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Before We Read

MY LEARNING GOALS

I can

- ☐ compare and contrast two things.
- ☐ tell what I know about bicycles.

Pedaling Through History

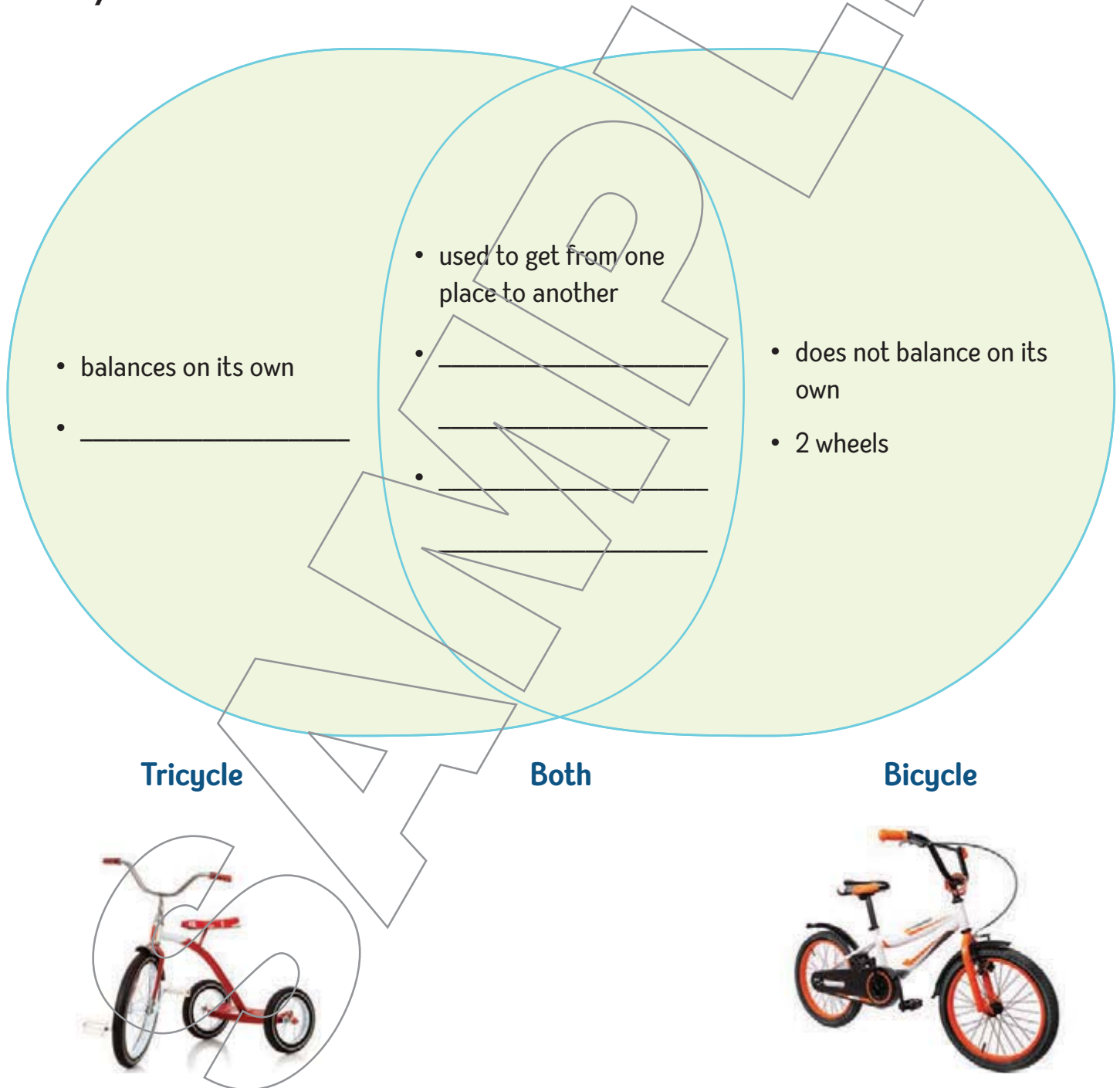
How would life be without bicycles? Many people like to ride bicycles. Some people ride them to get from one place to another. Some people like to race them. There are tricycles for little kids and for adults. Most people do not know where the idea for a bicycle came from. Did you ever wonder who made the first bicycle?



