ELEMENTARY PROGRAM
Outline
(K-5)

Developed by:

Emma Ledbury Jones
Injury Prevention Coordinator
Erie County Department of Health
606 West 2nd Street
Erie, Pennsylvania 16507
(814) 451-6700

Pennsylvania Department of Health, Injury Prevention Program

http://www.pasafekids.org/k-5curriculum.htm
Elementary Program

Outline

- Program Goal and Objectives
- Education Session
- Evaluation/Questionnaires
- Activities/Games
- Bike Safety Promotional Ideas and Education Tools
- Bicycle Derby Information

Bicycle Safety Project Goal

To provide bicycle safety education, activities and equipment to youth’s aged 5-14 with the intended purpose of increasing bicycle safety knowledge and the use of safety equipment, thus reducing related injuries.

Bicycle Safety Project Objectives

After individuals participate in the bicycle safety project, they will be able to:

1. Understand that helmet usage is the law in Pennsylvania.
2. Express the importance of helmet usage and the necessity to wear it every time they ride.
3. Show how to properly wear and adjust a bicycle helmet.
4. Understand the role of bicycle safety equipment and the benefits of bicycle safety practices.
5. Recognize and repeat hand signals, simple road rules and street signs.

Education Session

- Introduction

* Look for these boxes throughout the program outline. They contain helpful hints and ideas to make your program run smoothly.

Welcome to the Bicycle Safety Project.

http://www.pasafekids.org/k-5curriculum.htm
1. **Introduce Yourself.**
2. **Introduce the Bicycle Safety Project and course content:**

"Today we will be talking about bicycle safety. I’m going to talk to you about the importance of wearing a helmet, following the rules of the road, doing bicycle safety inspections, wearing safety equipment and more. But first I want to learn about you…"

Issue questionnaire now, if using evaluation tools 1 or 3 (See evaluation section for more details.

3. **Ice Breaker** (Have children raise their hands)

"Who has a bike?"
"Who has a helmet?"
"Who wears their helmet EVERY TIME they ride their bike?"

- **Video (Optional)**

If time allows.

**TOP PICKS:**

1. "Bicycle Safety Camp" (grades K-5)
2. "Bike Safety with Bill Nye the Science Guy" (grades 1-6)
3. "Jell-O in a Jar" (grades 4-8)

Peer group feedback showed that a high percentage of children liked a lecture/video/activity focus. All children liked the above three videos with the younger ones, K-4 really liking "Bicycle Safety Camp"

- **Discussion: To meet program objectives**

"WHAT IS THE FIRST THING WE SHOULD DO BEFORE WE RIDE OUR BICYCLES?"

**ANSWER:** *Do a bicycle safety inspection.*

1. Check the seat. Make sure it’s the right height and is on tightly.
2. Check the handlebars. Look to see if they are attached securely.
3. Check the brakes. Make sure the brake pads are clean and they are working properly.
4. Check the chain. The chain should be well oiled and on snugly.
5. Check the tires. Look to see if the tires have enough air in them and that they have enough tread.
6. Check the pedals. Make sure they are on securely and in good condition.

"WHY DO WE NEED TO WEAR A HELMET?"

1. It’s the law. In PA the law states that everyone under age 12 must wear a
helmet.

2. **It protects your head.** A bicycle helmet has been proven to greatly reduce the risk of head and brain injuries by up to 85%.

3. **It makes you visible (easier to see) to other people.** Many helmets are made with bright colors or with reflective material. This makes it easier for people in cars to see you better.

4. **Wear it EVERY TIME you ride.** Even if it’s in your driveway or on the sidewalk. Over 350 children die each year in crashes and most crashes are near their home.

5. **A helmet is required by many sports.** Popular sports have made helmet use mandatory. Sports such as BMX riding, X-treme sports, skateboarding, in-line skating, etc. all require helmet usage!

"HOW DO YOU PROPERLY WEAR A HELMET?"

(Ask students to raise their hands to give you three ways. Make sure the following are part of the discussion)

1. **On top of the head.** Sitting squarely, low on the forehead. Two fingers widths above the eye-brows

2. **Snug on the head.** Make sure the helmet doesn’t move from side to side or up and down. Use the foam pads that come with the helmet to help get the proper fit.

3. **Strapped on.** The straps should fit evenly on the face with the clips located below each earlobe. The bottom clip should be under the chin with only a 1-2 finger width gap between the chin and clip.

"WHY IS IT IMPORTANT TO WEAR A HELMET?"

