



## Gearing Up



**Time:** 25-30 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 objectives of this introductory lesson are to teach children about bikes by teaching them vocabulary and to emphasize the need for helmets and visible clothing.

Emphasis is placed on how objects are made up of parts, specifically the wheel and its role in transportation and the movement of vehicles. Children are also taught the importance of wearing a helmet through an egg drop demonstration and the appropriate clothing to wear when riding bikes or scooters.

The children will be able to:

- Explain what a wheel is and identify items that have wheels.
- Identify basic parts of a bicycle.
- Explain why it is important to wear a properly fitted bicycle helmet and visible clothing each time they ride a bike.

### Why This Lesson is Important

Knowing about wheels, parts and equipment gives kids the basic knowledge about how a bike operates and how to keep themselves safe. Suitable for this age group, an egg drop demonstration shows what can happen when bicyclists fall if their heads are not protected by bicycle helmets. The visual demonstration will illustrate why wearing a helmet is important enhance their understanding of this concept.

## Applicable Standards of Learning



### Essential Standards

|   |   |
|---|---|
| <p>PE.K.PR.4.3: Use safe practices when engaging in physical education activities.</p> <p>K.P.1.2: Give examples of different ways objects and organisms move.</p> <p>K.PCH.2.2: Explain the benefits of wearing seat belts and bicycle helmets.</p> <p>K.MEH.1.3: Illustrate personal responsibility for actions and possessions.</p> <p>K.E.1.2: Summarize daily weather conditions noting changes that occur from day to day and throughout the year.</p> <p>K.TT.1.1: Use a variety of technology tools to gather data and information.</p> | <p>PE.1.PR.4.3: Use safe practices when engaging in physical education activities.</p> <p>1.PCH.3.1: Identify safety hazards and injury prevention strategies.</p> <p>1.TT.1.1: Use a variety of technology tools to gather data and information.</p> |
|---|---|

### Common Core

|   |  |
|---|--|
| <p>CCSS.ELA-Literacy.SL.K.2: Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.</p> <p>CCSS.ELA-Literacy.L.K.6: Use words and phrases acquired through conversations, reading and being read to, and responding to texts.</p> | <p>CCSS.ELA-Literacy.SL.1.2: Ask and answer questions about key details in a text read aloud or information presented orally or through other media.</p> <p>CCSS.ELA-Literacy.L.1.6: Use words and phrases acquired through conversations, reading and being read to, and responding to texts, including using frequently occurring conjunctions to signal simple relationships (e.g., because).</p> |
|---|--|

### Guidance

|  |
|--|
| <p>RED.C.2.1: Identify situations from daily life in terms of problems and solution strategies.</p> <p>EEE.SE.1: Illustrate personal responsibility in a variety of settings and situations.</p> |
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## Gearing Up

Grades

**K-1**

Lesson 1

Gearing Up

### Materials

- Songs
- Label the Parts – Bicycle Diagram
- Two raw eggs
- Paper or plastic to cover the floor
- Container with Styrofoam sheets or Styrofoam peanuts
- Parent/Caregiver Tip Sheet
- Child Assessment – Worksheet
- Child Assessment – Instructor Question and Answer Key

### Preparation

For the Activity at the end of the lesson, the instructor will need to gather materials and set up the egg drop demonstration area. 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.

## Part 1 – Discussion and Demonstration

► **Time:** 10-15 minutes

1. **Wheels are Wonderful**
2. **Bicycles have Parts**
3. **Be Visible**
4. **Wear a Helmet**

### Introduction

The instructor will...

- Discuss what wheels are and their relationship to different types of transportation.
- Explain that objects have parts that serve different functions.
- Explain and give a demonstration on why children should wear a bicycle helmet every time they ride bikes, scooters or tricycles.
- Discuss what kids should wear when riding a bike.