Comparing and Contrasting

When you **compare**, you tell how things are **alike**, or **similar**.
When you **contrast**, you tell how things are **different**.

Look at the pictures of a bicycle and a tricycle. Try to find how they are alike and different.





Traveling on Two Wheels

Did you ever think about who made the first wheel? Someone must have thought of the idea. This invention could have happened more than 5,000 years ago!

The wheel is used so much. You probably do not even think about how useful wheels are. There would be no cars, bicycles, trains, or planes without them.

Steering the Road

The first bicycle was built in the late 1700s by a man in France. His name was De Sivrac. He saw a child's toy. The toy was a wooden horse on wheels. This gave him an idea. He thought it might be easier for an adult to get around on wheels, too. This first bicycle had two wheels. It did not have any pedals or steering. People just sat down and pushed themselves with their feet.

Many people bumped into things because the first bicycles had no steering. In 1817, a person in Germany had an idea for steering. A man named Von Drais made wooden handlebars. This made the bike's front wheel turn from side to side.

MY LEARNING GOALS

I can

- ☐ compare and contrast two things.
- ☐ read and discuss an informational story.



De Sivrac's bicycle



Von Drais's bicycle



Underline how people first made a bicycle move.



What are some things that use wheels?

I have used _____.



Pedal Power

In the 1840s, people worked to make a better bicycle. Their goal was to make pedals and a crank to keep people's feet off the ground. They pushed the pedals instead of the ground!

The first pedals were attached to the front wheel. When the biker pushed the pedal, the crank turned into the wheel. If the front wheel was larger, then the bicycle would go faster.

Bicycles looked a bit strange in the late 1800s. The front wheels were huge so the bikes could go faster. What happened when a rider quickly hit the brakes? He fell over the front of the bicycle!



Penny Farthing bicycle



Circle the sentence that tells what happened if a rider quickly hit the brakes.



What do the pedals of a bicycle do?

A bicycle's pedals _____.



Let's Read

Chains and Hooks

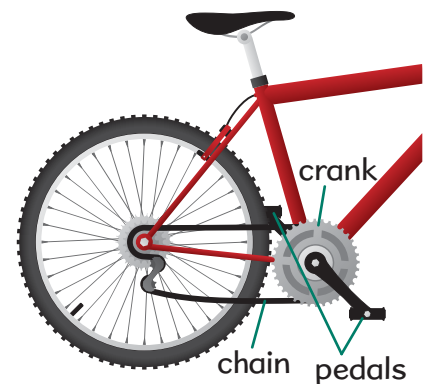
In 1885, a person from England helped solve the problem. John Kemp Starley made a chain that went around the back wheel. This connected to a pedal system in the middle of the bicycle. When a person pedaled his feet, the chain turned the back wheel. The front wheel was left for steering. The wheels of his Rover Safety Bicycle were closer in size. These bicycles were thought to be safer than the bicycles with the larger front wheel.



Rover Safety Bike

A More Comfortable Ride

In 1888, bicycles still had hard, solid wheels. John Dunlop of Scotland changed this. He put air in tires around wheels to give riders more comfort. The air helped cushion the rider. Now, the bicycle rider did not feel as many bumps in the road.



By the early 1900s, most bicycles were more modern. They had chains, steering, pedals, brakes, and air-filled wheels. The style of bicycles has not changed much since then.



Highlight what made John Dunlop's tires different from other tires.



What are some places where you would like to ride a bicycle?

I would like to ride a bicycle _____.



