Bike Parts Race

SUGGESTED GRADE LEVEL	Κ	1	2	3	4	5	6	7	8
SUGGESTED TIME	one	class p	perio	d					
SETTING	audi	torium	cla	ssroc	m	gymna	sium	outs	side
LEARNING STYLE ACCESS	audi	itory		kir	nes	thetic		vis	sual

OVERVIEW

Teach students the names and locations of bicycle parts. Offer students a bike-related indoor physical activity.

MATERIALS

One multi-gear bicycle per team. One full set of bicycle tags per team. Photocopy the template on page B3-3 on colored card stock paper, using a different color for each team. Cut between the words and attach pipe cleaners or twist ties to one end. Be sure each bike has all the parts listed, and remove the tags for any missing parts. Or leave additional parts in the mix and use it as a teaching moment about what things are on some bikes and not on others.

VOCABULARY

gear, reflector, derailleur, fork, lever, quick-release, hub, dropout, spoke.

MODIFICATIONS FOR CHILDREN WITH DISABILITIES

Create a matching game with a picture of the bike and all the parts listed separately, or have student with disability be the judge/facilitator or help you check to make sure all parts are correct.

MODIFICATIONS FOR USE IN LOW INCOME SCHOOLS

None needed

IMPRESSIONS

A great lesson to learn parts and get the kids moving. For more activity, place the bike far away from where the kids will be sitting in a line, ready to run and place their tag on the bike. A short bike parts introduction could happen first, or you could just start the race and see how many parts the kids already know.

SOURCE

Bike New York

3. The Bike Parts Race

OBJECTIVES

- Teach students the names and locations of bicycle parts
- Offer students a bike-related indoor physical activity.

NECESSARY RESOURCES

- One multi-gear bicycle per team
- One full set of bicycle tags *per team*. (Photocopy the template on page B3-3 on colored card stock paper, using a different color for each team. Cut between the words and attach pipe cleaners or twist ties to one end. Be sure each bike has all the parts listed, and remove the tags for any missing parts.)



TEACHER'S NOTE: This competitive game will give students some fun exercise. It can be used instead of or in addition unit E2, Learn the Names of Bike Parts.

Instructions

The object of this game is for each team to get rid of its bicycle tags first. Divide students into teams with equal numbers of students. Each team should divide the hang tags equally among its players.

- Position bicycles at one end of the space and the teams at the other end.
- When the game starts ("go," whistle, etc.), the first player from each team runs across the room to his or her team's bike and hangs the tag on the appropriate part. The player then runs back and tags the next player on the team, who performs the same task, then tags the next player, etc.
- O Rotate players through the line until all the tags from their team have been hung correctly.
- The team that finishes first earns five points.
- Each team gets one point for each part they tagged correctly.

3. The Bike Parts Race

FUN FACT: Bike messengers can be found in most major cities around the world. They are cyclists who are paid to deliver small packages quickly through busy, crowded streets. It's a hard, sometimes dangerous job, done in almost any kind of weather, and it doesn't pay very well.

Nelson Vails was a New York City bike messenger who rose from humble origins and seized his opportunity for a moment of glory. And as with Major Taylor (see Fun Fact, page A1-3), cycling provided the opportunity.

Vails was one of 10 children in a Harlem family. His dad was a janitor, and his mother was a nurse. By the time he was a teenager, Vails had caught the bike bug. He frequently raced at the Kissena Velodrome in Queens, New York City's only bike racing track.

As a young man of 19, Vails needed a job, so he became a bike messenger. Besides riding eight to 10 hours a day, he trained by riding 40 miles before work every day, and he also rode on weekends. His messenger nickname was "Cheetah," the fastest cat in the jungle.

In 1980, he was invited to join a local bike racing team after he beat their fastest riders in a track race. In 1982, he made the U.S. cycling team, and he won a gold medal in the 1983 Pan Am games. But then came disappointment. He barely missed making the U.S. Olympic cycling team when he came in second to another American racer, Mark Gorski. Under the rules then, only one racer from each country could compete in the 1,000-meter sprint, which was Vails's specialty.