*The wheel is a very significant invention that has made many types of transportation possible. Wagons, automobiles, trains, wheelchairs and even airplanes and jets have wheels. The wheel is vital for moving. A bicycle relies on wheels to move forward so that you can go places. Therefore, the wheel is one of the most important parts of the bicycle.*

## 1. Wheels are Wonderful

*How many wheels does a bike have? What other kinds of things have wheels?*

*Wheels are everywhere*

*On a bike, on a bus, even on a chair!  
There are many wheels we use to play,  
And wheels we ride to school each day.*

*Why do objects have wheels?*

- *Wheels allow you to move things easily.*

Show a paper plate or a cardboard circle. Have children watch as you trace the outer edge with your finger.

Ask children, *does this have the same shape as a wheel? Is it round like a wheel?*

Turn the plate to show kids how the wheel on a bicycle moves.

Put some common items (marble, ball, ruler, eraser, coaster, jar lid, etc.) in a paper bag. Have children take turns reaching into the “mystery bag” and pulling out an item. Before they take the item out of the bag, have them tell whether it is ‘round’ or ‘not round.’ Then have children look at the item. Ask children to demonstrate how the round items can turn or roll like the wheel on a bicycle.

Ask children, *what would happen if a part of the bicycle was missing or broken?*

*Having working equipment is important. It is always important to have an adult check your bicycle or scooter before you ride to make sure it is safe.*

## 2. Bicycles have Parts

*Everything has parts. Today we’re going to talk about the parts of a bicycle.*

The instructor should provide children with **Label the Parts — Bicycle Diagram** and have children label the parts of the bike. If a bicycle is available, show children each of the parts on a real kid-sized bicycle.

Have children talk about the five different parts of the simplified bicycle and the purpose of each part.

## 3. Be Visible

*The environment changes daily. During the night when it is dark, it is difficult to see other people outside. The weather changes all of the time. When it rains, it can also be difficult to see people outside. If you wear bright clothing, you will be easier for other people to see.*

Read the children the following short passage and have them answer questions about the importance of being visible

*It was a cold and windy fall day. Dark clouds moved across the sky. Rachel decided to ride her bicycle a short distance from her house to the school. She wore a grey jacket with blue jeans. It was windy so she pulled a black hat down over her ears. She rode down the driveway and started off to school.*

- *What type of weather is happening on the day Rachel bikes to school?*
- *What did Rachel wear to school that day?*
- *Are the people driving cars likely to see Rachel? Why?*
- *What could Rachel wear so that she is more likely to be seen?*

*It is always important to wear bright-colored clothing when you ride your bike. Kids in dark colors are hard to see when it’s cloudy or dark outside.*

#### 4. Wear a Helmet

Have children list all the people they can think of, past and present, who wear helmets to protect themselves from injury on their jobs or in an activity. Ask children to share their lists with the class. Have children discuss why so many people wear helmets.

Possible answers: knights, police, soldiers, motorcyclists, construction workers, miners, baseball players, football players, hockey players, race-car drivers, astronauts, airplane pilots, sky divers, deep-sea divers, firefighters, dirt-bike racers, gladiators.

Ask children to name reasons that people wear a helmet. Answers should include a conjunction word such as 'because' or 'so.' For example, a child might say, "A football player wears a helmet so his head does not get injured." or "A motorcycle rider wears a helmet because it would protect his head if he fell or had a crash with a car."

*What do all of these activities have in common?*

Ask children to raise their hands if they have a bike helmet. Engage children by asking:

- *Who wears a helmet? Always? Sometimes?*
- *Who has fallen off their bike or knows someone who has fallen off a bike?*
- *Who knows someone who has hit their head?*

*Many bicycle injuries are due to falls. Both children and adults of any age can fall off their bicycles. You never know when a crash might happen, and that's why it is important to always wear a helmet when riding.*

Ask children: *What are some things that could cause you to fall or crash if you are riding your bike?*

- *Learning to ride for the first time/getting used to riding a bicycle*
- *Riding over road hazards (debris, gravel, wet leaves or sand) or damaged sidewalks.*
- *Riding a bike that's too big*
- *Bicycle parts not working properly*
- *Unsafe riding behavior (carrying bags or a friend on the handlebars)*
- *Failing to look for cars at driveways or streets*
- *Not paying attention*

*There is a long list of reasons why it is important to always wear a helmet! The activity that goes along with this lesson will show you why wearing a helmet is important.*

## Part 2 - Activity



► **Time:** 15 minutes

### **Egg Drop Demonstration**

Set up the demonstration area in advance. The first drop will utilize a box with Styrofoam pieces in it or a box with at least 6" of soft material in it. The second drop requires a hard surface such as a brick or rock that children can associate with a real life scenario.

