



BIG QUESTION 3

Why are wheels important?

Think and write.

What do you know?

What do you want to know?

UNIT 5

Get Ready

Words

A Match the words and the pictures or definitions.

1 axle



a



2 spoke



b

to pull or carry

3 transportation



c



4 rotate



d

to move or trade places

5 rod



e



6 rim



f

knowledge used to make hinges

7 transfer



g



8 haul



h

the grip of the wheel on the road

9 traction



i



10 gear



j

to crush and make smaller

11 grind



k



12 technology



l

to move in a circle

B Circle the correct answer.

- 1 The six metal rods on the inside of the wheel are the _____.
a rims **b** spokes **c** transportation **d** gears
- 2 We need to _____ the wheat to make flour.
a rotate **b** transfer **c** grind **d** haul
- 3 The outside part of a wheel is called the _____.
a spoke **b** rod **c** axle **d** rim
- 4 The wheels _____ on their _____.
a transfer / rods **b** haul / spokes **c** rotate / axles **d** grind / gears

C Write the missing word.

gears grind hauling traction rotate transportation

1



The car lost its _____ when we hit the ice.

2



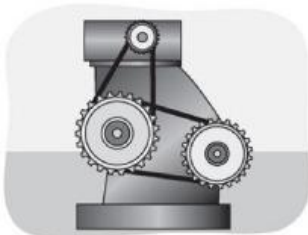
Cars, bicycles, trains, and buses are kinds of _____.

3



The truck is _____ furniture.

4



A grinding machine is for making flour. The _____ are part of this machine. When they _____, or move around, they move a belt. This makes the machine _____ the flour.

A Read the article. What are the uses and benefits of bicycles?

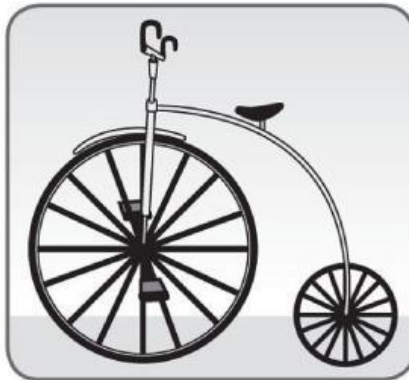
B Read the article again. Remember: You can re-read a sentence or paragraph to help you understand it.

Bicycles: Clean Transportation

Bicycles are one of the most popular forms of **transportation**. There are more than a billion bicycles in the world. People use them for transportation and also for recreation, racing, and to **haul** supplies, letters, or packages.

One of the first bicycles was made in Germany in 1817. It did not have pedals. The rider sat on a wooden platform and pushed the ground with his feet. Some things about the bicycle were similar to modern bicycles. The wheels had **spokes** like our bicycles. The bicycle frame was also similar because it was attached to each wheel **axle**.

In the 1860s, pedals were added to the bicycle. This bicycle had a very large front wheel. Later, people added the chain and **gears** to control how fast bicycles could go. Bicycles needed brakes, too. In the late 1800s, **rim** brakes were invented. These brakes stopped the bicycle with a pad that pressed against the rim of the wheel. **Technology** has



Think

Re-read the paragraph. What were the first bicycles like?

continued to improve bicycles. The seats, steering, gears, and wheels have all changed.

Bicycles are a very clean kind of transportation, so many cities try to encourage people to use them. Workplaces have bicycle racks for people to keep their bicycles. There are special bicycle

lanes on the roads. This makes bicycle riding safer so that more people can use their bicycles instead of cars. Some cities, like Montreal, have programs for people to share public bicycles. People pay to use them and then park them in another station for someone else to use. The city of Hangzhou, China has one of the largest bicycle sharing programs—more than 60,000 public bicycles are used there. And they are going to increase that number to 175,000 by 2020! In Copenhagen, 36% of the people now use bicycles to get to work. City officials think the number will increase to 50%.

If cities make it easier for cyclists, many more people will ride bicycles. Bicycles are here to stay. They will help us keep transportation clean!

Understand

Comprehension

A Re-read to understand. Re-read each paragraph to answer the questions.

1 Re-read the first paragraph. List four uses for bicycles.

2 Re-read the second paragraph. How was the first bicycle the same and different from a modern bicycle? Give at least one example of how it was the same, and one example of how it was different.

Same: _____

Different: _____

3 Re-read the third paragraph. List three things that were added to bicycles.

4 Re-read the fourth paragraph. List four ways that cities have encouraged people to use more bicycles.

5 Why is it a good idea for people to use more bicycles?

B What kind of transportation do people use where you live?

C Words in Context Fill in the blanks.

platform vehicles durable mill mechanical inspire

1 Wheels and gears were used to make many _____ things.

One invention using a wheel is a _____ to grind flour.

2 Wheels are also used for _____, like bicycles and cars.

3 The first bicycle had a wooden _____ to sit on. It was made of very strong, _____ wood.

4 Reading about inventions can _____ people to want to invent new things.



Grammar in Use



A Study the grammar.

Learn Future with *Will* and *Going to*

Will	Going to
Future Plan The train will leave at 2:59 P.M.	Future Plan They are going to increase the number of bikes to 175,000 by 2020.
Predictions about things you believe City officials think the number of bikes will increase by 50%.	Prediction about things you can see I'm late. I'm going to miss the train.

B For each numbered sentence below, write a prediction from the box.

There's going to be a big storm.

He's going to get into an accident.

I'm going to get a good grade.

She's going to fall asleep on the way home.

I'm going to get stuck in traffic.

It's going to hurt tonight.

- I twisted my ankle playing soccer. _____
- I have studied a lot for the test. _____
- The baby looks very tired. _____
- The sky is getting very dark. _____
- There are a lot of cars on the road. _____
- That driver is not being careful. _____



C Complete the future facts. Use *will* with *she, he, they, or you*.

1



The train
_____ will _____
leave at 6:05 P.M.

2



_____ be 10 years old on Saturday.

3



_____ be traveling tomorrow, so they won't be able to call.

4



You are getting on the 10 o'clock train, so _____ arrive at 10:30 P.M.

D Complete the future plans. Use *going to* with *she, he, they, or you*.

1



He's going to take the baby outside for a walk.

2



_____ to see a lot of places.

3



_____ go ice skating with her friends today.

4



_____ go to Spain this summer.

E Write two predictions about the future. Use *will*.

1 What will cars of the future look like?

2 Will people live on other planets someday? When? Who will live there first?

Communicate

Word Study

A Connect two nouns to make compound words. Then connect the compound word to the picture. Write the words.

1	wheel	ring		
2	door	ship		
3	foot	time		
4	hand	writing		
5	day	case		
6	suit	bell		
7	space	chair		
8	ear	print		

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

B Write sentences with five of the compound words above.

1	_____
2	_____
3	_____
4	_____
5	_____

Writing Study

A Answer the questions. Use the verbs *decide*, *forget*, *hope*, *want*, or *plan* with an infinitive.

1 What did you decide to do this week?

2 What did you forget to do this week?

3 Where do you hope to go this year?

4 What do you want to do this weekend?

5 What do you plan to do tonight?

6 Where do you want to travel to this year?

7 What famous person do you hope to meet someday?

B Write a paragraph based on the model below. Describe plans you have with your friends or family. Use some of the verbs from **A**. Use *going to* or *will*.

This week, I decided to spend more time with my friends. We all like movies. We are going to see a lot of new movies this month. I will meet my friends tomorrow to go to see a funny movie about a spaceship. We will go in the daytime so that we can get cheaper tickets. I want to invite them to my house afterward. This weekend, I am hoping to play soccer with my friends. I will call them to see if they want to play.