Then international politics intervened. The Soviet Union and its allies in Eastern Europe boycotted the 1984 Los Angeles Olympics, which opened up more spots in bike racing. Nelson Vails was back on the team, and like a bike messenger seeing an opening in dense traffic, he took advantage of his second chance. U.S. Olympic cyclists had not won a single medal in 72 years. Competing against the best from Europe, Japan, and Latin America, the U.S. team won nine medals, including four gold.

Nelson Vails won one of those medals, a silver in the 1,000-meter match sprint, coming in second again to Mark Gorski. The next time Vails rode up a street in Manhattan, it was very slowly along the Broadway's Canyon of Heroes, as confetti fell from the skyscrapers on him and his fellow American Olympians.

6. The Bike Parts Race

Front Derailleur	Brake Lever	Fork
Seat	Seatpost	Top Tube
Brake	Reflector	Cable
Chain	Shift Lever	Tire
Handlebar	Stem	Quick- Release Lever
Dropout	Frame	Grips
Rim	Spoke	Hub



Comic Strip LESSON PLAN OVERVIEW

SUGGESTED GRADE LEVEL	Κ	1	2	3	4	5	6	7	8
SUGGESTED TIME	one	class	peric	bd					
SETTING	audi	torium	cla	assroc	m	gymna	sium	outs	side
LEARNING STYLE ACCESS	aud	itory		kir	nes	thetic		vis	ual

OVERVIEW

Students will compose an original story that teaches a lesson about walking/biking safety. Students will illustrate the story in comic form. Students will present the story to younger students, thereby teaching them about walking/biking safety.

MATERIALS

My comic strip blanks, sample comic strips from previous classes

VOCABULARY

illustration, representation, convey, narrative

MODIFICATIONS FOR CHILDREN WITH DISABILITIES

Provide examples of work already completed, larger comic strip boxes.

MODIFICATIONS FOR USE IN LOW INCOME SCHOOLS

None needed

IMPRESSIONS

This can be a venue to help with any lessons. Topics do not have to necessarily be "safety" related.

SOURCE SR2S Nebraska

ACTIVITY 4 COMIC STRIP

OBJECTIVES:

- Students will compose an original story that teaches a lesson about walking/biking safety.
- Students will illustrate the story in comic form.
- Students will present the story to younger students, thereby teaching them about walking/biking safety.

NEBRASKA STATE STANDARDS:

Reading/Writing 8.2.1 – Students will write using standard English (conventions) for sentence structure, usage, punctuation, spelling, and paragraph indentation.

Reading/Writing 8.2.4 – Students will demonstrate the use of multiple forms to write for different audiences and purposes.

Reading/Writing 8.3.2 – Students will use multiple presentation styles for specific audiences and purposes.

Science 8.7.1 – Students will develop an understanding of personal health.

TIME/DURATION: 1 hour

MATERIALS:

A copy of the provided My Comic Strip sheet for each student

INSTRUCTIONS:

- 1. Print out one comic book sheet for each student.
- 2. Instruct students to write a 6-frame comic story on a separate sheet of paper. The story should teach a lesson about walking/biking safety.
- 3. Once their story is complete, they may begin illustrating the story on the comic book page.
- 4. When the illustrations are complete, assign each student in your class to a student in kindergarten or first grade. Your students should use the comic story they've created to teach a lesson about biking/walking safety to the younger students.

MY COMIC STRIP

Title: _____

If Stop Signs Could Talk

SUGGESTED GRADE LEVEL	Κ	1	2	3	4	5	6	7	8
SUGGESTED TIME	one c	lass p	oerio	d					
SETTING	audite	orium	clas	classroom gymnasium				outs	side
LEARNING STYLE ACCESS	audit	ory	kinesthetic			vis	ual		

OVERVIEW

Students will compose a monologue from the perspective of a walking/biking safety device. Students will do a dramatic performance of their piece in front of the class. Alternatively, they don't have to do a dramatic performance, they can just read, or give their writing to a dramatic classmate to read for them.

MATERIALS

Pencil and paper

VOCABULARY

monologue, perspective, viewpoint

MODIFICATIONS FOR CHILDREN WITH DISABILITIES

Give students some prompts or copies of monologues other students have already written.