#### **Prepare the eggs**

Have the class name 4 eggs.

Hold up one egg and explain that the egg is delicate like our own heads and brains.

*I'm going to show you what can happen to a head and brain when a crash occurs. The egg represents the human head: the shell is fragile like your head and the inside of the egg represents your brain. If your head hits a hard surface it can crack and the brain can be injured.*

Draw a face and hair on each egg with a marker and introduce them to the class.

Place each egg in a sealable plastic sandwich bag.

#### **Involve the children**

Ask for two child volunteers to help with the demonstration.

**First Drop:** Ask the first volunteer child to hold an egg and drop (not throw) it into a box full of Styrofoam pieces from a height of at least four feet. (Six inches of soft material can also be placed inside a bucket or box.) The egg should not break.

*A helmet is represented by the soft material. The soft material pads the egg when it is dropped. A bicycle helmet can protect the head just like the soft material protects the egg.*

**Second Drop:** Set up a brick, rock, or other hard surface in the middle of the demonstration area. Ask children to guess at which height the egg will break. Let the second volunteer child drop an egg sealed in a plastic bag from 3 distances that the children suggest. (The egg will most likely break when dropped from a distance of 6" and crack when dropped from a distance of 2-3").

#### **Discuss Outcome**

*The soft material represents the kind of protection that a bicycle helmet provides when there is a crash. The hard surface represents a place where you might fall, like a sidewalk.*

Show the class a bicycle helmet. Explain that it is constructed with an inside liner of a crushable material like Styrofoam. It protects your head in the same way as it protected the egg when it fell.

*Bicycle helmets can help prevent serious head injuries that can permanently damage your brain or kill you. They do this by absorbing most of the blow of a fall or crash. If a helmet doesn't fit snugly, it might not protect your head. Every person riding a bicycle, tricycle or scooter should wear a helmet every time they ride.*

## Review (optional)

► Time: 5 minutes

The instructor will...

- Review the parts of the bicycle and discuss the importance of wheels in transportation.
- Review why it is important to wear bright-colored clothing and wear a helmet while riding a bike.

*Let's review all that we have learned today.*

*First, we learned some important new words. A bike is an object that is made of different parts. A bicycle has a frame, seat, pedals, handlebars and wheels. Each of the parts is important to how the bicycle functions. Wheels, which are round, are common to many types of transportation.*

*We also learned that if you wear visible clothing and bright colors, cars are more likely to see you. In addition to bright clothing, you should always wear a helmet. Your head is fragile like the shell of an egg. The helmet, when it fits your head properly, will protect your head against injuries if you fall just like the foam protected the egg from breaking.*





## Suggestions for a Balanced Curriculum

Grades  
**K-1**  
Lesson 1

Gearing Up

*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 they may be assigned as homework opportunities.*

### Healthful Living

Have children look up important facts about helmets. Talk about websites where children can find accurate information. Have children report what they find using online tools (e-books, web searches). Here are some examples:

1. The helmet is the most important piece of safety equipment a bicyclist has, other than common sense. Eight out of every ten deaths involving a bicyclist are the result of head injuries. Wear a helmet!
2. Because helmets are worn to protect the forehead and top of the head – where falling riders are most likely to hit the ground – helmets must fit the head snugly and not move around. Straps should be adjusted to hold the helmet squarely on the head. Straps that come from the temple should be adjusted to hold the helmet down on the forehead.
3. Everyone under age 16 who rides a bike, regardless of age, needs to wear a bike helmet approved by the Consumer Product Safety Commissions (CPSC). North Carolina state law makes parents responsible for children wearing bike helmets, and parents of any child not wearing a helmet can be fined \$10.

