ Very briefly review what they learned: how to fit their helmet, how to keep their bike in shape, what to wear, what the rules of the road are, how to do a power start and an anti-lock stop, how to balance while riding very slowly, how to maneuver safely around obstacles, how to signal turns, how to navigate intersections, how to communicate with drivers. Impress upon them just how much they learned and congratulate them for their hard work.

## Celebrate!

- ★ Consider giving out certificates to all participants indicating what they learned and naming them as "Bike Smart Certified" or the like.
- ★ If your budget allows, distribute basic safety items to all participants, such as reflective stickers for their helmets or reflective legbands for their pants.
- ★ Thank each parent as they arrive on the last day to pick up their kids. Tell them about something specific that their child learned and excelled at. Encourage them to get their kids our biking regularly.