



Bicycle Safety

Physical Education Curriculum



Letter to Educators

DEAR EDUCATORS,

Thank you for choosing to support students' physical activity through bicycle safety education!

Equipping students with the skills and awareness to bicycle safely in our community not only enhances their personal safety, but supports their growth as healthy and aware community members.

With the guidance of Physical Education teachers throughout the East Central Wisconsin region, the Safe Routes to School team is proud to offer you the Safe Routes to School Bicycle Safety Curriculum. This curriculum aims to teach students how to ride a bicycle safely as a tool for fun, transportation, and self-empowerment.

Middle school is a great developmental time to introduce students to bicycling if they have not yet learned how to ride, or to hone students' bicycle safety skills. Teaching bicycle safety to middle school youth is important because they are increasingly likely to walk and bike alone or with their peers. Overall, middle school aged students:¹

- Are usually ready for a mix of independent activities and some supervision
- May need reinforcement and reminders about safe behaviors
- Benefit from practicing routes and navigating more complex situations with an adult before biking or walking without adult supervision.

This Bicycle Safety Curriculum teaches students basics about riding a bicycle and navigating their environment safely. It equips teachers with resources and questions to bring these lessons into their classrooms.

Thank you for being part of this effort to make our communities safer and healthier!

Sincerely,

Your Safe Routes to School Team

East Central Wisconsin Regional Planning Commission

Reserve the Bike Fleet!

The Regional SRTS program offers a fleet of about 20 bicycles in an enclosed trailer for schools to check out **for free** when teaching bicycle safety curriculum.

Contact the team to learn how many bikes are available during the time you will teach these lessons!

Learn more at: eastcentralsrts.org/bike-fleet

¹ National Center for Safe Routes to School. *Teaching Children to Walk Safely as They Grow and Develop*
http://guide.saferoutesinfo.org/graduated_walking/children_age_ten_and_older.cfm



Table of Contents

LESSON PLAN OVERVIEW

Lesson Plan	Duration	Materials
Pre-Work <ul style="list-style-type: none"> Student assessment 	10 minutes	Safe Riding Worksheet – 1 per student, 1-2 weeks prior to first lesson
Lesson 1: Bicycling Basics <ul style="list-style-type: none"> Helmet Fitting Bicycle Anatomy Bicycle Fitting Familiarize with the Start Position Recap <i>Optional Activities</i> 	30 minutes	<ul style="list-style-type: none"> Helmets with adjustable fit turn dials (Small: 20" – 21.75"; Medium: 21.75" – 23.25"; Large: 23.25" – 24.75") <ul style="list-style-type: none"> <i>While most sizes should accommodate a size medium, large helmet sizes should be available to accommodate different head sizes and hair styles.</i> Hairnets, shower caps, or surgical/painters' cap for helmet fitting (or disinfectant spray) – 1 per student Digital display or printed image of Regions of the Brain (pg. 50) Helmet Fit Tips sheet (pg. 51) – 1 per student Bicycles (different sizes: 20", 24", and 26" wheel size.) <ul style="list-style-type: none"> <i>Inquire with ECWRPC staff regarding the number and sizes of bikes available during the time when you plan to teach bicycle safety.</i> – 1 per student
Lesson 2: Before You Go <ul style="list-style-type: none"> Review of Helmet Fit What to Wear & Pack ABC Quick Check Review the Start Position Hand Signals Recap <i>Optional Activity</i> 	30 minutes	<ul style="list-style-type: none"> Helmets with adjustable fit turn dials – 1 per student Hairnets, shower caps, or surgical/painters' cap (or disinfectant spray) – 1 per student Bicycles (different sizes: 20", 24", and 26" wheel size) – 1 per student Dark backdrop or sheet 5 or 6 brightly colored shirts or pennies Reflective material (to be shown in the dark) Small hand weights – <i>optional</i> Floor pump with gauge – <i>optional</i>





Lesson 3: Start & Stop	30 minutes	<ul style="list-style-type: none">• Helmets with adjustable fit turn dials – 1 per student• Hairnets, shower caps, or surgical/painters' cap (or disinfectant spray) – 1 per student• Bicycles (different sizes: 20", 24", and 26" wheel size) – 1 per student• Cones, rope, and/or chalk to set up an optional bicycle course – <i>comes with Bike Fleet</i>• A moveable "Stop" sign– <i>comes with Bike Fleet</i>
Lesson 4: Visual Checks & Scanning	30 minutes	<ul style="list-style-type: none">• Helmets with adjustable fit turn dials – 1 per student• Hairnets, shower caps, or surgical/painters' cap (or disinfectant spray) – 1 per student• Bicycles (different sizes: 20", 24", and 26" wheel size) – 1 per student• Cones, rope, and/or chalk to set up an optional bicycle course – <i>comes with Bike Fleet</i>• A moveable "Stop" sign – <i>comes with Bike Fleet</i>
Lesson 5: Residential Riding	30 minutes	<ul style="list-style-type: none">• Helmets with adjustable fit turn dials – 1 per student• Hairnets, shower caps, or surgical/painters' cap (or disinfectant spray) – 1 per student• Bicycles (different sizes: 20", 24", and 26" wheel size) – 1 per student• Sidewalk chalk or spray chalk• Measuring tape• One adult volunteer per five to eight students• Safety vest for each adult• Cones to act as safety aids or barricades to block off street – <i>cones come with Bike Fleet</i>• A moveable "Stop" sign – <i>comes with Bike Fleet</i>• Boxes to act as vehicles – <i>optional</i>• Four cones – <i>optional</i>• Four ropes at least 100 feet long – <i>optional</i>

Ready-to-Go Resources

- Safe Riding Worksheet, Answer Key
 - Mobility for All for Educators
 - Helmet Fit Tips for Educators
 - Learn to Ride for Educators & Families
 - Basic Bicycle Maintenance for Students
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Curriculum Goals & State Standards

CURRICULUM GOAL

Teach students to learn how to ride a bicycle safely as a tool for fun, transportation, and empowerment.

WISCONSIN PHYSICAL EDUCATION STANDARDS

Wisconsin PE Standards		Applicable Lesson Plan				
		1	2	3	4	5
Standard 1	The student will demonstrate competency in a variety of motor skills and movement patterns.	X	X	X	X	X
Standard 2	The student will apply knowledge of concepts, principles, strategies and tactics related to movement and performance.		X	X	X	X
Standard 3	The student will demonstrate the knowledge and skills to achieve a health-enhancing level of physical activity and fitness.	X	X	X	X	X
Standard 4	The student will exhibit responsible personal and social behavior that respects self and others.	X	X	X	X	X
Standard 5	The student will recognize the value of physical activity for health, enjoyment, challenge, self-expression, and social interaction.					X



Prep-Work

Each lesson plan in this curriculum provides basic and intermediate skill building activities, with additional activities to engage students with more advanced skills. **Review the bicycle safety education one pagers from ECWRPC in advance of the lessons.** These contain tips for teaching helmet fitting and other bicycle riding skills.

Use the Ready-to-Go Resources

The following resources are included in this curriculum:

- Safe Riding Worksheet – page 46**
- Answer Key (Safe Riding Worksheet) – page 47**
- Regions of the Brain – page 48**

The following one pagers are distributed for free through ECWRPC:

- Mobility for All for Educators – page 49**
- Helmet Fit Tips for Educators – page 51**
- Learn to Ride for Educators & Families – page 53**
- Basic Bicycle Maintenance for Students – page 54**



Safe Riding Worksheet and the Answer Key to assess what your students already know about safe bicycling before launching this curriculum. See the Ready to Go Resources section of this curriculum for more information. **Send the Safe Riding Worksheet home with students to fill out and return at least one week before you begin teaching.**

Lesson 1 | Bicycling Basics

LEARNING OBJECTIVES

- Demonstrate how to wear a bicycle helmet properly. (Standard 3)
- Understand the impacts of a bicycle crash on the head and brain. (Standard 4)
- Demonstrate knowledge of the parts of a bicycle. (Standard 3)
- Demonstrate knowledge of how to adjust a bicycle to fit personal needs. (Standard 3)
- Demonstrate how to put the pedal in the power start position. (Standard 1)

LOGISTICS

Time: 30 minutes, with additional optional activities (7, 15, or 22 minutes)

Location: Outdoors on a cleared black-top

Materials:

- Helmets (Small: 20" – 21.75"; Medium: 21.75" – 23.25"; Large: 23.25" – 24.75") While most sizes should accommodate a size medium, large helmet sizes should be available to accommodate different head sizes and hair styles – 1 per student
- Hairnets, shower caps, or surgical/painters' cap for helmet fitting (or disinfectant spray) – 1 per student
- Digital display or printed image of Regions of the Brain (pg. 50)
- Helmet fit tip-sheet (pg. 51) – 1 per student
- Bicycles (different sizes: 20", 24", and 26" wheel size) – 1 per student



PREP WORK:

Ready-to-Go Resources

The following resources are included in this curriculum:

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- Answer Key (Safe Riding Worksheet) – page 47**
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The following one pagers are distributed for free through ECWRPC:

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- Basic Bicycle Maintenance for Students – page 54**



- Safe Riding Worksheet distribution 1-2 weeks prior
- Read Mobility for All for Educators (pg. 49)
- Read Helmet Fit Tips for Educators (pg. 51)
- Check to see if your city ordinance and/or school administration requires children to wear helmets²
- Set up bicycles and helmets according to size

VOCABULARY TERMS

- Bicycle anatomy vocabulary (see **Error! Reference source not found.**)

ACTIVITY 1: HELMET FITTING (10 MINUTES)

PROTECTING YOUR BRAIN (5 MINUTES)

1. Discussion (30 seconds)

Explain to students that every part of the human body is important to being a living human, but one part of the body is the computer that makes everything else run.