1. **Your brain is inside your head.** Your brain is responsible for everything you do. It is made up of many different sections that all have a different job. For example: the front part of your brain is responsible for your emotions, and thinking. The top is responsible for your motor skills (walking, running, jumping etc). The back is responsible for your vision (seeing things) and speech.

2. **A helmet reduces head injuries.** Properly wearing a helmet can reduce head injuries up to 85%.

3. **Head injuries are life threatening.** You can die from a injury to the head. A head injury is not like an injury to another part of the body. A broken arm can be put into a cast but a broken head can’t be put back together. Head injuries can cause people to forget everything they’ve ever learned (including eating, dressing, walking), or become a completely different person.

4. **Be a good example.** By wearing your helmet you’re a good example to all bicycle riders.
5. Replace your helmet. You need to get a new helmet whenever you are in a crash or the helmet gets too tight for your head.

A demonstration is very helpful here. An egg in a Styrofoam container will show that the yolk is the brain, the shell is the skull and the styrofoam is the helmet. Do an experiment: What happens to the egg when it's dropped in a "helmet" and without. The Jell-O also works well. (See Educational Materials section.)

A bicycle helmet that was involved in a crash is a good tool to use.

WHAT KIND OF THINGS CAN YOU WEAR OR PUT ON YOUR BIKE TO MAKE IT SAFER TO RIDE?"

1. A reflective helmet. Caution not to put stickers on the helmet. The glue may break down the helmet’s outer shell.
2. Brightly colored clothing. (See Activities/Games)

Note: List some bright colors and pick out audience members as examples.

3. Reflective Stickers. Stickers can be put on clothing, bike or helmet.
4. A bike light. You should NOT ride at night. When you get older and must ride at night, a bicycle light is a must!
5. Spoke reflectors. Make sure your bike has all standard reflectors and remember…you can always add more.
6. Blinkers. Safety blinkers will help car drivers and others see you from far away. They normally attach to your clothing and run on batteries.

"WHAT ARE THE BENEFITS OF SAFE BICYCLE PRACTICES?"

Answer:
SAFE BICYCLE RIDING PRACTICES = REDUCE CHANCE FOR INJURIES.

"WHAT ARE THE PROPER HAND SIGNALS?"

Note: Ask students to stand and spread out so they have enough room for practice.

Demonstration:

1. Have students raise their left hand and wave it around.
2. Have students raise their right hand and wave it around.
3. Have students raise their left hand again.

Tell students that most hand signals are done with the left hand.

- Show students the signal for a LEFT HAND TURN: Have the students
practice.
- Show the students the signal for a RIGHT HAND TURN: Have the students practice. (Show alternate RH Turn at this time)
- Show the students the signal for STOPPING or SLOWING DOWN. Have the students practice.

*Game time*

Tell the students you will give a series of turns and they need to show the correct hand signal.

NOTE: Keep it fast-paced and FUN!
EXAMPLE: "Is everyone ready???? Let’s go"
Right turn
Left turn
Stop
Left turn
Right turn
Right turn
Stop
Stop
Left turn

Do the signals with them…HAVE FUN!!!!!

"Road Rules"

- A bicycle is a vehicle, not a toy
- Explain that a bicycle on the road has to follow all the same rules that a car does.
- A police officer can give a ticket to a bicyclist that fails to stop at a stop sign, fails to yield or runs a red light.
- Ask your parents if you’re allowed to ride on the road. Most children 10 and under should stay on the sidewalk or in a driveway.

* Work with local police to see if they will help with this and all parts of the bicycle safety project.

Ask participants

1. "What side of the road do we ride our bike on?"
   Answer: THE RIGHT SIDE

   * NOTE: Children have a hard time understanding this concept. Try to demonstrate what the right side of the road looks like. For example: Draw a road on a poster board showing the flow of traffic and bike riders.

2. "What street signs do we have to obey when riding your bike?"
   Answer: ALL OF THEM
3. List the hidden dangers on the road

- Potholes
- Train tracks
- Driveways (cars backing out)
- Puddles (make brakes less effective)
- Gravel
- Sewer grates
- Man-hole covers
- Parked cars on the street (doors opening)
- Other debris (leaves, litter, rocks)

4. Should you let your little brother or sister or a friend ride your bike?

- No, because the bike will be too big for them and they may fall or and hurt themselves.

Ask participants if they have any questions and give a brief review of the basic points of the discussion.

"Conclusion of Educational Session"

Activity/Games

Use an activity or game here for program reinforcement. See Activities/Game Sheet following the Evaluation Tools.

Issue questionnaire now, if using evaluation tools 1 or 3 (See evaluation section for more details.)

