

# 6<sup>th</sup> Grade Bike Safety Education Unit

The following outlines a recommended 10-day unit for teaching bike safety education to 6<sup>th</sup> graders.

Day and Goal	Activities	ALPACA Principle
<b>Day 1:</b> Principles of active transportation, and personal security	1.1 What if? List 1.2 Bike Safety Worksheet 1.3 Principles of Bike Safety (ALPACA) Run	All ALPACA principles
<b>Day Two:</b> Fit bike and helmet	2.1 Helmet Fitting 2.2 Personal Safety Check 2.3 Bike Fitting 2.4 Bike Safety Check	Legal
<b>Day Three:</b> Basic Riding Skills: Braking, Signals, Ride with one hand	3.1 Basics of Braking 3.2 Ride in a Circle 1: One hand 3.3 Ride in Circles 2: While signaling 3.4 Braking with Signal	Legal, Predictable, Able to be seen
<b>Day Four:</b> Ride with one hand, Shoulder check	Activity: Skipped activities from Day 3 4.1 Pop the Bubble 4.2 How Many Fingers?	Aware, Legal, Predictable, Able to be seen
<b>Day Five:</b> Right Turns and scanning	Activity: Ride around the block 5.1 Memory Relay	Aware, Legal, Able to be seen, Assertive
<b>Day Six:</b> Right turn practice and left turn lesson	6.1 Keep it simple on-campus 6.2 Keep it simple off-campus	Aware, Legal, Predictable, Able to be seen, Assertive
<b>Day Seven:</b> Left turn practice and rules of right-of-way lesson	7.1 Copenhagen Left: On Campus 7.2 Copenhagen Left: Off Campus	Aware, Legal, Predictable, Able to be seen
<b>Day Eight:</b> Right-of-way	8.1 First to Stop ROW: On Campus 8.2 First to Stop ROW: Off Campus	All ALPACA principles
<b>Day Nine:</b> Copenhagen right-of-way	9.1 First to Stop ROW + Copenhagen Left	All ALPACA principles
<b>Day Ten:</b> Community Ride!	Community Ride (see map)	All ALPACA principles



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## Day 1 - Basics of Bike Safety: Principles of Active Transportation + Personal Security

**Essential talking points:** The purpose of this lesson is to ensure that students know the foundations of bike safety and traffic safety in general. It is important that students understand that if they follow these foundational principles that they will be a safe road user.

1. Introduce the program goals, activities, and expectations. Give students a brief day-by-day overview of the class; include a reminder about the community ride and inviting guardians. Assure students there are bikes and helmets to use.
2. **1.1 What If? List:** The What If? List will be used throughout the 10-day unit. This list should guide how the unit moves forward and help you identify the skills that students are lacking.
3. Define the basics of bike safety: **ALPACA** – **A**ware, **L**egal, **P**redictable, **A**ssertive, **C**ourteous, **A**ble to be seen. Use **1.2 ALPACA worksheet** and **1.3 ALPACA Signs:**

**Aware** – People riding bikes need to know what is happening around them.

**Legal** – People riding bikes need to know and follow traffic laws.

**Predictable** – People riding bikes behave in a way that other users would expect and understand.

**Assertive** – People riding bikes know the laws, know how they are supposed to ride and do so with confidence.

**Courteous** – People riding bikes understand that all users are entitled to the road and give space and grace.

**Able to be seen** – People riding bikes ensure that other road users can see them.

Ask the students to come up with examples of each principle. Here is a list of examples:

- Looking side-to-side often (aware)
- Making eye contact with other users (aware)
- Using helmets (legal)
- Using lights at night (legal, able to be seen)
- Obeying street signs (legal, predictable)
- Being in appropriate lane position (legal, predictable, able to be seen)
- Using signals (legal, predictable, able to be seen)
- Using your voice to let people know you are passing safely (courteous)
- Sharing the road (courteous)
- following rules of right-of-way (assertive)
- Having control of bike (assertive)

4. Activity: **1.3 Principles of Bike Safety (ALPACA) Run**

**Best practice:** Keep the students moving. Yes/No and ALPACA principles are great ways to have discussions.

## Lesson 2 – Equipment: Helmet and Bike Fit

**Essential talking points:** This lesson is about getting students the gear that they will need for the rest of bike safety. Limiting explanations and leaving time to hand out helmets and bikes is very important. However, there is one important point to make: *Always wear your helmet, but never use it.* The meaning of this mantra is that a helmet does not make a person riding a bike safe. It protects them when they are in an unsafe position. How a person rides is what keeps them safe. Following ALPACA principles helps people ensure they are riding safely.