Q: Does anyone know what part that is?

A: The brain.

Q: What does it do that is so important?

A: Helps you see, hear, smell, breathe, and helps your heart beat. It helps us process emotions, what we feel, what we think, our ability to balance

2. Regions of the Brain (show the Regions of the Brain image, pg. 50) (2 minutes)

Different regions of the brain have different functions and control specific activities. These include voluntary functions and involuntary functions.

The brain is divided into three main areas:

*The **brain stem**, responsible for basic body functions such as heartbeat regulation.*

*The **cerebellum**, responsible for things such as balance and muscular coordination.*

*The **cerebrum**, made of two distinct hemispheres and responsible for higher brain functions including thinking and emotions.*

Voluntary Functions

Voluntary functions are those of which you are aware, and which you voluntarily control. Ask the students to name some voluntary functions: writing, running, chewing, etc.

² There is no Wisconsin statewide law requiring people who ride bicycles to wear helmets, but some city ordinances require children to wear a helmet.



Involuntary Functions

Involuntary functions are those that are not under our conscious control. What are some involuntary functions of the brain? Is breathing a voluntary or an involuntary function?

3. The Brain is Delicate (30 seconds)

As I've shown, the brain is our "computer" that is responsible for so many incredible things that allow our body to function. The brain, however, is also extremely delicate. The brain has a consistency similar to Jell-O, and unlike other parts of our bodies, it usually cannot repair itself.

4. Protect Your Brain! (1 minute)

For all these reasons, and more, it is crucial that we protect our delicate and incredible brains. When riding a bicycle, that means wearing a helmet!

Not only bicyclists wear helmets.

Q: *Who else wears a helmet?*

A: *Skate boarders, football players, hockey players, baseball players, skiers, snowboarders, motorcycle and car racers, construction workers, astronauts, firefighters.*

No matter how good of a rider you may be, unexpected things can happen that you cannot control – like someone driving a car pulling out right in front of you. When those unexpected things happen – you want a helmet to protect your brain.

5. Five Layers of Crash Protection (1 minute)

It is important to emphasize to students that helmets are a tool to protect your brain, but also the first line of defense when a crash occurs.

Write the "Five Layers of Crash Protection" from the League of American Bicyclists on the board and explain. The five layers are listed below:

Over the next few days, we will work on ways to help keep us safe and prevent crashing. Here are the five layers of crash protection.

- *Control your bike. (Prevent falls.)*
- *Obey the laws. (Don't cause a crash.)*
- *Discourage others' mistakes. (Lane position.)*
- *Learn hazard avoidance.*
- *Wear a helmet.*



HELMET FIT (5 MINUTES)

6. Discussion (30 seconds)

Helmets protect your head from the impact of crashes. It is essential to put them on properly. Helmets must be snug so they don't slide off or are loose on your head. During crashes, bicyclists generally go forward and hit the front of their head. So, it is essential that the helmet is always strapped, and that it covers the forehead and cannot be easily pushed back on the head.

Tips for Teaching

Some youth helmets do not accommodate select hair styles or religious headwear well. Here are some tips for teaching helmet fitting with this in mind. Refer to the Helmet Fit Tips handout (pg. 51) for more guidance.

- ✓ **Communicate with parents** prior to the lesson. Share with them the helmet fitting activities you will be doing in class and ask for guidance on how to best support their child.
- ✓ **Provide some larger helmets** for students to use, while ensuring the helmet still fits snugly and is fully secured and stabilized on the student's head. Sizing up is normal and can be necessary.
- ✓ **Keep the talk positive** so the students do not feel their hairstyle or headwear is a "problem." It's not!

7. Hands-on: How to fit a helmet: (2 minutes)

Ask a student to volunteer to be the model as you explain proper helmet fit.

To make sure your helmet fits and you're wearing it every time you go for a ride, we follow these steps:

Step 1: Fit

Place your helmet squarely on your head – forward, just out of your eyeline. It should fit snugly without buckling it yet. Some helmets have a turn dial (called a retention band) on the back—turn the dial to fit your helmet tightly, but not too tight that it would give you a headache.

Step 2: Ear Check

Now buckle your chin strap and check that the straps form a V under your ears, using your two fingers to feel and check.

Step 3: Eye Check

Place two fingers at the top of your eyebrows. Only the width of 2 fingers should fit between your eyebrows and the brim of your helmet.

Step 4: Mouth Check

Finally, place two fingers flat under your chin, between your chin and the chin strap. Only 2 fingers, maximum, should fit between your chin and strap.

After you've (1) tightened the retention band, (2) checked your ears, (3) checked the space above your eyes, and (4) checked your chin strap, then you can do a final full-check by shaking your head. If it moves around or shifts on your head, you need to go back and tighten one or more of your straps.



8. Try it Out with a Partner (2 minutes and 30 seconds)

After the demonstration, have students get with a partner, get a surgical or painters' cap, and try helmets on. Each student should:

- Find the right sized helmet for them
- Go through the 4-step helmet fit process.
- Check their partner for proper fit and make suggestions for adjustments if needed.
- Remember the size of their helmet for next class.

Refer to the Helmet Fit Tips one pager (page 51) for more information about teaching safe helmet fitting.



ACTIVITY 2: BICYCLE ANATOMY (5 MINUTES)

NAME THAT PART! (5 MINUTES)

1. Grab a Bicycle

While students keep their helmets on and are in pairs, have one student per pair grab a bicycle to bring back to their pair. Show and ask that they put up the kick stand.

Q: Why do you think it's important to learn the parts of a bicycle?

A: Knowing the parts of your bicycle and making sure it fits and works is important to ensuring your bike is in good, safe riding condition. When you need to bring it to a bike shop for replacement parts or repairs, you can correctly tell them what seems to be the problem and they can understand your needs – or you can learn how to fix your bike.

2. Bike Parts

Using a bike, point out and define the following key parts of a bicycle that students need to learn for safe fitting and riding. For students who aren't as familiar with riding a bicycle, focus on the key terms that are underlined.

- **Frame**: the main central part of a bicycle that holds everything else together:
 - **Top tube**: the top part of the frame that connects the seat and the handlebars
 - **Down tube**: the bottom part of the frame that connects the pedals and just below the handlebars
 - **Seat tube**: part of the frame that connects the pedals with the seat
 - **Seat post**: part of the frame that directly supports the seat, is inserted into the seat tube, and is adjustable to fit the height of the rider
 - **Kick stand**: A piece of metal or plastic that flips down from the bottom of the frame and allows the bike to stand upright.
- **Drive train**: all of the components that are used to propel the bike forward:
 - **Pedal**: where you put your feet and push to make the bike move
 - **Cranks**: pedals are attached to cranks
 - **Chain**: Series of attached metal links that connect the motion of the pedals with the wheels to move the bike
 - **Rear derailleur**: a component that works to change the rear gears, which is usually controlled by the gear shifter used with your right hand
 - **Cassette**: attaches to the rear wheel and grabs the chain so the wheel turns with the chain's movement
- **Wheel**: These roll to keep the bike moving forward:
 - **Tire**: Black rubber covering on the outside of the wheel
 - **Spokes**: Skinny metal sticks that help keep the wheel's shape
 - **Rim**: the outer circle that forms the wheel, holds the tire, and is connected to the spokes
 - **Seat**: where you sit when you ride
 - **Handlebars**: the “steering wheel” of the bike
 - **Brake levers**: squeeze these to make the bike slow down and/or stop rolling



PARTS OF A BICYCLE

THERE ARE MANY DIFFERENT TYPES OF BIKES AND COMPONENTS CAN DIFFER FROM ONE KIND OF BICYCLE TO ANOTHER.



ACTIVITY 3: BICYCLE FITTING (10 MINUTES)

1. Discussion (3 minutes)

Ask that each student now get a bike and space out so there's more than arms distance between each student.