MODIFICATIONS FOR USE IN LOW INCOME SCHOOLS

None needed

IMPRESSIONS

Students will likely not have done this kind of thing before, at least not as it pertains to safety! It will access lots of different styles of expression. You might need to create some example samples to share with kids to get their imaginations jump-started. Lesson can be modified to write a monologue from the point of view of a bicycle too! Modify the lesson so that the bicycle has to address an issue of safety, or it can all just be about the bike.

SOURCE SR2S Nebraska

ACTIVITY 5 IF STOP SIGNS COULD TALK...

OBJECTIVES:

- Students will compose a monologue from the perspective of a walking/biking safety device.
- Students will do a dramatic performance of their piece in front of the class.

NEBRASKA STATE STANDARDS:

Reading/Writing 8.2.1 – Students will write using standard English (conventions) for sentence structure, usage, punctuation, capitalization, and spelling.

Reading/Writing 8.2.4 – Students will demonstrate the use of multiple forms to write for different audiences and purposes.

TIME/DURATION: 1 hour

MATERIALS:

None

INSTRUCTION:

- 1. Assign each student to pretend he or she is a certain walking/biking/traffic safety device (stop sign, speed bump, sidewalk, helmet, etc.)
- 2. Instruct students to write a 3- or 4-minute monologue from the perspective of their device, as if the device could talk.
- 3. Request that students consider what the device likes, doesn't like, what it would like to improve about its life, its sense of purpose, its friends, its fears and hopes, etc.
- 4. After 30 minutes of writing, give each student a turn to present his or her monologue.

Riding on the Road and through Intersections

LESSON PLAN OVERVIEW

SUGGESTED GRADE LEVEL	Κ	1	2	3	4	5	6	7	8
SUGGESTED TIME	one	class p	perioc	1					
SETTING	audit	orium	clas	sroor	n gy	mnas	sium	outs	ide
LEARNING STYLE ACCESS	audi	tory		kinesthetic		visi	Jal		

OVERVIEW

The five key rules for bikes

- Ride in the Same Direction as Traffic
- Obey All Traffic Signs
- Ride on the Road
- Use Hand Signals
- Stay to the Right

But what happens when they travel through intersections? We will draw the proper road positioning for each type of turn.

MATERIALS

Intersection overhead, Intersection worksheets, 1 per student

VOCABULARY

law, enforcement, severity of punishment, liability, predictable

MODIFICATIONS FOR CHILDREN WITH DISABILITIES

Larger print

MODIFICATIONS FOR USE IN LOW INCOME SCHOOLS

None needed

IMPRESSIONS

A seemingly dull topic that can generate a lot of participation with the right energy from the teacher. Get kids up and out of their seats to help- consider purchasing some laser pointers or set up a Velcro/magnetic intersection diagram- Adjust language for NJ!

SOURCE

Bicycle Transportation Alliance

Bicycle ridership and safety

BACKGROUND

LESSON

The five key rules for bikes

1 Ride in the Same Direction as Traffic

- 2 Obey All Traffic Signs
- 3 Ride on the Road
- 4 Use Hand Signals
- Stay to the Right

ORS means Oregon Revised Statute.

Skateboards, rollerblades and scooters in some areas have the same responsibilities as bicycles, which means that they have to follow the rules of the road, not act like a walker. This means that they have to give audible calls when passing walkers on the sidewalk and have to be especially careful when traveling across intersections because cars do not expect people in the crosswalk to be moving quickly through the intersection.



, WHAT ARE THE TRAFFIC LAWS?

Bikes generally must follow the same rules of the road as automobiles. Therefore when we teach you the rules of the road for bicycling, you are also learning how to drive a car. Riding on the sidewalk is dangerous and is only recommended for children ages 9 and under.

A "bicycle" means a vehicle. ORS 801.150.

<u>Helmets always first.</u> The Helmet Law: "A person commits an offense... if the person is under 16 years of age...operates or rides a bicycle...on premises open to the public and is not wear-ing protective headgear." *ORS 814.408, Section 2.*

<u>Bicycles must act like cars.</u> "Every person riding a bicycle upon a public way is subject to the provisions applicable to and has the same rights and duties as the driver of any other vehicle." *ORS 814.400.*

There are some valid reasons for riding with traffic/like an automobile:

- The law requires cyclists to ride with traffic (in the same direction as cars).
- Motorists do not expect to see traffic coming in the opposite direction. In order to be seen bicyclists must ride where motorists expect to see traffic, on the right.
- Wrong-way riding results in nearly one fourth of all car/bike crashes.
- Traffic control devices (i.e. stop signs and traffic lights) face the normal flow of traffic.
- Cyclists who ride with the traffic, on the right, face the danger of a head-on crash with a wrong-way rider.