1. Review **ALPACA** and the What If? List students created.
2. Highlight the importance of wearing a helmet.
  - Protects your brain. Why do you like your brain? What can it do?
  - Your brain can't fix itself like a broken bone can.
3. Ask how a helmet works and when do you replace it.
  - How helmets work: The styrofoam absorbs the impact of the fall. The plastic on the outside helps it slide. The straps keep it on your head.
  - You should replace your helmet after a crash or 5 years.
  - You should never drop, kick, throw your helmet, or store it in the sun.
4. Pass out helmets. Have students check helmets for cracks in the Styrofoam.
5. Activity: **2.1 Helmet Fitting**
6. Lead class in **2.2 Personal Safety Check (PSC)**.
7. Activity: **2.3 Bike Fitting**
8. Lead **2.4 Bike Safety Check (BSC)** - This is also referred to as the ABC-Q Check. This is important to do every time the student rides the bike the first time that day..
  - **Air** - check for air in the tires.
  - **Brakes** - squeeze both brakes and push forward and pull backward. Wheels should lock in place if brakes are working.
  - **Chain** - lift up rear wheel and pedal forwards, checking to see if the chain is engaged with the gears.
  - **Quick release** - make sure quick release levers on wheels are closed. For class purposes, check that the seat is at an appropriate height.

**Extra time:** Lead the students on a ride around the school grounds.

**Best practice:** Develop a system for storing bicycles and helmets to reduce time collecting and putting them away throughout the program.

## Lesson 3 – Basic Riding Skills

**Essential talking points:** It is important for students to understand that the parts on the right side of the handlebar activate rear parts (line up the R's, right for rear), and that parts on the left side of the handlebar activate front parts (line up the L's, left for lead).

1. Review: Personal Safety Check (PSC) and Bike Safety Check (BSC)
2. Go over hand signals: The teacher may choose to play *Simon Says*, or other call and response games to get students repeating signals.
3. Prepare to ride: Lead students in PSC and BSC



4. Choose from the following drills, doing as many as fits into the day:
  - **3.1 Basics of Braking**
    - Students should keep weight back.
  - **3.2 Ride in a Circle 1:** Riding with one hand
    - Students should maintain “ghost space” or the space between the rider and the person in front of them (which should roughly be the space of their own bike).
    - If student is nervous to take their hand off the handlebars, teacher can begin by encouraging them to open their palm and slowly take the hand away while riding. Students should engage their core and look toward the direction they want to go (as opposed to looking down).
  - **3.3 Ride in a Circle 2:** Riding while signaling
    - Signals should be large and away from the body.
    - If a student does not feel comfortable signaling when they are on the road, it is legal for them to verbally communicate which direction they are turning or if they are stopping; however, it is not as visible to others.
  - **3.4 Braking with Signals**
    - Students should keep weight back.
    - Students should signal before braking: to make sure they are stable while braking, a rider should always use both hands to brake.

**Extra time:** Conduct a **Slow Race**

**Best practice:** Give overview of drills, important notes, and other elements of the day inside instead of outside. It is hard to keep student attention while outside and when they are near the bikes. Hold students accountable for inappropriate behavior on the bikes as soon as possible.

## Lesson 4 – Basic Riding Skills continued and Shoulder Check

**Essential talking points:** Taking the lane is legal and highly encouraged in situations where riding on the right side is unsafe (i.e. obstacle on bike lane, parked cars, potholes, etc.). However bikes and scooters are encouraged to ride as furthest right as it is safe to share the road with faster moving vehicles. Whenever we are moving through traffic (whether we are taking the lane or not) a crucial skill is to be able to scan by looking both ways and checking traffic behind you. Being able to scan often and safely is an important skill to mitigate one of the most common crashes that take place in Portland streets: Right hooks: when a vehicle turning right does not yield to the bike/scooter going forward on the intersection.