EVALUATION TOOLS

To properly assess the success of your program you need to evaluate the effectiveness of the program.

Evaluation of a program can be very helpful in determining areas of program strength and weakness and will help you report outcome data.

Outcome data provides evidence of program worth and helps you measure changes in attitude, behavior or beliefs of program recipients. The goal of any health education program, including the bicycle safety program, ...
To change attitude, belief or behavior on a specific subject.

To determine if changes have been made in attitude, belief or behaviors about bicycle safety, three evaluation tools have been created. Each one was created with a specific audience in mind.

**Evaluation Tool 1.** This was created for classroom (grades 3-5) presentations. Questionnaire "A" should be given to students after the Ice Breaker activity and before any education has been given. Collect the questionnaires. After the conclusion of the program give students the questionnaire again. Tabulate the responses from both sets of questionnaires. The second questionnaire should show positive changes in program recipient’s attitudes, beliefs and knowledge by selecting more right answers.

**Evaluation Tool 2.** Use questionnaire "A" but issue it in a different way. This method should be used in assembly-type presentations. After confirmation with a school to conduct a bicycle safety presentation, ask the principal if they would distribute the questionnaire the day prior to your presentation. Teachers should administer the questionnaire but not educate the students on the right answers. Collect the questionnaire the day of your presentation and give teachers another set. Have the teachers re-administer the questionnaire after your presentation. Collect the questionnaires and tabulate the results.

**Evaluation Tool 3.** This is for non-reading grades (K-2). Use questionnaire "B". This time orally give the children the questions before and after your presentation. Have students put their heads down and listen to the questions. (By putting their heads down, you’ll get individual responses and not "group" responses). Have them raise their hands to indicate what response they think is right. Record the number of hands for each response. After the presentation give the oral questionnaire again, recording the number of hands for each response.

---

**Evaluation Tool 1 & 2**

---

**Questionnaire "A"**

(Use for grades 3-5)

This questionnaire was designed to measure learning in a pre-and-post evaluation tool. The same questionnaire should be used before and after the presentation.

Give students 5 minutes to answer the following 10 questions.

Circle the correct answer

1. A bicycle helmet reduces…
   - Crashes
   - Head Injuries
   - Broken Bones

2. It is the law in Pennsylvania to wear a bicycle helmet if you’re under age 12.
   - True
   - False

http://www.pasafekids.org/k-5curriculum.htm

3/25/2004
3. What side of the road should you ride your bicycle?
   - Right
   - Left

4. A bicycle has to follow all the same rules as a car does.
   - True
   - False

5. You should wear your bicycle helmet only when you're riding on the street.
   - True
   - False

6. Before you ride your bike what should you do?
   - Eat something
   - Inspect your Bike
   - Find a friend

7. Your bicycle helmet should fit…
   - Loose and comfortable
   - Snug and not move
   - Big so you can grow into it

8. Which color should you wear if you're riding your bike at night?
   - Black
   - Blue
   - Yellow

9. Should you let your little brother or sister ride your bike?
   - Yes
   - No

10. A helmet needs replaced…
    - When it’s in a crash
    - Never

---

**Evaluation Tool 3**

**Questionnaire "B"**

(Use for non-reading grades K-2)

This questionnaire was designed to measure learning in a pre-and-post evaluation tool. The same questionnaire should be used before and after the presentation.

Have the children put their heads down and read the questions out loud. Have them raise their hands to indicate the right response. Count down the number of responses each answer has.

1. A bicycle helmet can help stop…

http://www.pasafekids.org/k-5curriculum.htm
2. It is the law in Pennsylvania to wear a bicycle helmet if you’re under age 12.

   Yes                          No

3. A bicycle has to stop at a stop sign like a car does?

   Yes                          No

4. You should wear your bicycle helmet only when you’re riding on the sidewalk?

   Yes                          No

5. Before you ride your bike, what should you do?

   Eat something                          Inspect your Bike                              Find a friend

6. Your bicycle helmet should fit…

   Loose                                      Snug and not move                           Big so you can grow
   into it

7. Should you let somebody else ride your bike?

   Yes                                          No

---

**Bicycle Safety Games**

**BLACK BOX**

Get a black box and fill the inside with neon/colorful stickers. In one corner hide a black sock. Show the students the box and how the colorful stickers stand out. Start a discussion on what bright colors they saw, who has on bright colors in the room etc. Then ask who saw the black sock. Explain why this is important.