Take Your Pick

What kind of bike do you like best? This may depend on your style of riding. Road bikes, BMX bikes, and mountain bikes have become very popular. If you would rather sit back while you ride, a recumbent bike is for you. This bike is like a chair on wheels. A unicycle has only one wheel and no handlebars. You often see clowns riding unicycles in the circus. Little children often ride tricycles until they are able to balance themselves on a bicycle. Adults might ride a tricycle, too. One adult tricycle has a basket between the back wheels that helps carry things. A quadracycle has four wheels. One or two people can ride one of these bikes. One thing is sure. Bicycles have come a long way since they were invented.



BMX bicycle



quadracycle



recumbent bike



Underline what makes a recumbent bicycle different from other bicycles.



What type of bike would you like to ride?

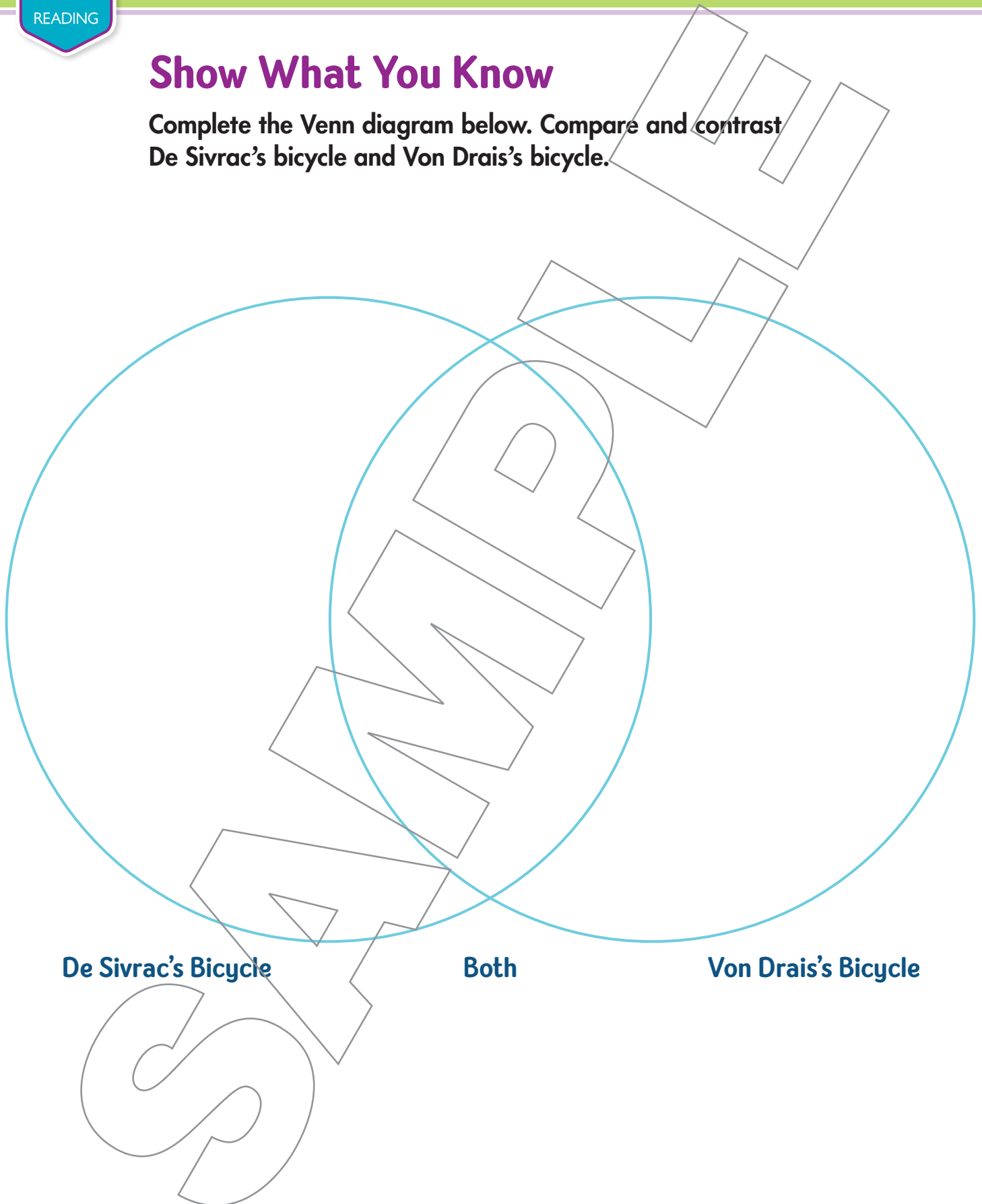
I would like to ride _____ because _____.