### Right Hook

1. Review: **What If? List** (check on progress) and **Hand Signals**
2. Introduce lane position:
  - Within a driving lane, bikes usually ride on the right side, but they can also “take the lane” meaning they ride in the middle of the lane in case there is a hazard, to turn left, or to indicate that it is not safe for drivers to pass them.
3. Prepare to ride bikes (PSC, BSC): encourage students to do their safety checks without being guided by the teacher.
4. On-bike Drills:
  - Catch up on any drills missed from Day 3
  - **4.1 Pop the Bubble**
  - **4.2 How Many Fingers?:** Shoulder check
    - Front wheel should stay straight
    - Students may take left arm off to ensure straight front wheel
    - Make sure students are rotating core but not moving right hand: One technique: putting their left hand on their left thigh and then doing a shoulder check. This helps keep bike on straight path, another way is putting your left hand on your hip and rotating left.



**Extra time:** Allow students to ride around on their own to practice; **Memory Relay**

**Best practice:** Give overview of drills, important notes, and other elements of the day inside instead of outside. It is hard to keep student attention while outside and when they are near the bikes.

## Lesson 5 – Right Turns and Scanning

**Essential talking points:** Going right and going straight are virtually the same maneuver approaching an intersection. Though there is no change of lane when going straight, it is important to always scan the intersection for people crossing the street and drivers turning right.

1. Review: When do we signal? Why is it important to shoulder check? And any relevant topics from the What If? list
2. Introduce turning right and going straight
  - 1st: Rider must signal that they are stopping.
  - 2nd: Rider must come to a controlled stop. While at the stop sign, they will signal which way they are going (both hands on the handlebars implies someone is going straight).
  - 3rd: Rider will proceed through the intersection once it is clear.
3. Prepare to ride bikes (PSC, BSC)
4. Ride around the block practicing right turns
  - Go over street expectations and riding protocol
  - Ride single file on the right side of the road, with ghost space and following the line leader; no passing.
5. On-bike Drill: **5.1 Memory Relay**

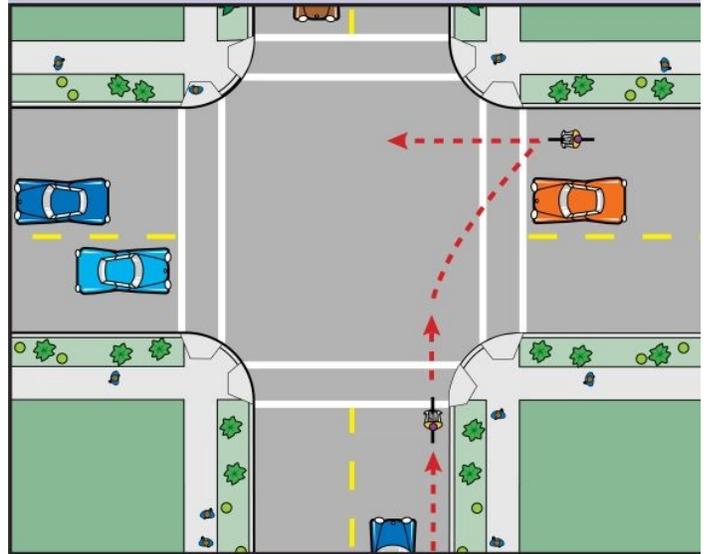
**Extra time:** **Foot Down** or *Follow-the-Leader*. Follow the leader is a great on-campus ride where students can practice ghost space, shifting, communication and/or signaling depending on the class needs.

**Best practice:** Make it fun! It's Friday!

## Lesson 6 – Right Turn Practice and Left Turn Lesson

**Essential talking points:** The Copenhagen Left Turn was invented in Copenhagen! The rider approaches the intersection as if they are going straight. Instead of holding a straight line through the intersection, the rider will b-line to the intersection with enough space to turn around just at the waiting line.