Kid-Oriented On-line Resource Examples:

[www.mcgruff.org](http://www.mcgruff.org) • Advice – Riding Right

[www.bam.gov](http://www.bam.gov) • Physical Activity – Activity Cards

[www.kidshealth.org](http://www.kidshealth.org) • Playing it Safe – Outdoors and on the Road

### Arts Education

Children can color the ***Decorate the Helmet Worksheet*** in the materials section of the lesson. Have children take home the decorated helmet page, which has tips for parents on how to properly fit a bicycle helmet on their child.

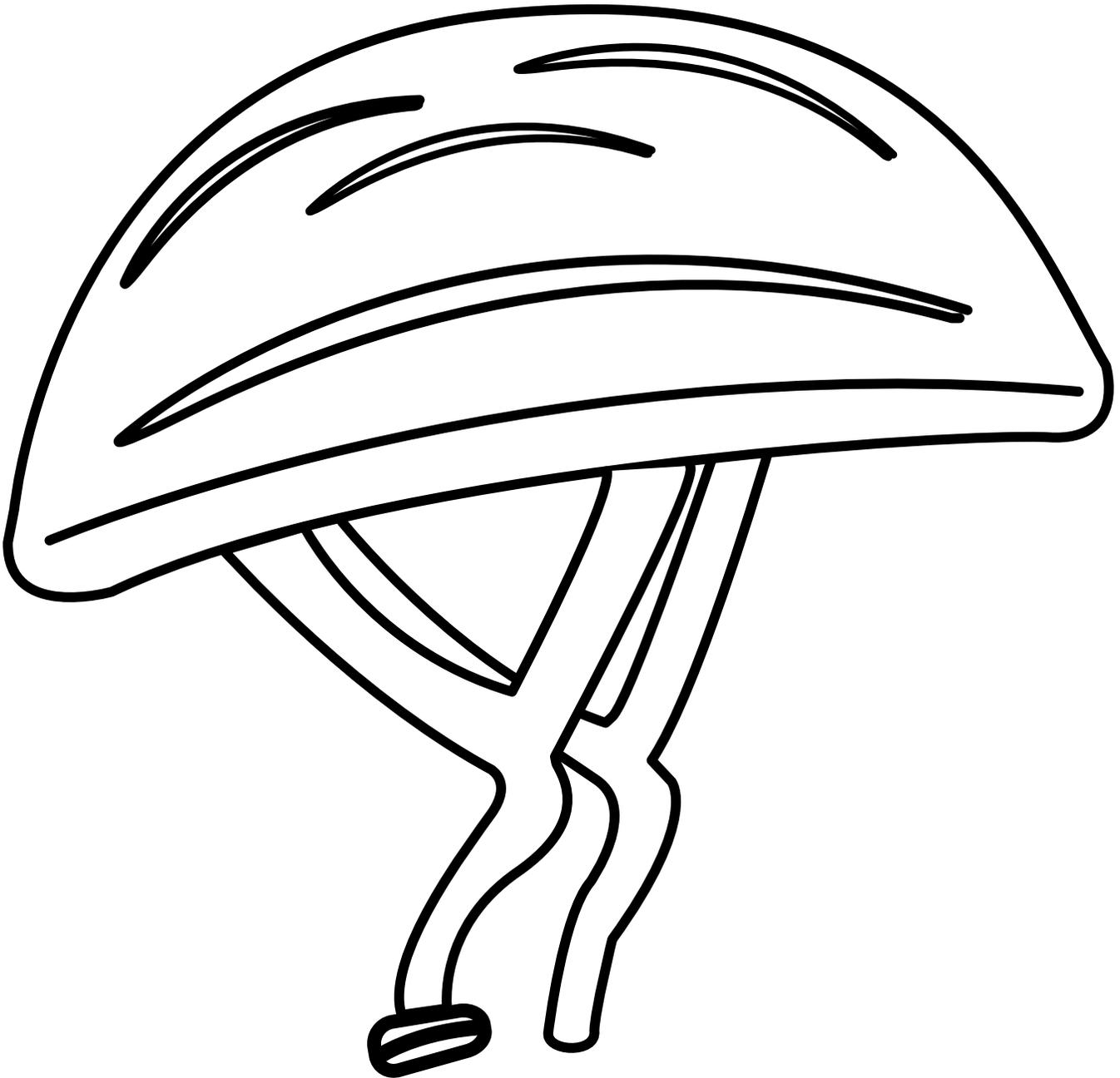
**Let's Go Biking!**



Name \_\_\_\_\_

## **Decorate the Helmet**

Use crayons, glitter and stickers to decorate this helmet:



Remember, you should **ALWAYS** wear a helmet when you ride a bike!

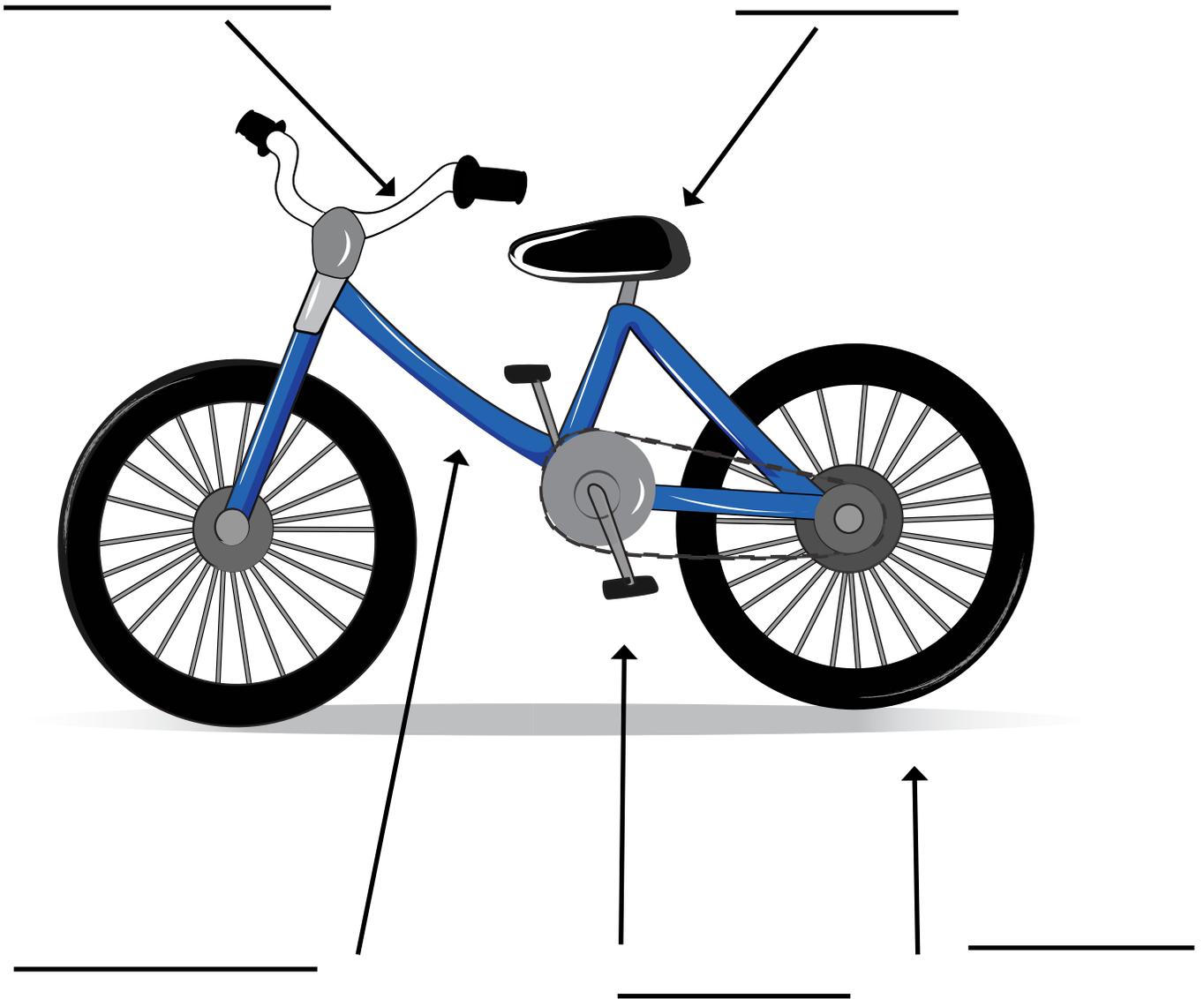
# Let's Go Biking!



