

Go By Bike





Time: 35-40 minutes

Studies have demonstrated that skill-building activities are the most effective way to promote retention of bicycling safety skills. Lesson objectives set the stage for building safety skills, which are emphasized through learners' participation in class activities. This curriculum does not cover every possible scenario that a child may encounter as a bicyclist but instead addresses the basic skills needed to be a safe bicyclist. Instructors should use their discretion to break up material to accommodate their daily schedules. The Skill Building Activity is an essential component to this curriculum, and all lessons should be complemented with the reinforcement of safe bicycling behavior. More time can be spent on practicing skills if children are already familiar with the core material.

Lesson Objectives

The objective of this introductory lesson is to teach children the basic concepts of what a bicycle is, how it is used, and the health benefits of bicycling. It also covers the importance of wearing a bike helmet. Bicycling is a skill that can help children maintain a healthy lifestyle into adulthood, but children should always ask permission before riding their bikes outside their home area. It is important to emphasize that children should never bike near traffic but they are learning the skills to one day become independent riders. To stay safe while bicycling, children should always wear a properly fitted helmet.

The children will be able to:

- Identify safe places to ride bikes.
- Name reasons why people like to ride bikes.
- Understand the health benefits of cycling and how it benefits their bodies and minds.
- Explain why a well-fitted helmet is important and how to wear it properly.

Why This Lesson is Important

Bicycling is an important skill for children to learn because it will give them the ability to choose healthy, active transportation options into adulthood. Being a smart bicyclist is an important step in the evolution of independence and autonomy, especially through developed decision-making skills. Getting kids into the habit of cycling early on encourages physical fitness, awareness of their surroundings and an understanding of their environment that they won't get in a car. This lesson covers why people choose to bicycle as a part of a healthy lifestyle, where bikes belong, places people bike and the importance of wearing a bicycle helmet.

Applicable Standards of Learning



Essential Standards

- 2.MEH.1.2: Summarize behaviors that help to avoid risks.
- 2.NPA.1.3: Classify activities in terms of their appropriateness for a healthy lifestyle.
- 2.NPA.3.1: Contrast a physically active and inactive lifestyle.
- PE.2.HF.3.2: Identify enjoyable and challenging activities that one can do for increasing periods of time without stopping.
- PE.2.PR.4.3: Use safe practices when engaging in physical education activities with little or no prompting.
- 2.G.1.1: Interpret maps of the school and community that contain symbols, legends and cardinal directions.

- 3.PCH.1.2: Classify behaviors in terms of whether they do or do not contribute to healthy living.
- 3.NPA.1.3: Plan activities for fitness and recreation during out of school hours.
- 3.G.1.1: Find absolute and relative locations of places within the local community and region.

Common Core

- CCSS.ELA-Literacy.SL.2.1: Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.
- CCSS.ELA-Literacy.L.2.6: Use words and phrases acquired through conversations, reading and being read to, and responding to texts, including using adjectives and adverbs to describe.
- CCSS.ELA-Literacy.SL.3.1: Engage effectively in a range of collaborative discussions with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.
- CCSS.ELA-Literacy.L.3.6: Acquire and use accurately grade-appropriate conversational, general academic, and domain specific words and phrases, including those that signal spatial and temporal relationships.

Guidance

- RED.C.2.1: Identify situations from your daily life in terms of problems and solution strategies.
- EEE.SE.1.2: Illustrate personal responsibility in a variety of settings and situations.
- P.SE.1.2: Use self determination to build independence.



Go By Bike

Materials

- 2 or more honeydew melons. This type of melon offers a good helmet fit and their smooth surfaces are easy to draw faces on. A melon that is not ripe enough for seeds to rattle inside when you shake it works best.
- Markers or paint for the melon activity
- Helmets one for the presenter, one for the melon (*use a rounded toddler helmet for the melon and pad the inside with extra soft padding. The helmet won't ever fit a melon perfectly and this padding just helps ensure a better, more snug fit).
- · Step Ladder
- Tarp
- Clean up supplies
- One helmet for each child plus one for the instructor (It is preferable to use the helmets that children will be wearing during the on-bike skills training in Lessons 4 and 5.)
- · Physical Activity and the Body
- · Fitting Your Bike Helmet Guide
- Parent/Caregiver Tip Sheet
- Child Assessment and Answer Key Select a Helmet that Fits
- Child Assessment and Answer Key Who Needs a Helmet?