1. Review: Right Turns and when to Shoulder Check and Scan
2. Introduce Copenhagen Left: show a visual or draw movements on whiteboard
3. Prepare to ride bikes (PSC, BSC)
4. On-bike Drills: **6.1 Simple Signals: Off campus** or **6.2 Simple Signals: On campus**



**Extra time:** Review **What If? List**

**Best practice:** Demonstrate what the drill should look like ahead of time, you may use whiteboard or chalk it on the black top. If large class, you may use multiple intersections on campus.

## Lesson 7 – Rules of Right of Way (ROW) + Left Turn Practice

**Essential talking points:** There are four rules of right-of-way; three that are real and one that was invented by bike safety experts but is still crucial. ROW is followed by every user of the road to determine who gets to go through an intersection first. The exception is that pedestrians always have ROW at crosswalks (marked or not). The rules go in order, so knowing that order is important. The made up rule is the Zero Rule - don't get hit. The idea behind this is that ROW can be confusing. If a student is ever confused or unsure when to go, they can refuse to do so until they feel comfortable proceeding. In 6th grade we will focus on the first and zero rule.

**Rules of ROW Hierarchy:** on all-way stop or uncontrolled intersections

**0 rule, don't get hit!** If a student is ever confused or unsure when to go, they can refuse to do so until they feel comfortable proceeding

**1st rule, first goes first:** first vehicle to reach the intersection goes first

**2nd rule, furthest right goes first:** When two vehicles reach the intersection at the same time, the vehicle furthest right goes first.

**3rd rule, left goes last:** if two vehicles reach the intersection at the same time, and they are across from each other; left turning vehicle must yield (or go last).

1. Review: Copenhagen Lefts
2. Introduce right-of-way (ROW)
3. Prepare to ride bikes (PSC, BSC)
4. On-bike Drill: **7.1 Copenhagen Left: On Campus** or **7.2 Copenhagen Left: Off Campus**

**Extra time:** Free ride!

**Best practice:** Emphasize the importance of being visible to other road users: eye contact, head nods, hand waves, etc.

## Lesson 8 – Right-of-Way

**Essential talking points:** Scanning for traffic isn't simply looking left and right. It is knowing what is down those traffic lanes and how fast the vehicles are traveling.

1. Review: Rules of Right-of-Way 0 rule & 1st rule
2. Prepare to ride bikes (PSC, BSC)
3. On-bike Drill: **8.1 First to Stop: On campus** or **8.2 First to Stop: Off campus**

**Best practice:** Emphasize scanning before approaching an intersection.

## Lesson 9 – Copenhagen ROW

**Essential talking points:** Students need to understand that the rules of right-of-way are also impacted by street signs. The hierarchy here is that if road users have no signs dictating their movement then the rules only apply to other users that also have no signs. Then the layer drops down to road users with signs dictating their movement. The rules apply to all users who have signs dictating their movement. If one road user has a stop sign and the other does not, it does not matter who got there first. The user without the stop sign gets to proceed through the intersection.

1. Review: Rules of ROW and Left Turns
2. Prepare to ride bikes (PSC, BSC)
3. On-bike Drills: **9.1 First Stop: ROW + Copenhagen Left Off campus**, but this time allowing students to make Copenhagen Left Turns.
  - Students should check left to avoid traffic and right to line up with traffic
  - Students should line up in front of traffic (as if there was a bike box)
  - Students should point to where they are going. Stop and wait.
  - Students should make eye contact
  - Students should be looking at the other intersections before they arrive.
  - Verbal communication is encouraged.

**Extra time:** Remove stop signs to create uncontrolled intersections

**Best practice:** Emphasize scanning before approaching an intersection.

## **Lesson 10 – Community Ride**

**Essential talking points:** Remind students that they are in charge of themselves. The adults are to assist them in their ride, but the students are still responsible for checking the road for themselves.

1. Review: ALPACA principles, signals, and expectations
2. Prepare to ride bikes (PSC, BSC)
3. Community Ride! **Find the map for your school here**

**Extra time:** **Play Foot Down**

**Best practice:** Follow **Ride Protocol**