While we won't ride today, to prepare for next time we want to make sure we ride a bike that fits us properly. Our seat must be at a height so that when we sit on our bike with the pedal in the down position, the knee is slightly bent, and the handlebars are aligned with the front wheel.

2. Bicycle Fitting Steps (6 minutes)

Each student should have a bike to make sure the bike fits as you go over the steps below.

Fitting a Bike Frame:

- Straddle the bike
- Stand in front of the seat, over the top tube, with your feet flat on the ground
- There should be 1-2 inches of space between you and the top tube.
- There should be 3-4 inches of space for a hybrid or mountain bike.

Fitting your Saddle (Seat):

- Saddle height should be high enough that there is a slight bend in your knee when the pedal is all the way down.
- Front knee should be above the center of the pedal.
- The saddle should be level, not angled up or down. The saddle should be adjusted at the connection of the seat post and the saddle.
- Make sure it is comfortable!

Instruct students to adjust their seats or swap bike frame sizes, as needed. For seat adjustments, many bicycles have quick releases below the seat post. Instruct students to open the quick release, turn the quick release to loosen, and adjust the seat post up or down. Tighten and secure the quick release.



ACTIVITY 4: FAMILIARIZE WITH THE START POSITION (3 MINUTES)

Demonstrate to the class the “power pedal” position with the following explanation:

The “power pedal” position helps you start to pedal in the most powerful way by giving you the most leverage on your first push of the pedal. Getting more power at the start gives you more time to balance.

To get to this position, backpedal slightly until right pedal is at the top, or two o’clock position and the left pedal is at the bottom, or ten o’clock. This will be the push-off pedal. Starting from this position allows us to push down on the pedal as we lift our body on to the seat and move forward.

Have students demonstrate the “power pedal” position, holding the position while maintaining balance with the other foot on the ground.

Activity Modification:

To get to the “power pedal” position on a handcycle, pedal backwards until both pedals are at the 8 and 4 position. Starting with the pedals in this position allows you to use the strength of your upper body and torso to push the bike away from you.

Additional Optional Activity (for intermediate students):

With students who are already familiar with bicycling, have them practice the start position with both feet (dominant and non-dominant). This works student’s balancing skills and dexterity.



RECAP (2 MINUTES)

While students are holding a start position to practice balance and build muscle memory, walk through the following key points:

- Importance of helmets: Helmets are important to protect our brains – whether we accidentally fall or something out of our control happens.
- Helmet fit: Ears, eyes, and mouth check using two-fingers
- Bicycle fit: bike frame and saddle adjustments
- Start position

Optional Extra Activities:

1. **Watch:** Bicycle Safer Journey middle school video (7 minutes) (https://www.pedbikeinfo.org/bicyclesaferjourney/mi_en.html) – available in English and Spanish
2. **Melon Drop:** demonstrate a simulation of the impacts of a bicycle crash on the head and brain using watermelon. Download the free Walk! Bike! Fun! curriculum, Lesson Plan 2 at www.walkbikefun.org/teachers-school-administrators-and-community-education/download-the-curriculum/ for guidance (15 minutes)



Lesson 2 | Before You Go

LEARNING OBJECTIVES REVIEW (PREVIOUS LESSON)

- Demonstrate how to wear a bicycle helmet properly. (Standard 3)
- Understand the impacts of a bicycle crash on the head and brain. (Standard 4)
- Demonstrate knowledge of the parts of a bicycle. (Standard 3)
- Demonstrate knowledge of how to adjust a bicycle to fit personal needs. (Standard 3)
- Demonstrate how to put the pedal in the power position. (Standard 1)

LESSON 2 LEARNING OBJECTIVES

- Demonstrate knowledge of the “ABC Quick Check” safety steps. (Standard 2 and 3)
- Recognize clothing that is safe for bicycling and walking. (Standard 2)
- Demonstrate hand signals including left turn, right turn, and slowing while straddling the bicycle. (Standard 2)

LOGISTICS

Time: 30 minutes, with additional optional activities (10 added minutes)

Location: Outdoors on a cleared black-top

Materials:

- Helmets – 1 per student
- Hairnets, shower caps, or surgical/painters’ cap (or disinfectant spray) – 1 per student
- Bicycles (different sizes: 20”, 24”, and 26” wheel size) – 1 per student
- Dark backdrop or sheet
- 5 or 6 brightly colored shirts or pennies
- Reflective material (to be shown in the dark)
- Small hand weights –to use for optional addition to the hand signals exercise
- Floor pump with gauge – to use if you need to pump up tires or for optional activity

PREP WORK:

- Set up bicycles according to size
- Set up helmets according to size

VOCABULARY TERMS

- Visibility
- ABC Quick Check



ACTIVITY 1: REVIEW OF HELMET FIT (4 MINUTES)

1. Discussion (1 minute)

Helmets protect your head from the impact of crashes. It is essential to put them on properly. Helmets must be snug and strapped so they don't slide off or are loose, cover the forehead, and cannot be easily pushed back on the head. These are important because if you do fall or get in a crash, you want your head, including your forehead, to be protected.

2. How to fit a helmet: (3 minutes)

Have each student grab the helmet in the size that they fit to last time and a hairnet. Walk through the proper helmet fit steps together.

To make sure your helmet fits and you're wearing it every time you go for a ride, we follow these steps:

Step 1: Fit

Place your helmet squarely on your head – forward, just out of your eyeline. It should fit snugly without buckling it yet. Some helmets have a turn dial (called a retention band) on the back—turn the dial to fit your helmet tightly, but not too tight that it would give you a headache.

Step 2: Ear Check

Now buckle your chin strap and check that the straps form a V under your ears, using your two fingers to feel and check.

Step 3: Eye Check

Place two fingers at the top of your eyebrows. Only the width of 2 fingers should fit between your eyebrows and the brim of your helmet.

Step 4: Mouth Check

Finally, place two fingers flat under your chin, between your chin and the chin strap. Only 2 fingers, maximum, should fit between your chin and strap.

After you've (1) tightened the retention band, (2) checked your ears, (3) checked the space above your eyes, and (4) checked your chin strap, then you can do a final full-check by shaking your head. If it moves around or shifts on your head, you need to go back and tighten one or more of your straps.



ACTIVITY 2: WHAT TO WEAR & PACK (7 MINUTES)

WHAT TO WEAR (6 MINUTES)

1. Discussion (1 minute)

Q: Why is being visible important when riding a bicycle?

Q: How can you make sure a vehicle driver sees you when you are riding your bike?

Explain that bright clothing is part of being visible in the traffic scene. The bicycle user or walker should wear light-colored, bright clothing in the daytime and reflective clothing at night.

2. Bright & Visible Clothing (3 minutes)

Have 5 to 6 students with different shirt colors or pennies, including at least one very bright or light color and one dark color, run to the far end of field or outdoor space, ideally standing against dark-colored background, such as a dark sheet or wall pads. Ask other students to rate which color is the most visible.

Q: Move your head side to side, with your eyes following your head movement, at about one-second cadence. Who do you see first or who is most visible?

Q: Who do you see second?

Q: Who is least visible?

Q: Which colors are most visible?



3. Reflective Clothing & Material (1 minute)

Explain that it is especially important for people riding bicycles and people walking (pedestrians) to wear light-colored or reflective clothing when walking or biking at dusk or in the dark, since most serious crashes are at night.

Show students reflective material and equipment.

- *Those who must walk or ride at dusk or at night need to wear reflective material over clothing, on backpacks, and on helmets. Reflective materials reflect light back to the light source when shined upon.*
- *According to Wisconsin law, while riding at night, a bicycle must have a white light in the front and a red light or red reflector on the back.³*
- *Although we are outside today, try testing out the visibility of a reflective material at home. Turn out the lights in a room at home. Then, shine a flashlight on the material and observe how the material stands out by reflecting the light.*

Tips for Differentiated Learning

If demonstrating reflective clothing in a gym, be sensitive to students with sensory issues who may be alarmed by the darkness, flashing lights and reflective material in this activity.

4. Shoelaces & Pant legs (1 minute)

Q: Has anyone ever caught a shoe lace or pant leg in the chain of their bike?

Q: What happened when it caught?

Explain how it can rip your pants or skirt, and can potentially cause you to crash.

Have students demonstrate tying and tucking shoelaces and rolling up right pant leg. Reinforce this each day so laces and pant legs don't get caught in chain.