<u>Bike lanes.</u> In Oregon bicyclists are supposed to ride in bike lanes when they are provided unless when turning or if the bicyclist doesn't feel that it is safe. While in the bike lane, bicyclists possess additional right-of-way privileges. In fact, bicyclists can legally pass on the right side of cars and cars are not allowed to turn in front of bicyclists in bike lanes. Bicyclists should still remain cautious of cars when in bike lanes.

BACKGROUND



RIDING ON THE ROAD AND THROUGH

MATERIALS

- Intersection overhead (see page 99, Lesson 4)
- Intersection worksheets, 1 per student

• As said above, bicyclists must ride on the right. But what happens when they travel through intersections? We will draw the proper road positioning for each type of turn.

2 Teachers should draw intersections or use the intersection handout (see page 99) to make an overhead or worksheets for students to label along with them. Each lane of travel should be labeled with three positions, 1 (inside), 2 (middle), 3 (outside or right) and the direction of travel should be indicated. When demonstrating turning, show normal placement of travel (on right), and then proper turning positions. Follow the below examples.

Intersection 1. Straight



The bicyclist normally rides in position 3, 3 feet from the curb, and remains in position 3 when going straight through an intersection. Bicyclists often move into position 2 when there are parked cars or hazards on the side of the road.

Bicycle ridership and safety

BACKGROUND

LESSON

Lane striping on a one-way street is usually a while dotted line in the middle of lanes; two way streets have yellow lines in the middle separating travel directions.

Intersection 2. Right



The bicyclist normally rides in position 3 and remains in position 3 when turning right through an intersection.

Intersection 3. Left



The bicyclist normally rides in position 3 but when turning left, they must move to position 1. To get to position 1 <u>they must look back and check for traffic, signal left and then signal again before turning</u>. They complete the turn at position 3.

BACKGROUND

LESSON



The bicyclist normally rides in position 3 but when turning left, they must move to position 1. When riding on a one-way street, they must get to position 1 the left lane, the one closest to the turn. If they turn from the right lane, they may be hit by traffic on the left.

Intersection 5. Example of an incorrect left turn



A common mistake that students make when completing the turn is to turn from position 1 into position 1. It is important to emphasize that this is dangerous, as it puts the cyclist close to oncoming traffic and into the path of cars from behind.

Traffic Signals Stop and Go Game

LESSON PLAN OVERVIEW

SUGGESTED GRADE LEVEL	Κ	1	2	3	4	5	6	7	8
SUGGESTED TIME	one	class p	perio	d					
SETTING	audit	orium	clas	ssrooi	m	gymnas	sium	outs	ide
LEARNING STYLE ACCESS	audi	tory		kin	est	hetic		vis	ual

OVERVIEW

Students will be able to identify the meaning of 7 pedestrian and traffic signals by playing an active memory game.

MATERIALS

Signal flash cards (included) Large, open space, such as a gym or school yard to play the game

VOCABULARY extend, signal, yield, simulation

MODIFICATIONS FOR CHILDREN WITH DISABILITIES

Copy of all materials, use some of the modifications listed in the materials.

MODIFICATIONS FOR USE IN LOW INCOME SCHOOLS

Don't use Powerpoint, print out presentation in stead to a class set.

IMPRESSIONS *Great activity that isn't lecture based.*

SOURCE SR2S Philly

Physical Education: Traffic Signals Stop and Go Game, 15 minutes



Objective: Students will be able to identify the meaning of 7 pedestrian and traffic signals by playing an active memory game.

MATERIALS

- » Signal flash cards (see Pedestrian Resources tab or PowerPoint at www.saferoutesphilly.org/schools/curriculum)
- » Large, open space, such as a gym or school yard to play the game



To preserve your flash cards, place them in plastic page protectors.