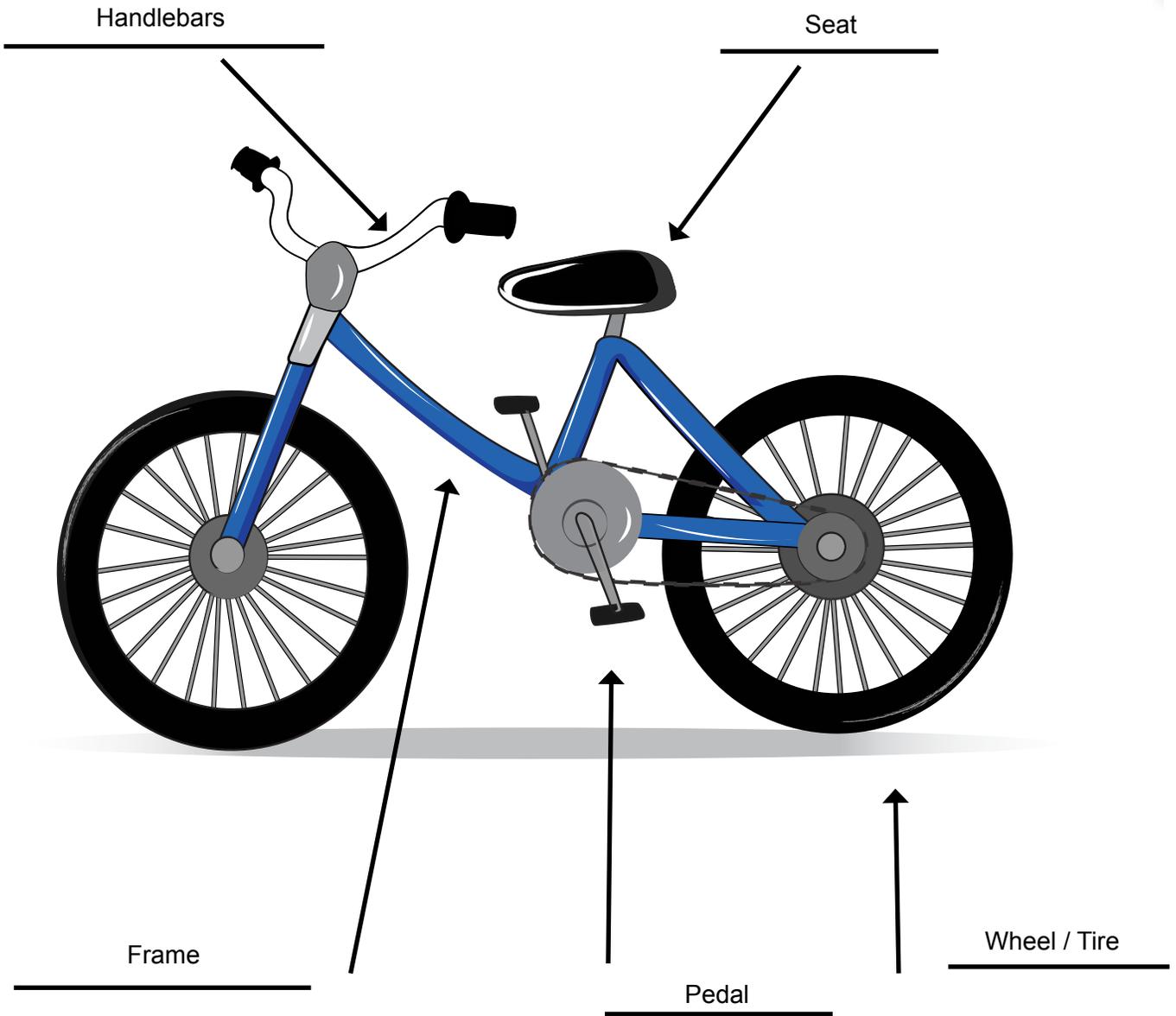
Name \_\_\_\_\_

## Label the Parts – Bicycle Diagram

|              |            |      |
|--------------|------------|------|
| Frame        | Pedal      | Seat |
| Wheel / Tire | Handlebars |      |



# Label the Parts – Bicycle Diagram KEY



# Songs

## “Parts of the Bike” Song

Sung to the Tune of “Wheels on the Bus”

*The wheels on the bike go round and round, Round and round. Round and round.  
The wheels on the bike go round and round, All through the town.*

*The pedals on the bike make it go, go, go, Go, go, go. Go, go, go.  
The pedals on the bike make it go, go, go. All through the town.*

*The brakes on the bike help you stop, stop, stop. Stop, stop, stop.  
The brakes on the bike help you stop, stop, stop. All through the town.*

*The bars on the bike steer side to side. Side to side. Side to side.  
The bars on the bike steer side to side. All through the town.*

*The wheels on the bike go round and round. Round and round. Round and round.  
The wheels on the bike go round and round, All through the town.*

## Let’s Go Biking! Safety Song

Sung to the Tune of “Wheels on the Bus”

*Kids on the go always get permission. Get permission. Get permission.  
Kids on the go always get permission, when they ride their bikes.*

*Kids on the go wear safety gear. Safety gear. Safety gear.  
Kids on their bikes wear safety gear, when they ride their bikes.*

*Kids on the go tie their laces. Tie their laces. Tie their laces.  
Kids on the go tie their laces, when they ride their bikes.*

*Kids on the go look out for cars. Look out for cars. Look out for cars.  