Preparation

Review the *Let's Go Biking!* **Getting Started** video which can be found in the For Instructors portion of the *Let's Go NC!* Interface. It is recommended that you also view the *Let's Go Biking!* lesson videos, "**Getting Ready to Ride**" and "**Bicycling Basics**," to see a demonstration of how the skills taught in this set of lessons are performed by older children in realistic settings.

Prepare the melons with facial expressions. Melons that are to be dropped without helmets should look alarmed; melons dropped wearing helmets should look happy.

It may be helpful to have knowledgeable volunteers on hand during class time to assist with helmet fitting at the end of the lesson. Coordinate with assistants in advance.

Part 1 - Discussion and Demonstration

► Time: 20-25 minutes

1. Places to Ride Bicycles

2. Where Bikes Belong

- 3. Why People Ride Bicycles
- 4. Healthy for Life
- 5. Wear a Helmet





Introduction

The instructor will...

- · Discuss places to which we can ride bikes.
- Discuss where bikes belong.
- · Discuss why people ride bicycles.
- Discuss the health benefits of riding a bike.
- · Show the importance of wearing a bike helmet.

Today, we are going to begin a new unit of study. For the next several days, we are going to talk about riding a bike safely to stay healthy and help our world.

Raise your hand if you have a bicycle or know someone who has a bike.

Great! It looks like everyone in this class has seen a bike before.

1. Places to Ride Bicycles

If a distance is short, walking is very quick and easy. Bikes are good for traveling distances that are too far to walk in a small amount of time. Once a distance is too great, buses and cars may be better options. Since kids can't drive cars, walking and cycling are good skills to practice for when you get older.

Raise your hand if you have ever biked somewhere.

Great, it looks like many of you have ridden a bike. At your age it is important to only ride a bike with adult supervision.

Let's talk about places that we can bikes. Raise your hand and tell me one place that people like to ride bikes.

- · Grocery store
- Neighborhood park
- · Soccer/baseball game
- Library
- · Friend's house
- · School!

Great! These are all good examples of places we can bike to if they are not far from our homes.

2. Where Bikes Belong

Now that we've talked about what a bike is, why people bike and places that we can bike to, we're going to talk about where bikes belong. You will often notice that children ride their bikes on the sidewalk while adults ride their bikes in the road.

Sidewalks are for people who walk places. Kids who are still learning to ride their bikes may ride on a sidewalk until they are older. When they are older and have control of their bicycle and understand the rules of the road, they can begin to ride in the roadway.

There are other places that may be OK for kids to learn how to ride. One place that you might go to is a "greenway" or a path that cars are not allowed on. Riding on a greenway is a great way to experience nature.

[If applicable, discuss some of the greenways in your community.]





Because you are still learning to ride a bike, you should ride on a sidewalk or a safe area such as a path. You should always ride with an adult. It is always important to watch for people who are walking and pass them safely, whether they are on the sidewalk or a greenway.



3. Why People Ride Bicycles

Cycling is a great way to get places that are too far to walk, but that are close enough to get to quickly by bike. Let's discuss why people ride bikes. Can you name a reason why people ride bicycles? I'll write your reasons on the board/chart.

- It's is good for you (exercise).
- It's good for the environment (no air pollution).
- · It's good for your neighborhood (less traffic).
- It's not expensive.
- · It's a great activity to do outdoors.
- · When you're older, you can get around on your bike on your own.
- And last, but not least, it's fun!

Cycling is good for many reasons, and it's a great way to include physical activity in your daily life. There are special bicycles that allow people with disabilities to get places and enjoy the outdoors, too.

[See the Instructor's Guide for a more detailed discussion of the different types of bicycles available for children of varying abilities]

Cycling is good for the environment because it does not cause pollution. Cars and trucks cause huge amounts of pollution. When you ride a bike instead of going in a car, you do not pollute the air. Smog, a chemical haze, can form in the air from automobile exhaust making it hard to see and to breathe.

4. Healthy for Life

Maintaining your health is one of the best reasons to ride a bike. If you ride to places that you need to go, you can get exercise every day. Let's talk about some reasons that cycling is a good choice for a healthy activity.

- Families can bike together.
- It helps you have fun.
- · It's great exercise.