1. SIGNALS: Introduce traffic signals using the flashcards (left, right, walk, don't walk, yellow, red and green).

2. SIGNALS STOP AND GO GAME: Tell students they are going to play a game to learn the meaning of each signal. Think of this game as a combination of "Red light, Green light" and "Simon Says".



If you have limited space, use the motions in parentheses, which allow students to stay seated or stand next to their desks.

A. Explain that each signal is associated with a different action and model the actions on the next page (you may need to modify actions to fit the needs of your students).

B. Instruct students to spread out around the space, giving themselves plenty of room, but making sure they can still see the signal cards when you hold them up.



When modeling "left" and "right" be sure to either turn your back to the class or use the opposite hand so that students know the correct hand to use.







Pedestrian Safety Program

C. Stand where you are visible to each student and hold up the flashcards, rotating them at random while students perform the actions associated with each card. Play the game for approximately 10 minutes.

- » LEFT: Shuffle left 5 times; (look and point left)
- » **RIGHT**: Shuffle right 5 times; (look and point right)
- **»** WALK: Walk or lunge forward; (march in place)
- » DON'T WALK: Stop moving and place your hands on your hips
- » GREEN: Move forward by running or skipping; (pump your arms as if you were running)
- » YELLOW: Run in place; (flash hands by opening and closing them)
- » RED: Stop moving and extend your right arm in front of your body, signaling "stop"





You can use this lesson for a 5th grade bike safety lesson by using the bike safety simulation cards and making the following modifications:

- » For "left" and "right", have students show you their hand signals for bicycling
- » Omit "walk" and "don't walk" from the signal cards used
- » Add in the "yield" sign and instruct students to hop in place

















Why Should I Wear a Helmet?

SUGGESTED GRADE LEVEL	Κ	1	2	3	4	5	6	7	8
SUGGESTED TIME	one	class p	perio	d					
SETTING	audi	torium	cla	ssroc	m	gymna	asium	outs	side
LEARNING STYLE ACCESS	audi	tory		kir	nes	thetic		vis	ual

OVERVIEW

Cyclists will experience a simulation of brain damage. Cyclists will understand how a helmet protects fragile skulls.

MATERIALS

Pens or pencils, Student workbook or copies of Do You Wear a Bike Helmet questionnaire (page B2-5), Hand-held mirror for each student, Student workbook or copies of mirror exercises

VOCABULARY

brain damage, perception, disability

MODIFICATIONS FOR CHILDREN WITH DISABILITIES

Printouts for students to have in front of them.

MODIFICATIONS FOR USE IN LOW INCOME SCHOOLS

Bring your own supplies and mirrors.

IMPRESSIONS

A very unique approach to teaching the importance of helmets and attempting to understand brain damage.

SOURCE Bike New York

2. Why Should I Wear a Helmet?

OBJECTIVES

- Cyclists will experience what brain damage is like.
- Cyclists will understand how a helmet protects fragile skulls.

TEACHER'S NOTE: Students may offer many reasons for not wearing a helmet while cycling. Excuses often reflect fears about their appearance ("Helmets look geeky," "Helmets are for babies," "They mess up my hair," "No one on my block wears a helmet"), as well as the belief that they will never have an accident ("I know how to ride a bike," "If I'm about to crash into a car, I'll just jump out of the way"). The statistics do not support these arguments. Some 83% of all bike crashes do not involve a motor vehicle according to the League of American Bicyclists, and a New York City Department of Health study showed that 97% of cyclists who had fatal crashes were not wearing a helmet.

Teaching about helmets helps students develop a less self-conscious and more positive, practical attitude toward wearing them. It's important to treat helmets as part of the sport, and to compare cycling to other sports where the use of helmets and other safety gear is normal and expected.

If students have shown resistance to wearing a helmet, the following activities will reinforce the importance of doing so.

FUN FACT: The one-minute mile was a goal that cyclists had been inching toward when **Charles Murphy**, with the help of the Long Island Railroad, achieved it on June 30, 1899.

Murphy, a professional racing cyclist, had been bragging that no train could outpace a cyclist as long as the bike was equipped with a high-enough gear to sustain a speed of 60 mph. But Murphy had a trick up his sleeve: he knew that if he could stay right behind the train, it would pull him along in a pocket of calm air. Cyclists today call this "drafting."