**JEOPARDY**

Make a jeopardy board from foam board. Make the categories "Velcro" for board versatility. Have categories be different areas of bicycle safety. Have children answer questions for point values.
BIKE BINGO

Make bingo boards using pictures. Call out safety pictures until participants make Bingo. (such as helmets, stop signs, turns etc)

BIKE TIC-TAC-TOE

Get a blank board and helmet heads as markers. Split the audience into two groups. Ask each a student from each group a question and if they get it right they can put their color helmet head up. The team that gets Tic-tac-toe is the winner.

Bike Safety Promotional Ideas

May is designated bike safety month. This is a good month to have schools, community centers and retail stores promote bike safety.

Some ideas:

- Promote a bike helmet or bike safety coloring contest
- Create a bike safety bulletin board
- Have a school bike safety slogan contest. Have the winner win a donated bike.
- Students caught riding their bike with their helmet, get a free incentive item.

Bike Safety Handouts and Education Materials

- **Jell-O in a Jar**: a video developed by the National SAFE KIDS Campaign aimed at middle school children

To purchase this product call (310)523-3128

- Free materials are available in a limited quantity from PennDot @ 1-800-742-4363
  - "A Bicycle is Not a Toy" brochure
  - "Bike Like the Best" booklet
  - PA Bicycle Driver's Manual
  - Bike Safely bookmark

- **NHTSA/CPSC**
  - "What's New About Bicycle Helmets" brochure

"10 Smart Routes to Bicycle Safety" black & white brochure
"Use Your Head" poster

View their website @ www.cpsc.gov or call 1-800-638-2772

- **American Academy of Pediatrics**
  - Bicycle Driver's License

To purchase this product call 1-800-227-2358

- **NHTSA**
  - "Your Bicycle Helmet; A Correct Fit" brochure

View their website @ http://www.nhtsa.dot.gov

- **State Farm Insurance brochure**

- "Take the Safe Bicycling Quiz"

View their website @ www.nhtsa.dot.gov

- **PA Division of the American Trauma Society**

  "Bike Smart Club" brochure - as part of the club, children receive Team Helmet coloring book, "Bike Smart Club" membership certificate and Sheldon Turtle pin Emergency Information Helmet Stickers

- **McDonald's/CPSC**

  "Use Your Head" brochure

View their website @ www.bikehelmet.org/ or call 1-800-638-2772 for ordering materials

- **AAA manuals on conducting bicycle derbies**
  - "Bicycling is Great Fun" brochure, most appropriate for ages 5 thru 13
  - "Kids Speak Out on Bike Helmets" brochure

To order these materials call AAA @ (717)657-2244

- **Medical Information Carrier System**
- A medical information decal system, placed inside of the helmet, which provides critical life saving information in the event of an emergency.

To order call the Medical Emergency Data Systems, Inc. @ (724) 295-1988 or visit their website @ www.meds.org

- **Bill Nye the Science Guy**

  - A Disney video, which teaches children about bicycle safety in a fun manner. It covers hand signals and rules of the road to valuable tips from professional cyclist.
  - This is a fun way to learn about a serious subject!

  To order this product contact Disney Educational Productions @ 1-800-295-5010 or visit their website www.Disney.com/EducationalProductions

- **Diamondback Perfection on Wheels**

  - A 40-minute stunt show conducted by two of the nation’s top riders. It uses high-energy music, audience participation and incredible bicycle stunts to set the Perfection On Wheels team apart from other "Lecture" style assemblies.
  - Highlights all the important aspects of riding safely.

To book reservations call 1-800-660-2453, program cost $499.00

- **Neon square spoke reflector**

To order call The Children's Hospital of Philadelphia @ (215) 590-5437

- **"Be Safe, Wear A Helmet" coloring book**

To order, call Allentown Health Bureau @ (610) 437-7677

- **"Helmet Safe with Bucklebear" storybook**

To order, call Center for Injury Prevention @ 1-800-344-7580

---

**Bicycle Derbies**

A bicycle derby gives students a chance to practice their safety knowledge on a course designed just for them. Derbies normally consist of stations that focus on different aspects of safe bike riding. Students go through the stations with their bikes and their helmets.

**Helmet usage is mandatory!** If a child does not have a helmet, helmets should be available for giveaway, sale or loan.
A complete "HOW TO" on Bicycle Derbies can be obtained by calling AAA.

Robert S. Zimmerman, Jr., M.P.H.  
Secretary of Health

Tom Ridge  
Governor

Injury Prevention Program  
P.O. Box 90  
Harrisburg, PA 17108

Call the State Health Line  
For additional information  
Too Free  
1-877-PA-HEALTH  
or visit www.health.state.pa.us

The Pennsylvania Department of Health is an equal opportunity provider of Grants, contracts, services, and employment.