Kids are much healthier and happier when they have activity in their day. Bicycling is a great way to be active and have fun! Physical activity can improve your health and help prevent health problems. Let's talk about reasons why bicycling is a great way to stay healthy:

Physical Fitness benefits:

- **Body Composition:** Regular physical activity, like cycling, can help people maintain their current weight or lose extra weight. It can help retain muscle.
- Cardiovascular Endurance: Cycling works your heart and lungs so that they can learn to work longer and longer without getting tired.
- **Muscular Strength:** Cycling helps you build muscles, especially in your legs, rear end, back, and upper arms.

Other Physical benefits:

• Mental Health: Exercise, especially outdoors, can help you stay happy and energetic all day long. Bicycling can help keep you in a good mood.



- Prevention against disease: You can keep your body healthy by giving it
 plenty of exercise. Exercise like cycling can help you avoid diseases like
 diabetes and heart disease.
- **Balance and coordination:** Riding a bike helps you learn to balance, and the more you practice, the more coordinated you will become.



Parts of the Body benefits:

- **Brain:** Physical activity makes your brain work better and can help you do better in school.
- **Heart:** Your heart's a muscle. Aerobic exercise that works the large muscles in your arms and legs helps your heart by making it work more efficiently during exercise and rest so it can beat for a long time.
- Lungs: Exercise makes you breathe deeper and makes your lungs stronger.
- **Joints:** Cycling is a low-impact activity, so it helps build joint strength and does not cause the cartilage in your joints to break down, which hurts.

[Instructor provides "Physical Activity and the Body" page found in the Materials section.]

5. Wear a Helmet Correctly

The Child Assessments at the end of this lesson focus on "Who Should Wear a Helmet?" and "How to Wear a Helmet." Go over the following materials:

There is a long list of reasons why it is important to wear a helmet! In North Carolina, children under the age of 16 must wear a helmet when they ride a bike. Can you list some reasons why it is important to wear a helmet?

Let's talk about when you should wear a helmet.

Have children brainstorm a list of when they should wear a helmet. Examples include, when riding a scooter, skiing, riding a bicycle, and when wearing roller blades or roller skates. Use the *Fitting Your Bike Helmet Guide* in the materials section to go over the steps on how to properly fit a bike helmet.

Part 2 - Activity

► Time: 15 minutes

Keep Your Melon Safe!

The objective of this demonstration is to observe the effects of a melon dropped at high velocity with and without a helmet. Draw parallels between the melon and the human head and have kids imagine the drop being equivalent to a bicycle crash at moderate speed. Melons should be prepared in advance of the class activity.

Give the Facts

Explain the importance of wearing a helmet.

Wearing a properly fitted helmet can protect your brain from injury and possibly save your life. It's the single most effective way to reduce head injuries and fatalities resulting from bicycle crashes.

Introduce the Melons

Introduce children to both the alarmed and happy melons: the alarmed melon is about to take a fall without a helmet; the happy melon will also fall, but his head will be protected by a helmet. Talk to the class about what will happen to each melon on impact. Make sure the helmet is properly fitted on the helmet with the chin straps tightly secured.



Climb the Ladder

The presenter should put on his or her helmet before climbing up the ladder. As the presenter heads up the ladder explain the importance of helmets. Hold the melon six feet above the ground. Have the class countdown for the melon drop.



Drop the Melons

Drop the melon in the helmet first. Make sure the helmet is facing down so the helmet hits the ground first. As the presenter comes down from the ladder and examines the melon, discuss the outcome. Explain how the head is protected because the helmet absorbed the force of the fall. If the melon gets injured, note that even with a helmet, the head can get injured but the amount of damage is less than if a helmet is not worn.

Next, drop the melon without the helmet, making sure the drop is over the tarp. Ask the class to watch what happens as the drop is made without any helmet. As the presenter comes down from the ladder, discuss the outcome. A head is fragile and it may crack causing temporary damage or permanent brain damage as the result of impact. Explain that if a bicyclist falls and hits his or her head, wearing a helmet significantly reduces the chance of serious brain injury or death. Explain that the best neurosurgeons can't put this head back together.

If you have time, loosen the straps on the helmeted melon and drop it again. Show the class that the helmet must be properly adjusted and fit snugly or it won't protect their heads. Show the class the loosely fitted helmet before you drop it. Chances are it may roll out of the helmet altogether when it falls.