Kids on the go look out for cars, when they ride their bikes.*

*Kids on the go look both ways. Look both ways. Look both ways.  
Kids on the go look both ways, when they ride their bikes.*



## Parent/Caregiver Tip Sheet

### Gearing Up

This week in school your child geared up to learn about bicycling:

1. **WHEELS** are essential to many modes of transportation. They allow objects to move easily.
2. **OBJECTS** are made up of many **PARTS**. Bicycles have a frame, wheels, a seat, pedals and handlebars.
3. It is always important to **BE VISIBLE** when you are riding a bike. The environment changes daily and so does the weather. **DARK** or **RAIN** can affect someone's ability to see you.
4. **ALWAYS WEAR A HELMET** when you ride your bike. There is always the possibility that you may fall somewhere hard, such as a sidewalk. You need to protect your head! Remember what happened to the egg!

Fitting a bicycle helmet correctly:

- The helmet should sit level on your head; wear it low on your forehead, two fingers above the eyebrows.
- Adjust the plastic slider on both straps to form a "V" shape under your ears.
- Tighten the chin strap and adjust the pads inside so the helmet doesn't move.
- The helmet should fit snugly and must always be buckled—EACH time you ride.

### Did you know?

Parents can play a vital role in encouraging children's healthy, active lifestyles by being a good role model. Parents who wear helmets to protect their heads every time they ride bicycles (or engage in other activities that need protective head equipment) are more likely to pass on those good habits to their children.