³ Wisconsin bicycling safety rules and state statutes: wisconsindot.gov/Pages/safety/education/bike/rules.aspx



Tips for Inclusion of Cultural Dress

Cultural or religious dress can be an important part of a student's identity. **Some bicycles make wearing cultural dress and maintaining full leg coverage challenging.** Help your students with long cultural or religious dress participate fully:

- **Check-in with parents**, sharing about the planned activities, what you wish to respect and how, and asking if they have other ideas for you to best support their student's involvement in the lesson.
- **Normalize the students' dress**, being careful not to shame them or tell them it is unsafe. Emphasize that we all wear or have different clothing styles, and the goal is to reduce the chance any of our clothing gets caught in our wheels, chain, or pedals.
- **Provide a step-through bicycle, rather than a step-over bicycle**, that limits how much a long garment rides up. Teach different ways of mounting a bicycle, such as tilting the bicycle to minimize clothing riding up when stepping through, or swinging one's leg over an upright bike.

WHAT TO PACK (1 MINUTE)

Discuss what to pack whenever going on a bicycle ride and how to bring it along safely.

Always ask an adult for permission before going on a bicycle ride. Make sure you clearly tell them where you will be riding, when to expect to get there or return, and with whom.

Q: *When going for a bicycle ride, whether it's to school, a friend's house, or cruising through the neighborhood or park, what should you always bring with you?*

It's important to always have water, safely secured in a bottle holder on your bike or in your backpack. Bring a snack for energy and another layer in case the temperature outside or your body temperature changes quickly. Bring: Water. Snack. Layer. All in a backpack on your back so it does not get caught in your wheel.



ACTIVITY 3: ABC QUICK CHECK (10 MINUTES)

1. Discussion (1 minute)

Now that we know how to properly wear our helmet and what clothes to wear, we need to check to make sure our bike is safe to use and ready for us to ride!

The “ABC Quick Check” is a great way to make sure your bike is in good working condition so you stay safe while riding. Do the ABC Quick Check every time before you go out on a ride.

2. Demonstrate the “ABC Quick Check” (9 minutes)

Have each student collect a bike of the proper frame size from Lesson 1. Each student stands with at least two arm’s lengths between them. Demonstrate and explain each ABC Quick Check, asking that students listen and check their bike along with you.

The ABC Quick Check stands for Air, Brakes, Chain and Crank Set, and Quick Release.

A stands for AIR

- *Check tire pressure: squeeze front and back tires. They should be firm, not soft or squishy. If a tire does not have the appropriate amount of air in it, it could damage the tire and you may get a flat or in a crash.*
- *Tires should be inflated to a rated pressure printed on the sidewall (pounds/square inch, or PSI) of the tire.*
- *Check for damage to the sidewalls and tread. Damage to the sidewall is common if the brakes are not adjusted properly. If the fabric of the tire shows below the surface, replace the tire immediately and do not go for a ride.*

B stands for BRAKES

- *Check the brakes by squeezing the brake levers. There should be a finger width between the handlebar and brake lever.*
- *Hold down the brake levers and try to move the bike back and forth. If it doesn’t roll, you are good.*
- *Look closely at the brake pads. The brakes are positioned properly when the pads are parallel to and aligned with the side of the rim or disc, not rubbing on the tire. (Note: Increasing numbers of youth bikes are equipped with disc brakes. These are located at the center of the wheel and stop the bike by squeezing a brake pad with a rotor mounted on the hub.)*

C stands for CHAIN and CRANK SET

- *Look at the chain—it shouldn’t be rusty or orange but instead have a light coat of oil on it. Also, check that the chain fits snugly and is not kinked. If the chain appears too loose or drooping, it may need adjustment. Do not ride a bike with a loose chain.*
- *Check the crank set. The crank set consists of the bottom bracket, crank arms, pedals and chain rings. Take the left and right crank arms in your hands and attempt to move them sideways. If both cranks move side to side, you have a problem. If only one moves, one crank arm is loose and must be tightened before riding the bike.*



QUICK stands for QUICK RELEASE or BOLTS

- The quick release (QR) lever is located on the hub and when closed, acts like a clamp to hold the wheel in place. Some bikes don't have a quick release but have nuts on each end that also should be tight.
- Before going on a ride, check the quick release or bolts to make sure they are tight enough to hold the wheel in place. If the QR lever leaves a slight imprint in your hand when you try and close it, it is tightened properly. When closed, the QR lever should not overlap the frame or fork, so it is accessible to open.

CHECK stands for CHECK

Check over the entire bike. Lift the bike two inches off of the ground and carefully let it go while listening for any unusual rattles or sounds. Then ride the bike slowly for a short distance to check that the bike is working properly.

3. Additional Activity: Learn to pump tires (5-10 minutes)

- **Check your tire's PSI (pounds per square inch) range**, which you can find in small lettering on the side of your tire. These numbers (40 to 70 psi, for example) tell you how much air to pump into your tire.
- **Find the tire valve**, which sticks out of the tire, pointing into the center of the wheel. Test which end of your pump snugly fits over it.
- **Attach the pump to the valve**, and lock the pump lever.
- **Pump your tire**, pumping up and down until the PSI is within the tire's range.



Air Pump



Tire



ACTIVITY 4: REVIEW THE START POSITION (2 MINUTES)

Walk through the steps of properly fitting their bike seat.

Adjusting your Saddle (Seat):

- *Straddle the bike.*
- *Saddle height should be high enough that there is a slight bend in your knee when the pedal is all the way down.*
- *Front knee should be above the center of the pedal.*
- *The saddle should be level, not angled up or down. The saddle should be adjusted at the connection of the seat post and the saddle.*

As we discussed last class, the “power pedal” position helps you start to pedal in the most powerful way by giving you the most leverage on your first push of the pedal.

Quickly demonstrate the position.

As a reminder, to get to this position, backpedal slightly until right pedal is at the two o'clock position or the left pedal is at ten o'clock. This will be the push-of pedal. Starting from this position allows us to push down on the pedal as we lift our body on to the seat and move forward.

Activity Modification

To get to the “power pedal” position on a handcycle, pedal backwards until both pedals are at the 8 and 4 position. Starting with the pedals in this position allows you to use the strength of your upper body and torso to push the bike away from you.

Additional Optional Activity (for intermediate students)

With students who are already familiar with bicycling, have them practice the start position with both feet (dominant and non-dominant). This works student's balancing skills and dexterity.



ACTIVITY 5: HAND SIGNALS (7 MINUTES)

1. Discussion (2 minutes)

Ask students the following questions to introduce hand signals while bicycling:

Q: How do drivers communicate where they are going?

Q: What if a car's turn signals were not working or they don't use their turn signals?

Q: Why is it important for people bicycling to communicate where they are going?

2. Demonstrate hand signals (2 minutes)

People biking need to use hand signals to communicate with other people using the road – for everyone's safety. When we bike, we need to use hand signals well before we do the action we are telling them we are going to do.

Demonstrate hand signals and practice hand signals with the students. It is acceptable to teach younger students to simply point the direction that they are going to turn. Demonstrate with your back turned toward the students so that they can imitate you.

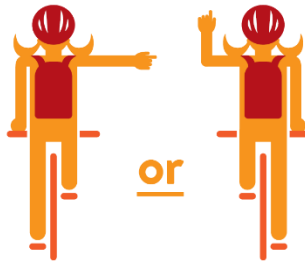
- *Stopping (left hand down, arm bent down at elbow)*
- *Right turn (right arm and hand straight out to the right. Alternatively, signal with the left arm straight out and bent 90 degrees at the elbow, pointing up)*
- *Left turn (left arm and hand straight out to the left)*

3. Practice hand signals (3 minutes)

Run through a series of strengthening exercises with hand weights while students straddle the bicycle or hold their foot in a power start position. Call out "stopping," "right turn," "left turn" and have students demonstrate the correct hand signal.



LEFT TURN (point left)



RIGHT TURN (point right)



STOPPING

Bicycling hand signals to turn left, right, and to stop



RECAP (IF TIME PERMITS)

When the students are cleaning up their materials, call on students to share out answers to the following questions.

Q: What does the A stand for?

Q: What does the B stand for?

Q: What does the C stand for?

Q: What does the QUICK stand for?

Q: What does the CHECK stand for?



Lesson 3 | Start & Stop

LEARNING OBJECTIVES REVIEW (PREVIOUS LESSONS)

- Demonstrate how to put the pedal in the power position. (Standard 1)
- Demonstrate knowledge of the “ABC Quick Check” safety steps. (Standard 2 and 3)
- Demonstrate hand signals including left turn, right turn, and slowing while straddling the bicycle. (Standard 2)

LEARNING OBJECTIVES

- Learn where and how to ride safely on the road for one’s personal safety and safety of others. (Standard 3 and 4)
- Demonstrate how to begin from a stopped position. (Standard 2)
- Demonstrate how to stop by coasting and by using hand brakes (Standard 2 and 3)

LOGISTICS

Time: 30 minutes

Location: Outdoors on a cleared black-top

Materials:

- Helmets – 1 per student
- Hairnets, shower caps, or surgical/painters’ cap (or disinfectant spray) – 1 per student
- Bicycles (different sizes: 20”, 24”, and 26” wheel size) – 1 per student
- Cones, rope, and/or chalk to set up an optional bicycle course
- A moveable “Stop” sign

PREP WORK:

- Extra hands will be particularly helpful for this lesson, especially with groups of students new to riding or groups with a large spectrum of skills
- Set up the bicycle course for the balancing and braking activities. The course requires two lanes at least 100 feet in length, twelve feet wide, and marked off with ropes, chalk, or cones. Place a “Stop” sign at the end of each lane. Diagram is provided on page 31.