Summary Discussion

- 1. Kids must wear a helmet when they ride a bike. It's the law!
- 2. Helmets can protect your head from injury and brain damage.
- 3. A helmet should always fit snugly and be secured properly.
 - It should fit level on the head (one to two finger widths above the eyebrows).
 - The straps should form a "V" under the ears.
 - The straps must be buckled and tight enough so no more than two fingers can fit between the chin and the strap.
- 4. When adjusted, the helmet should not move more than about an inch in any direction.
- 5. A helmet that has been in a crash has done its job. It's time to get a new one.

Helmet Fitting

At the end of the melon drop, work with children to properly fit helmets using the **Fitting Your Bike Helmet Guide** at the end of this lesson. It may be helpful to have assistants.

Review (optional)

► Time: 5 minutes

The instructor will review...

- · Why people ride bikes,
- Places to ride and where 2nd and 3rd graders should ride to be safe.
- How cycling can benefit children and what parts of the body become stronger through physical activity, and
- Correct answers to the Child Assessments. Review how wearing a helmet the wrong way
 could cause them to get hurt, the correct way to wear a helmet, and when a child should wear
 a helmet.



These optional activities are included to extend the lesson into other areas of learning. Most activities presented may be completed within a 20-minute time period, or may be assigned as homework opportunities.

Healthful Living

To be physically fit, children should be active for 60 minutes each day. It helps keep your heart strong. Riding a bike to school or walking to school is a great way to have an active lifestyle. Help children answer the following questions through this activity:

What is an inactive lifestyle? What things can you do to have an active lifestyle?

Hand out the **Heart Rate Worksheet** (found in the Materials Section) and discuss how physical activity affects the heart.

- Show children the two places to measure their heart rate by checking their pulse (carotid artery in the neck and blood vessels at the wrist)
- While the children are sitting, have them feel their pulse and count the number of beats in a minute. They should write down or remember the number in the correct box.
- Have children walk quickly for a few minutes. Have them check their heart rate again and write down the number in the correct box.
- Discuss with children why their heart rate changed after physical activity and how it benefits their hearts and bodies. Remind children that exercise that increases their heart rate helps to keep it healthy, and their heart should be worked for 60 minutes each day. Have them complete the worksheet for all of the activities.
- Note: You may have to adapt the physical activities on the worksheet to include children of differing abilities.

Social Studies

Where would I bike? Have children use maps to identify places and landmarks they would bike with their family and friends.

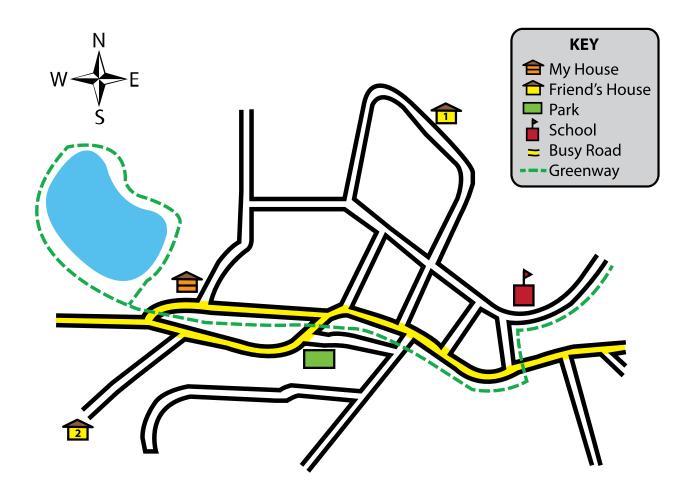
Print out several simple maps of your community and divide into groups. First, have children brainstorm 10 places where they would like to go, and make a list. Create a key that uses a different symbol for each common destination (libraries, stores, greenways, parks). Explain that understanding symbols on the map requires the use of a key. Have children complete the map of destinations using the symbols in the key. Mark the busy roads with a highlighter. Have children identify safe routes that they would take between destinations and explain why they chose the route.

For more mapping skills, an instructor can also add map scale and direction to this activity and explain each concept. Additionally, the instructor can have children give directions to destinations from the school in terms of relative location using cardinal directions and intermediate directions.



For ideas on how to create your own map, use the "Safe Routes" in My Town map.

Safe Routes in My Town







Physical Activity & the Body

Label the Body Parts

How does bicycling affect these parts of the body?

Brain

Muscles

Heart

Lungs

Joints



How does bicycling keep you fit?

List scenarios where bicycling keeps your body healthy.