A public relations official for the Long Island Railroad saw an opportunity to prove to the public that the railroad wasn't as slow as everyone believed. The railroad constructed a special wooden track on a stretch between Farmingdale and Babylon, and after weeks of training, the sprint was on. Murphy drafted closely behind the train, even catching up to it and striking the rear car six times. Dust, cinders, and gravel were flying into his face. It was a very dangerous feat, and at the end, he was nearly killed when he almost ran out of wooden track between the rails. People on the rear car grabbed Murphy and pulled him aboard.

He had done it, covering one mile in 57.8 seconds, which earned him the nickname "Mile-a-Minute Murphy." Murphy later became a New York City police officer.



2. Why Should I Wear a Helmet?

ACTIVITY A: DO YOU WEAR A HELMET?

Necessary Resources

- Pens or pencils
- Student workbook or copies of Do You Wear a Bike Helmet questionnaire (page B2-5)

Instructions

Have the students fill out the Do You Wear a Bike Helmet questionnaire. To encourage honest answers, tell them they should not write their names on it. Collect the questionnaires and study the types of answers. Discuss the responses and counter-responses with the students.

Typical responses Helmets mess up my hair.	Ask students for possible solutions or counter-responses Carry a comb or brush to use after you take off your helmet.
Helmets look stupid.	Most passersby won't know you and won't care that you're wearing a helmet.
	Get a helmet that you like and make sure it's adjusted properly on your head.
	Show students pictures of cyclists with head or face injuries resulting from bike crashes while not wearing a helmet.
	Do the "brain damage" exercise below. (Activity B)
	Your family and friends won't think you look stupid for trying to protect yourself and be safe.
I'm a good cyclist and don't need a helmet.	All competitive bike events require participants to wear helmets. Even professional racers must use helmets.
I'll just ride on the sidewalk, not in the street.	83% of all bike accidents don't involve a collision with a motor vehicle. (Source: League of American Bicyclists)
No one in my neighborhood wears a helmet.	Discuss peer pressure. Making the same mistake everyone else is making will not prevent a head injury.
It won't happen to me.	Discuss students' dreams for their future. How might a head injury prevent them from reaching those goals? Have students read about people who were saved by their helmets (www.helmets.org/crashes.htm) and people who were not wearing helmets when they crashed (www.helmets.org/crashmor.htm).

2. Why Should I Wear a Helmet?

ACTIVITY B: BRAIN DAMAGE EXERCISE

Necessary Resources

- Hand-held mirror for each student
- Pencils or pens
- Student workbook or copies of mirror exercises, below

Instructions

Ask students what they think having brain damage is like. Have them perform the mirror exercises below. These exercises approximate the difficulties someone with brain damage might have performing even simple tasks.

Looking only at the mirror, write your name in the box below. Do not look at the paper, only the reflection of the paper.

Looking only at the mirror, recreate the two shapes.







2. Why Should I Wear a Helmet?

ACTIVITY C: WHAT DIFFERENCE DOES A HELMET MAKE?

Necessary Resources

- An egg for each student
- Styrofoam cups and paper napkins for half the students
- Small sandwich bags for half the students
- Newspapers

Instructions

- Distribute eggs and newspapers to all students. Have them place the newspapers on the floor in front of them.
- Give cups and napkins to half the students. Ask them to wrap the napkin around their egg and place it inside the cup.
- Have the other students place their egg in a sandwich bag, seal it.
- Have both groups drop their eggs onto the newspaper. Compare the results. Explain that bike helmets are
 made of the same material as the Styrofoam cups, although stronger and more compressed.
- Alternative drop test: Use a bike helmet with a melon strapped into it, and a helmetless melon.

2. Why Should I Wear a Helmet?

Do You Wear a Bike Helmet?

1. Do you own a bike helmet?	Yes	No
2. Do you wear a bike helmet every time you ride?	Yes	No
If the answer to 1 or 2 is no, please answer 3.		

3. List all the reasons you don't wear a bike helmet in the space below.

Do You Wear a Bike Helmet?

1. Do you own a bike helmet?	Yes	No
2. Do you wear a bike helmet every time you ride?	Yes	No

If the answer to 1 or 2 is no, please answer 3. 3. List all the reasons you don't wear a bike helmet in the space below.