ACTIVITY 1: WHERE TO RIDE (3 MINUTES)

1. Discussion (1 minute)

Explain to students that bicyclists must follow the same rules of the road as drivers of cars if riding on the street. Incorporate guidance about riding bicycles on sidewalks based on your city or jurisdiction's ordinances.

Wisconsin state law says that bicycles are defined as vehicles, so bicyclists must follow the same laws as motorists. (Meaning motorized cars, trucks, motorcycles, etc.) To bike safely, we need to know Wisconsin laws for operating your bicycle.

2. Introduce the five key rules for bicyclists (2 minutes)

Ask students who are familiar with riding where they like to ride to or from. Then introduce the five key rules for bicyclists on where and how to ride:

1. *Ride in the same direction as traffic, not against traffic. (Yes, this is the opposite of walking direction)*
2. *Obey all traffic signs (like., stop signs, yield signs, and traffic lights)*
3. *Ride on the road, not sidewalks.*
4. *Use hand signals.*
5. *Stay to the right.*

AND...Always wear a helmet. While Wisconsin does not currently have a law requiring bicyclists to wear a bicycle helmet, it is highly recommended.

Explain where the class will be practicing riding today for getting basics down first, but that learning these rules for bicycling on the road is important.



ACTIVITY 2: PREPARE TO RIDE (5 MINUTES)

Have students prepare for on-bicycling instruction by getting their helmets and their bikes.

Have students line up their bikes “shoulder to shoulder” facing the teacher and each go through their ABC Quick Check.

Following their ABC Quick Check, ask that students all signal that they are ready by straddling their bikes and waiting for further instruction.

Activity Modifications:

- Review the proper helmet fit, bicycle fit, and ABC Quick Check with students as needed, especially with students needing recall assistance.
- For students who may need support being placed on their bicycle or tricycle, and are unable to perform “ABC Quick Check,” ask them what one or more of the ABCs stands for or why it’s important.



ACTIVITY 3: BALANCING (10 MINUTES)

1. *Get into the Power Pedal Position (2 minutes)*

As we discussed last class, the “power pedal” position helps you start to pedal in the most powerful way by giving you the most leverage on your first push of the pedal.

Quickly demonstrate the position.

As a reminder, to get to this position, backpedal slightly until right pedal is at the two o'clock position or the left pedal is at ten o'clock. This will be the push-of pedal. Starting from this position allows us to push down on the pedal as we lift our body on to the seat and move forward.

Grip your handle bars tight enough so that you could easily rotate the handlebars, but not squeezing.

Keep your elbows relaxed, not locked, to help you move and balance more easily.

Activity Modification

To get to the “power pedal” position on a handcycle, pedal backwards until both pedals are at the 8 and 4 position. Starting with the pedals in this position allows you to use the strength of your upper body and torso to push the bike away from you.

Additional Optional Activity (for intermediate – advanced students)

With students who are already familiar with bicycling, have them practice the start position with both feet (dominant and non-dominant). This works student's balancing skills and dexterity.

2. *Power to Coast (8 minutes)*

Students should be lined up “shoulder to shoulder” with at least an arm's length distance between each other and facing the teacher.

Number off by three. Explain that you will call out a number (one, two, or three) and students of that number will “Go.”

Instruct students to use the “power pedal” technique to coast. After the first “power pedal”, instruct students to see how far they can “coast” without pedaling. This will allow students to get used to using the “power pedal” technique and become comfortable balancing.

Backpedal slightly until one pedal is at the two or ten o'clock position, the “power pedal.” Starting from this position, push down on the pedal and lift your body on to the seat and pedal.



Q: How far can you coast?

Students should coast forward towards the teacher. Then ask them to stop in line with the teacher, after gliding to a stop and putting their feet down. Then, have them coast forward again from the teacher. Once students have coasted the second time, have them roll themselves to the edge of the coasting space and return to the start line. Have students repeat this twice.

Activity Modifications:

- Students with decreased muscle strength, may need a “push off” from behind given by a teacher or assistant but allow them to attempt to get started on their own first.
- Students on adaptive bikes should not be encouraged to lift their body when pushing down on the pedal to begin cycling.
- If the space is constrained such that students may easily collide into each other when coasting, consider having students line up in two or three lines after their ABC Quick Checks.

Additional Optional Activity (for intermediate – advanced students):

With students who are already familiar with bicycling, have them practice the power to coast move at least once and assess their balance. Then, either:

1. Have them do a “Slow Race” in another large area separate from other students. Have students bicycle (1) as slowly as possible without ever touching the ground after pushing off, (2) while staying within the track boundaries, and (3) not colliding with or touching another slow racer. Whoever gets to the finish line last wins. This activity hyper-focuses students on balance. Learn more about this fun, challenging activity here: <https://youtu.be/ek5Zth8Ebj0>
2. Send them on their way to bicycle through an obstacle course in another area, separate from students learning how to balance.



ACTIVITY 4: BRAKING (12 MINUTES)

1. Review hand signals: right, left, and stop. (1 minute)

Call out the different hand signals (right, left, and stop) and have the students perform the hand signals.

2. Discussion: Braking (1 minute)

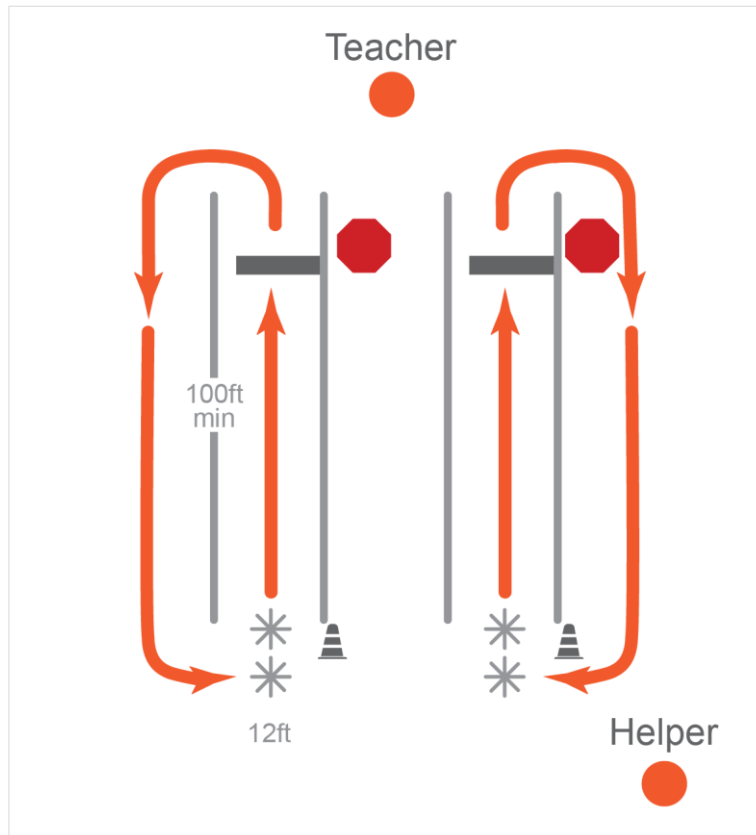
Q: Which hand powers the rear brake? **A:** The right hand.

Q: Why is it important to know the difference between the left hand brake and the right?
A: If you press too hard on the left brake, which powers the front brake, you could fall over the top of your handlebars.

Activity Modifications:

Depending on the child's age/skill level and their bicycle, some students might not have hand brakes. Instead, the bicycle may have rear coaster brakes. If that is the case, instruct students with coaster brakes that they need to pedal backward to "put the brakes on."

3. Starting and Stopping (No Brakes, 5 minutes)



Adapted from:
http://www.bikemn.org/storage/documents/Documents/Education/Walk_Bike_Fun_Pedestrian_and_Bicycle_Safety_Curriculum_Final_06_2719_ADA_FINAL.pdf



Instruct students to line up single file in two lines at the start of each lane on the course.

- The first student in each line rides down their lane and looks for the stop sign (these could be marked with tape or chalk across the lane.)
- Explain to the students that the right lane is for right turns and the left lane is for left turns.

Direct students to take off in the “power pedal” position and drive toward the end of the lane to the “Stop” sign.