Body Composition

Flexibility

Muscle Strength

Muscle Endurance

Cardiovascular Endurance

2-3 B1



Heart Rate Worksheet

In Class: Measure your actual heart rate for sitting and walking quickly by checking your pulse and recording the number of beats per minute. Fill in the predictions.

Out of Class: Perform each activity listed for at least two minutes. Check your pulse and record the answer. If you participate in other activities, record them in the extra space provided. Wait several minutes between activities so your heart rate can return to "normal" before you start another activity. Check your heart rate after sleeping first thing in the morning.

Activity	Heart Rate (Prediction)	Heart Rate (Actual)
Sitting		
Walking Quickly		
Walking Slowly		
Reading		
Watching TV		
Sprinting		
Jogging		
Sleeping		

Were your predictions correct? Which one was the highest? Why?

Fitting Your Bike Helmet



Size:

Measure your head to find your size. Try on several helmets in your size until one feels right. Now put the helmet level on your head and adjust the sizing pads or fit ring until the helmet is snug.



Position:

The helmet should sit level on your head and low on your forehead—one or two finger-widths above your eyebrow.



Side Straps:

Adjust the slider on both straps to form a "V" shape under, and slightly in front of, the ears. Lock the slider if possible.



Buckles:

Center the left buckle under the chin. On most helmets, the straps can be pulled from the back of the helmet to lengthen or shorten the chin straps. This task is easier if you take the helmet off to make these adjustments.



The Proper Helmet Fit

Helmets come in various sizes, just like hats. Size can vary between manufacturers. Follow the steps to fit a helmet properly. It may take time to ensure a proper helmet fit, but your life is worth it. It's usually easier to look in the mirror or have someone else adjust the straps. For the most comprehensive list of helmet sizes according to manufacturers, go the Bicycle Helmet Safety Institute (BHSI) Web site at: www.bhsi.org/.



Chin Strap:

Buckle your chin strap. Tighten the strap until it is snug, so that no more than one or two fingers fit under the strap.



Final Fitting:

A. Does your helmet fit right? Open your mouth wide...big yawn! The helmet should pull down on your head. If not, refer back to step 5 and tighten the chin strap.

- B. Does your helmet rock back more than two fingers above the eyebrows? If so, unbuckle and shorten the front strap by moving the slider forward. Buckle and retighten the chin strap, and test again.
- C. Does your helmet rock forward into your eyes? If so, unbuckle and tighten the back strap by moving the slider back toward the ear. Buckle and retighten the chin strap, and test again.
- **D.** Roll the rubber band down to the buckle. All four straps must go through the rubber band and be close to the buckle to prevent the buckle from slipping.

Replace a Helmet.

Replace your helmet when it has been in a crash; damage is not always visible.

Buy/Fit the Helmet For Now.

Buy a helmet that fits your head now, not a helmet to "grow into."

Ensure Helmet Comfort.

If you buy a helmet that you find comfortable and attractive, you are more likely to wear it. Readjust as necessary to ensure the helmet fits properly each ride.

Cover Your Forehead.

Adjust the helmet fitting based on your helmet first being in the correct position, level on the head and low on your forehead.

Adjust Straps Until Snug.

Both the side and chin straps need to be snug.

Avoid Helmet Rocking.

Your helmet should not rock forward or backward, or side to side on your head.

If your helmet rocks more than an inch, go back to step 6, and readjust.

Be a "Roll" Model for Safe Behavior

Everyone — adult and child — should wear a bicycle helmet each time they ride. Wearing a helmet each ride can encourage the same smart behavior in others.

Helmet Certification

Bicycle helmets sold in the U.S. must meet the standards issued by the U.S. Consumer Product Safety Commission (CPSC). Look for the certification label inside the helmet.



Helmet Laws

More children ages 5-14 go to emergency rooms for bicycle-related injuries than with any other sport; many are head injuries. As a result, many States and local jurisdictions have child bicycle helmet laws to increase and better ensure the safety of children when bicycling. See: www.helmets.org/mandator.htm.

Like car crashes, bicycle crashes can happen at any time, involving not only children, but adults, many of whom are skilled riders. In fact, middle-age adults represent the average age of bicycle riders killed and injured.

Helmets are the single most effective piece of safety equipment for riders of all ages, if you crash. Everyone should choose to wear a helmet; it just makes sense!