Let's Read

Show What You Know

Complete the Venn diagram below. Compare and contrast De Sivrac's bicycle and Von Drais's bicycle.





What Did You Learn?

Think about what you learned from the passage. Then circle the letter of the correct answer.

1. Tires were invented to make the bicycle _____.
 - A faster
 - B taller
 - C less expensive
 - D more comfortable

2. Which word in paragraph 3 of page 94 means “made”?
 - A gave
 - B built
 - C pushed
 - D sat

3. Who made the first bicycle in the 1700s?
 - A Von Drais
 - B De Sivrac
 - C John Dunlop
 - D John Kemp Starley

4. Which word from the passage means the same as “connect” or “join”?
 - A attach
 - B push
 - C turn
 - D crank



Listen and Discuss

MY LEARNING GOALS

I can

- ☐ listen to and understand a passage about riding a bicycle.
- ☐ use language to discuss what I heard and read.

Listen to a passage about riding a bicycle. While you listen the second time, take notes on the chart below.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____



mountain bike

Listen and Discuss



What are some important things to know about bicycles and riding them?



Learning About Language

MY LEARNING GOALS

I can

- understand word relationships.
- identify and understand prefixes and root words.

Prefixes

Greek and Latin number words are part of many words for shapes and things with many parts that are used today.

This first **bicycle** had two wheels.

The prefix *bi-* means “two.”

Here is a chart that tells other number words.

Prefix	Meaning
uni-	one
bi- or du-	two
tri-	three
quad-	four
penta-	five
hexa-	six
septa-	seven
octa-, octo-	eight
nona-	nine
deca-	ten



adult tricycle

Read these sentences from the passage. Circle the prefixes.

1. Little children often ride tricycles until they are able to balance themselves on a bicycle.
2. You often see clowns riding unicycles in the circus.
3. The first bicycle was built in the late 1700s by a man in France.
4. A quadracycle has four wheels.

Learning About Language

Draw a line to match each word with the meaning of its prefix.

1. triangle

2. binoculars

3. universe

4. quadrant

5. octopus

6. pentagon

eight

five

four

two

three

one



Read each sentence. Then write the number that matches the prefix of the boldface word. Look back at the chart on page 102 if you need help.

1. A **unicorn** has _____ horn in the middle of its forehead.

2. A **decade** is _____ years.

3. An **octagon** has _____ sides.

4. Philip Pullman's **trilogy** His Dark Materials has _____ volumes, *The Golden Compass*, *The Subtle Knife*, and *The Amber Spyglass*.