- Encourage students to practice putting both feet on the pedals after launching from power pedal position, and gently push on the pedals to maintain balance and continue forward.
- Each student says aloud “Stopping,” gives a hand signal (only if able to at this stage), stops, places one foot on the ground, and looks left-right-left for traffic.
- Explain that communicating “Stopping” verbally and with a hand signal is especially helpful if they are riding in a group with others behind them.

Remind students to take turns slow and wide, and to not get too close to the bike in front of them.

Students execute the drill two times in each lane.

Activity Modifications:

- For students that are unable to make the stop signal with their hand, have them do just the verbal announcement, “Stopping.”
- Walk alongside or behind students who need assistance starting or stopping.
- For students who are unable to use their foot to assist them in stopping, have them stop their bike properly and then look left, right, left. The next group of students begins as the first group is approaching the stop sign.
- Have students with limited endurance complete one lap as opposed to two.
- If students are not yet comfortable turning along the route, instruct students to practice a series of small power pedals along each direction of the route.
- If students are not yet comfortable with pedaling, they can continue coasting from a power pedal position (calling out “Stopping” along the way) or try rolling themselves along with their toes on the ground and balancing on the bike.



4. *Starting and Stopping (With Brakes, 5 minutes)*

Instruct students to:

- Ride down their lane; look for the first stop sign placed fifty-feet down the lane.
- Use the “Stopping” hand signal (only if able to at this stage)
- Brake with both brakes
- Come to a stop and straddle bike.
- Get into the “power pedal” position and signal while at the stop sign which direction they are turning (based on the course)
- Push forward and practice pedaling and moving through the course.
- Ride back to the start line to proceed two times on each side of the course.

Activity Modifications:

- For students that are unable to make the stop signal with their hand, have them do just the verbal announcement, “Stopping.”
- Walk alongside or behind students who need assistance starting or stopping.
- Provide verbal cuing to break slowly prior to the student approaching the stop sign.
- Have students with limited endurance or strength complete the activity just once.



Lesson 4 | Visual Checks & Scanning

LEARNING OBJECTIVES REVIEW (PREVIOUS LESSONS)

- Learn where and how to ride safely on the road for one's personal safety and safety of others. (Standard 3 and 4)
- Demonstrate how to put the pedal in the power position and begin from a stopped position. (Standard 2)
- Demonstrate hand signals including left turn, right turn, and slowing while on the bicycle. (Standard 2)

LEARNING OBJECTIVES

- Demonstrate the ability to ride their bicycle in a straight line for at least twenty feet with one hand on the handlebars. (Standards 1 and 2)
- Demonstrate the ability to scan, or look over the left or right shoulder, to identify the signal given by the teacher. (Standards 1, 2 and 4)

LOGISTICS

Time: 30 minutes, with additional optional activities (15 minutes)

Location: Outdoors on a cleared black-top

Materials:

- Helmets – 1 per student
- Hairnets, shower caps, or surgical/painters' cap (or disinfectant spray) – 1 per student
- Bicycles (different sizes: 20", 24", and 26" wheel size) – 1 per student
- Cones, rope, and/or chalk to set up an optional bicycle course
- A moveable "Stop" sign

PREP WORK:

- Extra hands will be particularly helpful for this lesson, especially with groups of students new to riding or groups with a large spectrum of skills
- Set up the bicycle course for the one-handed riding and scanning activities. The course requires two lanes at least 100 feet in length, twelve feet wide, and marked of with ropes, chalk, or cones. Place a "Stop" sign at the end of each lane. Diagram is provided on page 31.

VOCABULARY TERMS

- Scanning



ACTIVITY 1: WELCOME REVIEW (5 MINUTES)

1. **Key Rules for Bicyclists Review**

Begin class with all students standing next to the appropriately sized bicycle and with a helmet on. Reintroduce the five key rules for bicyclists.

1. *Ride in the same direction as traffic, not against traffic.*
2. *Obey all traffic signs.*
3. *Ride on the road, not sidewalks.*
4. *Use hand signals.*
5. *Stay to the right and pass on the left.*

AND...Always wear a helmet. While Wisconsin does not currently have a law requiring bicyclists to wear a bicycle helmet, it is highly recommended.

2. **Hand Signal Review**

Ask students to demonstrate the various hand signals (left, right, stop).

3. **Prepare to Ride**

Ask the students to:

- *Check the proper fit of your helmet.*
- *Run through an “ABC Quick Check” on your bike.*
- *Tuck in shoelaces, roll up pants, or tuck pants into your socks.*
- *Stand over your bike in straddle position.*
- *Hold handlebars with both hands.*

Activity Modifications:

- Students with limited fine motor skills or grasp, and/or range of motion may require assistance with putting on or fastening helmets.
- If student is unable to perform “ABC Quick Check” because they are already positioned on their bike, have the student verbally direct you in regards to what maintenance checks should be performed. Alternatively, review “ABC Quick Checks” with student if they need assistance with recalling it.
- Tuck in shoelaces, roll up pants, or tuck pants into socks. (Assist students with mobility limitations).



ACTIVITY 2: VISUAL CHECK & ONE-HANDED RIDING (13 MINUTES)

1. Visual Checks (3 minutes)

Direct the students to keep their hands on the handle bars, arms straight (not bent), and look over their left shoulder by turning their head only.

Q: How far can you see?

Then direct them to look over their right shoulder, arms straight by turning their head only.

Now direct the students to bend their elbows and look over their left shoulder.

Q: How far can you see now? (They should be able to see farther),

Look at the handlebars and front wheel.

Q: Did the front wheel turn?

Often you turn the handlebars in the direction you are looking while riding. You could swerve into traffic and may crash.

Demonstrate how to take the left hand off of the handlebars and put it on hip before looking over the shoulder. A person can turn farther to see more and the handlebars stay straighter. Now direct student to do so.

Activity Modification:

Some students may have difficulty looking over their shoulder. If this is the case, tell the student to make sure they ask their riding partner what is behind them on their left and on their right.

2. One-hand riding (10 minutes)

Now, you will practice riding a straight line with both hands and then with one hand on the handlebars. One-handed cycling should be used when looking backward for traffic and signaling.

Using the same course as in lesson 3, announce to the students that they will be riding their bikes down the lanes in straight lines. The right lane is for right turns and the left lane is for left turns.

Review with students to:

- Take off from the “power pedal” position (two or ten o’clock position), push down and then drive to the end of the lane with both hands on the handlebars.
- Ride in a straight line, signal “stopping” before the stop sign and stop at the stop sign.
- Students in left lane turn left, students in right lane turn right, and return to the line at the start.



The **second** time around the course students should ride down their lane with their right hand on the handlebar and their left hand on their hip, while:

- practicing using their hand brakes
- looking for the stop signs (could be marked with tape or chalk across the lane)
- riding their bike in a straight line without weaving out of their lane.

Stress that this exercise is about riding in control and is not a race.

The **third** time around the course students switch hands, riding with the right hand off of the handlebars and placed on their hip, also practicing using their left hand brake.

Students repeat lapping the course, as time allows, switching which sides of the course (turning direction) they are on and which hand they place on their hip.

Stagger the starts so that the next student begins riding when the previous student is just over halfway down the lane.

Activity Modifications:

- Review with students that are using a handcycle, how to get to the “handcycle power pedal” position (pedal backwards until both pedals are at the 8- and 4 o’clock position).
- Students on a handcycle should only take hand off pedal when they are coasting and/or at a stop sign and signaling.
- Reduce the number of times students complete the course if they have limited strength or endurance.



ACTIVITY 3: SCANNING (10 MINUTES)

As we ride through a park, a neighborhood, or along the streets by bicycle, our surroundings are always changing. We have to frequently look around, including behind us and to the side of us to see what's happening around us. This is called scanning.

Scanning is the act of looking over one's shoulder to observe if it is clear to change direction or to be aware of one's surroundings.

Explain to the students:

- The teacher and a helper (a student or adult volunteer) will be standing halfway down the lane.
- The student on a bicycle will ride past the teacher or helper and when the teacher/helper shouts, "Scan!," the student should look/scan back to see how many arms the teacher/helper is holding up.
- Students call out the number of arms they see.

Instruct two students to go at a time, one from each lane:

- Students ride with their right hand on the handle bars and their left hand on their hip and in a straight line past the teacher/helper who is standing halfway down the lane. Stress to students when "scanning" ("looking back") to turn their body, not the handlebars to scan over their left shoulder.
- Once past the teacher/helper, students scan/look back.
- The teacher/helper holds up one, two, or no arms. Student should shout out how many arms they saw in the air and continue biking down the lane
- Students drive their bicycle to the end of the lane, signaling left or right, then stop and return to the start.

Activity Modification:

Explain to students who are unable to fully look behind them due to limited range of motion to look ahead of them and in their periphery. Teacher/helper will yell scan when student is approaching and as they are riding past. Alternatively direct the student to ask their riding partner what they see behind them.