DOT HS 811 568







Parent/Caregiver Tip Sheet

Go By Bike

Today in school your child learned that bicycling is a healthy way to keep physically active and the many situations in which they can enjoy cycling as transportation and exercise.

Ask your child about what he/she learned about the following areas of the body and how bicycling can affect his/her health (correct answers are noted in parentheses):

- **Brain:** Physical activity makes your brain work better and can help you do better in school.
- **Muscles:** Cycling helps you build muscles, especially in your legs, rear end, back, and upper arms.
- Heart: Your heart's a muscle! Aerobic exercise that works the large muscles in your arms and legs helps your heart by making it work more efficiently during exercise and rest – so it can beat for a long time.
- Lungs: Exercise makes you breathe deeper and makes your lungs stronger.
- **Joints:** Cycling is a low-impact activity, so it helps build joint strength and does not cause the cartilage in your joints to break down, which hurts.
- Weight Control: Regular physical activity can help maintain a healthy weight.
- Mental Health: Exercise, especially outdoors, can help you release stress so you can stay happy and energetic all day long.
- Balance and coordination: Riding a bike helps you learn to balance, and the more you practice, the more coordinated you will become.
- Stamina: Cycling works your heart and lungs, so that they can learn to work longer and longer without getting tired.
- Prevention against disease:
 You can keep your body
 healthy by giving it plenty
 of exercise. Cycling can
 help you avoid diseases
 like diabetes and
 heart disease.



Parents can play a vital role in encouraging children's healthy, active lifestyles. Parents who incorporate physical activities in their own lives are more likely to pass on good habits to their children.

Children in second and third grade:

- Enjoy testing muscle strength and skills.
- Typically have developed a good sense of balance.
- Learn best through active, concrete experiences.
- Are old enough to grasp more complex information about laws, traffic signs, safety concepts, and personal responsibility for safety.

PRACTICE AT HOME!

Go By Bike

In preparation for Lesson 4, when your child will be riding a bike, the children learned how to ensure that their helmets fit correctly. Work with your child at home to ensure he or she is wearing a properly fitted and adjusted helmet.

How to Properly Fit Your Child's Helmet

Helmets are not hats! They must be level on your head and strapped on securely to be protective in a crash. You want the helmet to be level on the head, with the fitting pads inside touching all the way around, and the strap comfortably snug.



First, adjust the fit pads or ring

Most helmets come with extra foam fitting pads to customize the fit. You can usually remove the top pad or use a thin one there to lower the helmet on the head, bringing its protection down further on the sides. Use thicker pads on the side if your head is narrow and there is a space, or add thicker pads in the back for rounder heads. Move pads around to touch your head evenly all the way around. If you have a "one size fits all" model with a fitting ring instead, just adjust the fit by tightening the ring if needed.

Then Adjust the Side Straps

Put the helmet on, level on your head. Adjust the rear (nape) straps, then the front straps, to locate the Y fitting where the

straps come together just under your ear. You may have to slide the straps across the top of the helmet to get them even on both sides.

Finally, Adjust the Chin Strap

Adjust the chin strap so it is comfortably snug. Now adjust the rear stabilizer if the helmet has one.

Are you done?

Shake your head around. Then put your palm under the front edge and push up and back. Can you move the helmet more than an inch or so from level, exposing your bare forehead? Then you need to tighten the strap in front of your ear. Now reach back and pull up on the back edge. Can you move the helmet more than an inch? If so, tighten the nape strap. When you are done, your helmet should be level, feel solid on your head and be comfortable. It should not bump on your glasses (if it does, tighten the nape strap). If it still does not fit that way, keep working with the straps and pads, or try another helmet.

Adapted from the Bicycle Helmet Safety Institute website: www.bhsi.org





Name____

Child Assessment

Select the Helmet That Fits

For the helmets that do not fit right, explain why.





2._____



3._____



4.____



Name_____

Child Assessment

Who Needs a Helmet?

Draw a helmet on each person who needs one.



Instructor's Question and Answer Key

Select the Helmet That Fits

For the helmets that do not fit right, explain why.





1. Wrong Way!

Helmet is too far forwad.



2. Wrong Way!

Helmet does not cover forehead.



3. Wrong Way!

Helmet straps are too loose.



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4. Right way!

Helmet is level, covers forehead, and straps are tight.

Instructor's Question and Answer Key

Who Needs a Helmet?

Draw a helmet on each person who needs one.