#### Children in kindergarten and first grade:

- Can begin to adopt and maintain a physically active lifestyle.
- Are collecting information about objects and events in their environment.
- Enjoy testing muscle strength and developing balance.
- Should wear a helmet every time they ride. It's the law in NC!

# PRACTICE AT HOME!

## Gearing Up

Bicycles are a source of enjoyment and entertainment for children; bikes also provide them with mobility, a way to visit friends and explore their surroundings. However, a crash that results in a serious brain injury can greatly reduce a child's ability to grow up to be healthy and productive. Children and adolescents' most common complaints are that helmets are not fashionable or "cool," their friends don't wear them or they are uncomfortable and too hot.

One of the first steps in teaching children about bicycle safety is to "practice what we preach." To better ensure that children understand bicycle safety and engage in good behaviors, you need to be a good role model. When cycling, always wear a helmet and follow the rules of the road. If your child is reluctant to wear a helmet, help them personalize it with cool stickers.

### Ask your child, why do people wear a helmet?

- People wear a helmet to protect their head in case they fall down while riding their bikes.

### Ask your child, what part of the head is protected when you wear a helmet?

- It helps to protect your brain.

Today at school your child saw a demonstration with an egg to emphasize the importance of wearing a helmet. **Ask your child, what object is fragile like your head?**

- An egg is fragile like my head.

Teach your child to investigate and explore common objects like a bicycle to identify their parts, learn vocabulary and make connections with the real world. Use descriptive words to help them understand how different parts move. This will make it easier for them to comprehend systems and how things work.

Have your child find toys or things around the house that need several parts to work. Use a bicycle if you have one. Have them identify the frame, wheels, a seat, pedals and handlebars. Ask your child, what would happen if the wheels on their bike were missing?



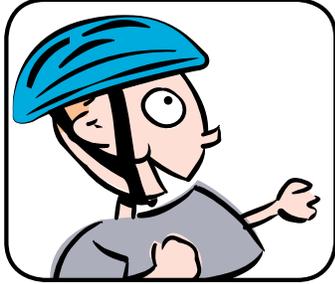
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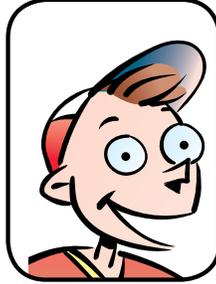
Name \_\_\_\_\_

## Child Assessment

1. Mark the bubble under the picture that shows a child wearing a helmet.



A

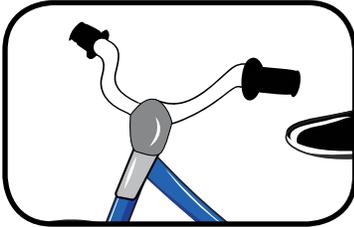


B

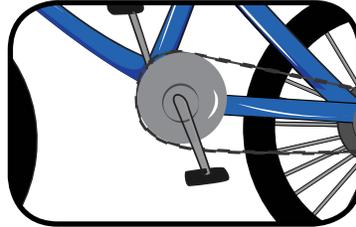


C

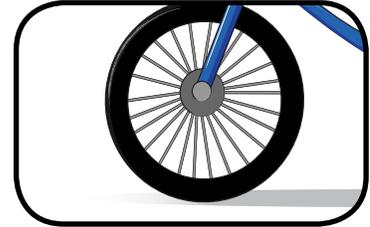
2. Mark the bubble under the picture that shows a bicycle wheel.



A



B



C

3. Mark the bubble under the picture that shows a bicyclist riding safely.



A



B



C

4. Mark the bubble under the picture that shows an object that is fragile like your head.



A



B



C

# Instructor's Question and Answer Key



Administer the child assessment worksheet.

## Questions:

1. Mark the bubble under the picture that shows a child wearing a helmet.
2. Mark the bubble under the picture that shows a bicycle wheel.
3. Mark the bubble under the picture that shows a bicyclist riding safely.
4. Mark the bubble under the picture that shows an object that is fragile like your head.

## Answers:

1. A
2. C
3. C
4. A