Additional Optional Activity: Quick Stop (10-15 minutes)

Students learn about the Quick Stop. The Quick Stop enables the rider to make an immediate stop, by using both the front and rear brakes and requires a much shorter braking distance. Provide a demonstration of a Quick Stop and then provide direction for students to learn on their own.



Lesson 5 | Residential Riding

LEARNING OBJECTIVES REVIEW (PREVIOUS LESSONS)

- Reiterate where and how to ride safely on the road for one's personal safety and safety of others. (Standard 3 and 4)

LEARNING OBJECTIVES

- Demonstrate how to communicate effectively with other road users (Standards 1, 2, and 4)
- Demonstrate the proper positioning while riding on the road for their safety and that of others. (Standards 2 and 4)
- Demonstrate how to ride their bicycle safely through an intersection. (Standards 1, 2, and 4)
- Identify bicycling as a way to be active and support health, while also being a tool for transportation and independence. (Standard 5)

LOGISTICS

Time: 30 minutes

Location: The best option is to use a quiet street near the school with few cars. If an acceptable street is not available, consider getting your local jurisdiction's permission to barricade a section of street near the school – you will need at least 100 feet of straightway and intersection. As a final option, set up a course in a nearby parking lot.

Materials:

- Helmets – 1 per student
- Hairnets, shower caps, or surgical/painters' cap (or disinfectant spray) – 1 per student
- Bicycles (different sizes: 20", 24", and 26" wheel size) – 1 per student
- Sidewalk chalk or spray chalk
- Measuring tape
- One adult volunteer per five to eight students
- Safety vest for each adult
- Cones to act as safety aids or barricades to block off street
- A moveable "Stop" sign
- Boxes to act as vehicles – *optional*
- Four cones – *optional*
- Four ropes at least 100 feet long – *optional*

PREP WORK:

- Extra adult volunteers will be helpful for this lesson, especially with groups of students new to riding or groups with a large spectrum of skills. Share the Mobility for All (pg. 49) and Helmet Fit Tips (pg. 51) with adult volunteers.
- This lesson puts students on the road to practice essential riding skills. For safety reasons, the best option is to use a quiet street near the school with few cars. If an acceptable street is not available, consider getting the City's permission to barricade a section of street near the school – you will need at least 100 feet of straightway and intersection. As a final option, set up a course in the parking lot.
- Set up the bicycle course or establish the street closure for the residential riding activity. See Activity 3 for further details.



VOCABULARY TERMS

- Courteous
- Predictable
- Right-of-way

ACTIVITY 1: REVIEW 5 KEY RULES FOR BICYCLISTS & WI LAWS (2 MINUTES)

By Wisconsin law, bicycles are defined as vehicles, so bicyclists must follow the same laws as motorists. To bike safely, we need to know Wisconsin laws for operating your bicycle.

Just because you see a driver while bicycling does not mean that the driver sees you. Today, we will try out ways to communicate when riding a bicycle and how to safely ride a bike on neighborhood streets.

Review the five key rules for bicyclists, which are listed below.

Talking Points:

1. *Ride in the same direction as traffic, not against traffic.*
2. *Obey all traffic signs.*
3. *Ride on the road, not sidewalks.*
4. *Use hand signals.*
5. *Stay to the right. Pass on the left.*

AND...Always wear a helmet. While Wisconsin does not currently have a law requiring bicyclists to wear a bicycle helmet, it is highly recommended.



ACTIVITY 2: RIDING & COMMUNICATING WITH OTHERS (3 MINUTES)

1. Discussion: Communication

Discuss with students the importance of communication and the different ways to communicate with other road users while riding a bicycle.

Q: What are ways of communicating while riding a bicycle?

A: When riding a bicycle, it is important to communicate your intentions to other road users, such as motorists, pedestrians, or other members of the traffic. This is called being predictable. One way to let others know what you intend to do is to communicate your intentions.

Communication involves two people: the sender and the receiver. If a bicyclist signals his/her intention to make a right turn but the driver behind or in front of him/her does not see the signal, the bicyclist is in danger of being cut off by the driver. Communication can be verbal, use hand signals, or both. Equally important is your position in the road. Proper lane position is an important way to signal your intentions.

Drivers often wear sunglasses and have tinted windshields. They may appear to be looking at the bicyclist, but not really see them. Make yourself conspicuous; let the driver know you are there and what your intentions are.

2. Discussion: Being Courteous & Sharing the Road

Discuss with students what it means to be courteous and share the road with other road users.

Q: What does "right-of-way" mean?

A: The definition of "right-of-way" is the right to move onto or across a road before other people or vehicles. For example, when you and another vehicle or bicyclist approach a stop sign close to the same time, the person who arrived first has the "right-of-way." Even if you have the "right-of-way" it is important to communicate with other road users to make sure they understand you are about to move forward or turn.

Q: What are some ways to be courteous while riding a bike?

A: Being courteous to others can go a long way. Treating others with respect and courtesy will encourage them to treat you the same in return. This means yielding and giving an audible signal to pedestrians and thanking motorists with a nod or wave for giving you the right-of-way.

Sharing the road with all road users equates to everyone following the rules and remembering to be courteous and patient with each other.

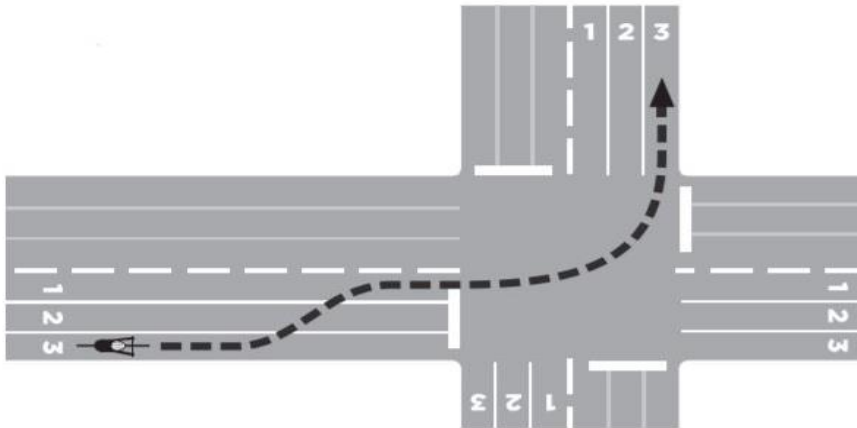
On narrow two lane roads with high volumes of traffic, a bicyclist may choose to occasionally pull off of the road to allow cars that are backing up to pass (if and when there is a safe spot to do so). This is a courteous demonstration of "sharing the road."

Explain how being courteous to others and being respected in return makes bicycling not only safer, but more fun! Remind students how learning to ride safely provides them with the tools to be more independent, go places, and enjoy getting outside.



ACTIVITY 3: HOW TO RIDE IN NEIGHBORHOODS – TAKING THE LANE, STOP SIGNS, TURN LANES (20 MINUTES)

1. Getting Set Up



Courtesy of:
http://www.bikemn.org/storage/documents/Documents/Education/Walk_Bike_Fun_Pedestrian_and_Bicycle_Safety_Curriculum_Final_062719_ADA_FINAL.pdf

A good place for this activity is a four-way stop intersection near the school with school zone signs nearby. If one is not available, use an intersection close to school with low traffic volume so as not to interfere with traffic. Use your best judgement of the roadways near your school to select an appropriate location. If an acceptable street is not available, consider getting the City's permission to barricade a section of street near the school – you will need at least 100 feet of straightway and intersection. As a final option, set up a course in the parking lot to replicate an intersection.

Teacher and volunteers should be wearing safety vests for visibility.

- A. Use sidewalk chalk or spray chalk to label the lane with the appropriate “1,” “2,” and “3” positions (like on the overhead diagram). Teacher should stand in the middle of the intersection throughout this activity and have one volunteer stand at least twenty or thirty feet from the corners to help the students know when to start scanning, signaling, and moving. Explain to students that they will be practicing proper position on the road at an intersection.
- B. Show students the three positions labeled on the road with chalk.
- C. Divide the class into two groups or more depending on the number of volunteers available. (Recommended ratio is one adult per five to eight students.) Place groups at intersections, approximately 100 feet before the stop sign.

Activity Modifications:

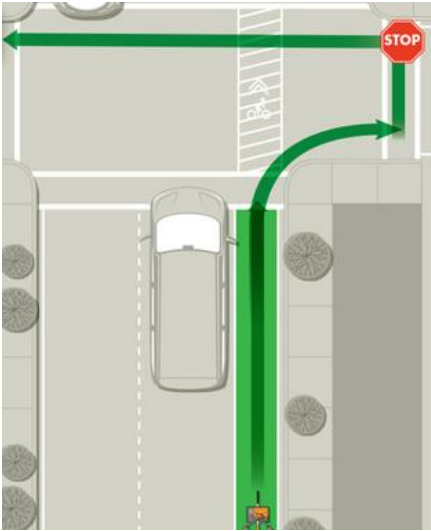
Place students with limited endurance 25 yards before the stop sign. If a student needs to reposition on a handcycle in an intersection, provide assistance.