5. The _____ people singing the **duet** are Zac and Vanessa.



Write About It

MY LEARNING GOALS

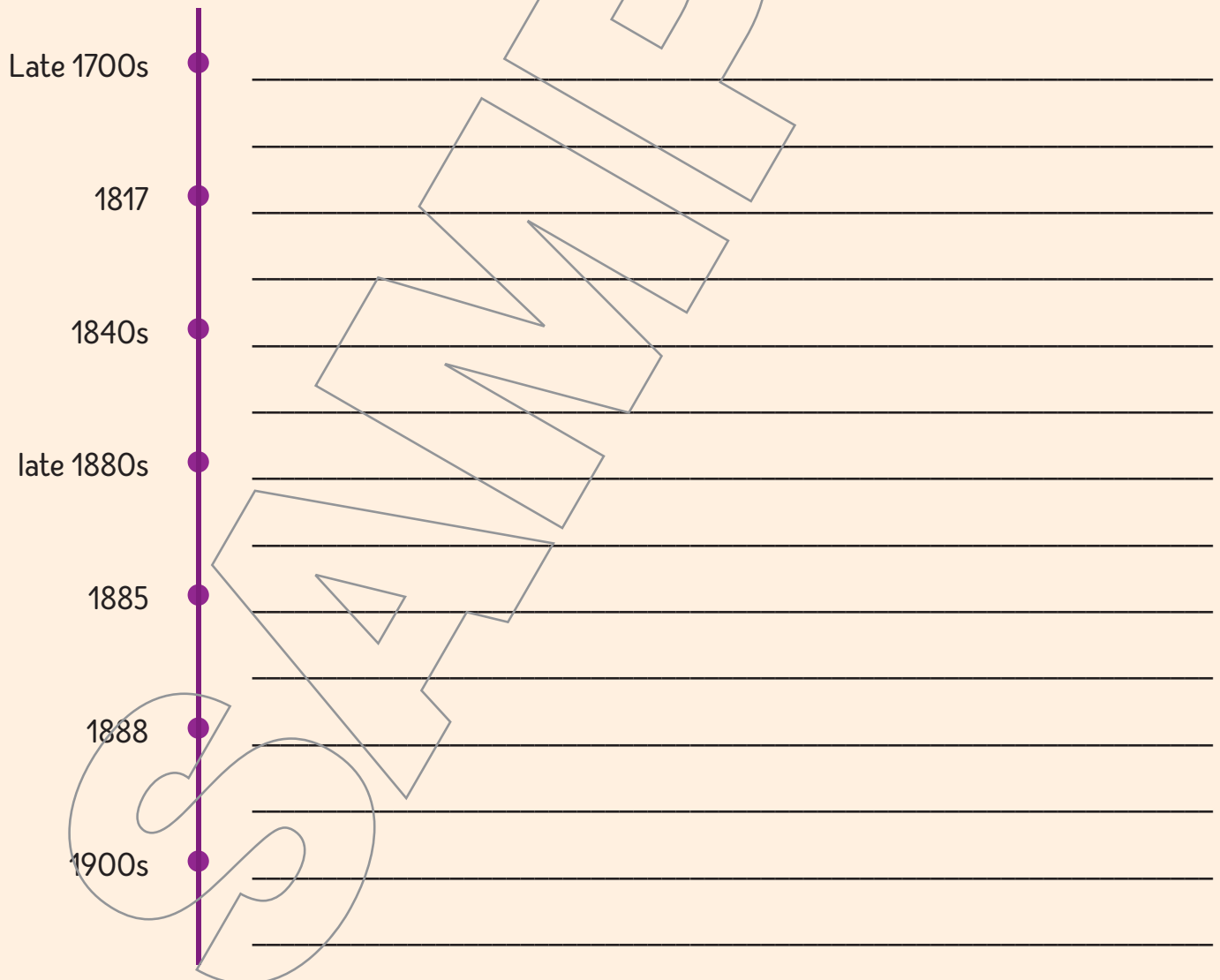
I can

- ☐ write about the history of the bicycle.
- ☐ use descriptive language.

Technology improves over time. The steps to improve these things happen in **sequence**, or order. The bicycle saw many changes before it looked like the ones we see today. Write a paragraph telling about how the bicycle changed over time.

Plan My Writing

Use the time line to plan your writing. Then use this information to write your paragraph about the bicycle's history.



Write About It



WRITING

Bicycles have changed over time. The bicycle was invented in _____
by _____. It did
not have _____.

Then in 1817, _____
_____.

In the 1840s, _____
_____.

By the late 1880s, the bicycle had a huge front wheel. These helped the
bicycle _____.

The Rover Safety Bicycle _____
_____.

John Dunlop added _____
_____.

By the 1900s, bicycles were like the ones we ride today with handlebars,
brakes, and air-filled tires.