2. Residential Riding Activity

Students will demonstrate the skills they have learned in previous lessons and activities in order to gain confidence riding on residential streets.

- A. **Right Turns:** Have the students practice making right turns one at a time at each stop sign. Remind them to aim for the number of the position they need to be in when making a right turn.
- B. **Straight through an intersection:** Discuss and demonstrate the proper road position for a “straight through” movement in an intersection. When traveling straight through an intersection, bicyclists should remain in position “3.”
 - a. Scan behind for oncoming traffic when approaching the stop sign.
 - b. Continue in position “3.” This will inform motorists of your intent to go straight through the intersection and prevent any right turning cars from pulling in front of you and cutting you off. Remember to aim for the number “3.”
 - c. Give your signal for stopping. Stop at the stop sign, look left, right, and left again.
 - d. When clear, move straight through the intersection. Remain in position “3.”
 - e. Make a U-turn and line up in the new lane.



Box turn diagram from the Bicycle Alliance of Minnesota (bikemn.org)

- f. **Left Turns:** Discuss and demonstrate the proper traffic procedure for left turns.
 - g. Scan over your left shoulder for traffic.
 - h. While scanning, give the left hand turn signal.
 - i. Move to the left side and into position “1” when it is clear and safe to do so.
 - j. Stop at the stop sign, look left, right, left, then look across the intersection to be sure there is no traffic coming straight through.
 - k. Proceed through the intersection and move to position “3” after making the left turn.
 - l. Note that another way to safely turn left on a bike is called a “two stage left turn”. To do this, stay in position “3” through one leg of the intersection. Then, pick up your bike and turn 90 degrees. Proceed through the intersection when it is your turn and it is safe to do so.
- C. **Navigating Parked Cars:** Discuss and demonstrate the proper positioning and movement to navigate parked cars.
 - a. Move to position “2” or at least 3 feet (more than one arm’s length) to the left of the parked car when passing to avoid the door zone.
 - b. Ride in a straight line and avoid weaving to remain predictable.



ACTIVITY 4: RECAP & CELEBRATION (5 MINUTES)

1. Residential Riding Recap

After students are safely away from traffic and can gather (i.e., before they put away equipment) ask them to describe skills that they used during the lesson.

Q: Who can name one of the five key rules that you should remember when you are bicycling?

A: Ride in the same direction as traffic, not against traffic; obey all traffic signs; ride on the road, not sidewalks; use hand signals; stay to the right.

Q: Why is it important to remember these rules?

A: These rules help us stay predictable and be seen by people driving cars and trucks. When you are bicycling in Wisconsin, the law defines you as a vehicle, so you should follow the rules of the road.

Q: Thinking about the ride you just took, what are some ways you rode through the intersection today?

A: Straight through the intersection, turned left, turned right, rode past parked cars, etc.

Q: With your parent, guardian, or other caregiver's permission and guidance, what is one place you might ride your bike that could be similar to where we rode today?

A: Students could discuss riding to school or other destinations in their community. For students who live in more remote, rural areas, they might consider opportunities to ride on trails or with friends/family in more suburban/urban communities.

You did it! Today you learned about riding and communicating and even tried out riding in a residential area! We hope these skills will help you feel more confident about riding your bike outside of school. You might have felt a little nervous when turning or going through the intersection. That's ok! These skills take time to develop and you really focused on them today. With an adult's permission, you could keep practicing in a residential area near you with low traffic and low speeds, or you could practice on a trail or on a blacktop. This will help turning and navigating traffic feel more natural over time! Remember – the bicycle is a tool that can help you get around, have fun, and be active. Great job today!



Ready-to-Go Resources

The following resources are included in this curriculum:

- Safe Riding Worksheet – page 46**
- Answer Key (Safe Riding Worksheet) – page 47**
- Regions of the Brain – page 48**

The following one pagers are distributed for free through ECWRPC:

- Mobility for All for Educators – page 49**
- Helmet Fit Tips for Educators – page 51**
- Learn to Ride for Educators & Families – page 53**
- Basic Bicycle Maintenance for Students – page 54**



Answer Key (Safe Riding Worksheet)

1. Circle the answer that best describes your experience riding bicycles:

Answers will vary. Use responses to adjust skill level of activities and/or assess if you need additional adult support.

2. How do you feel about riding a bicycle or learning how to ride a bicycle in PE?

Answers will vary. Use responses to tailor the support and encouragement you provide different students.

3. Why is it important to ride a bicycle safely?

To prevent getting injured or hurting someone else.

6. Circle the 5 key *rules of the road* for bicyclists (people who ride bicycles):

- B. Ride in the same direction as traffic.**
- D. Obey all traffic signs and signals.**
- E. Ride on the road, not sidewalks.**
- G. Use hand signals to communicate stopping and turning.**
- H. Stay to the right, pass on the left.**

Note that while very important, wearing a helmet is not a universal law across Wisconsin.

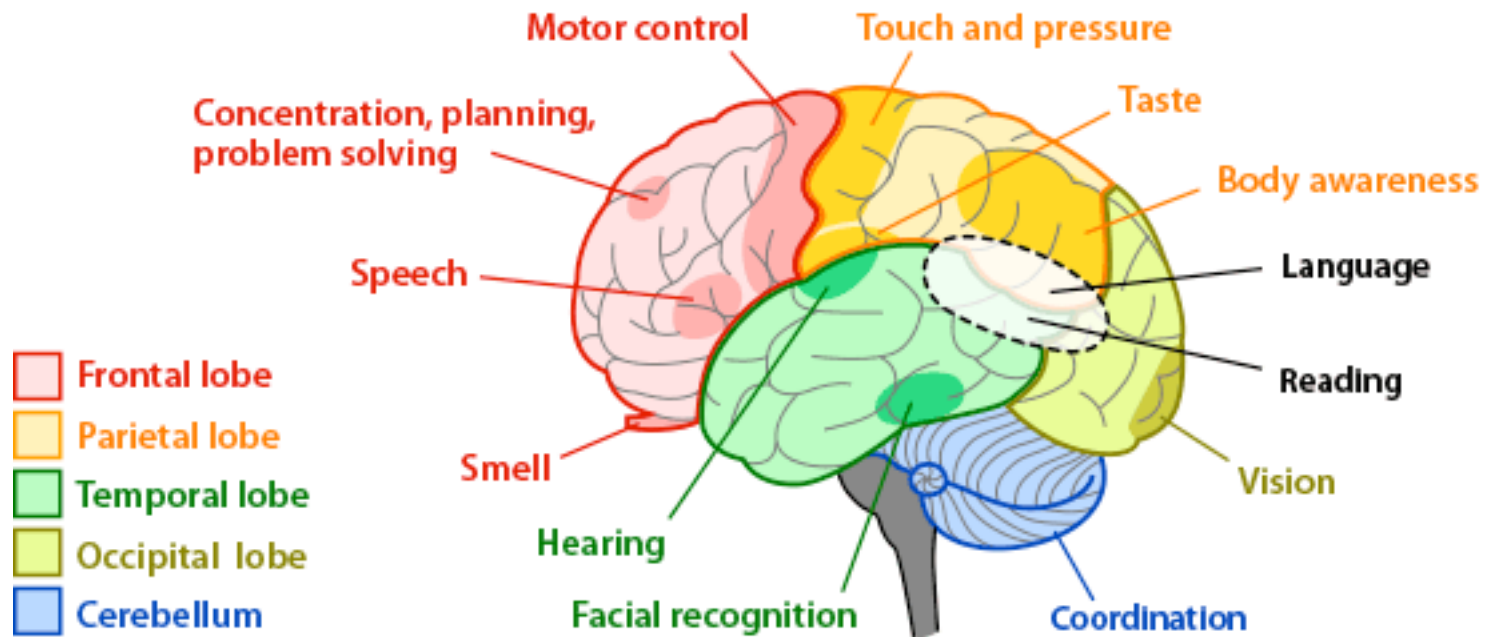
4. In addition to following the rules of the road, what else can you do to ride a bicycle safely? Try to list at least two!

Any of the following:

- **Wearing a helmet**
- **Wearing closed-toed shoes**
- **Not using earphones/headphones**
- **Checking my bike before riding (ABC quick check)**
- **Maintaining my bike**
- **Planning where to ride (a route) with an adult**



Regions of the Brain



Courtesy of: <https://askabiologist.asu.edu/brain-regions>