

Once Upon a Bike

Energy Revealed
Learner Worksheet
Grade Level: 4-7



Cycling: True or False?

1. There are about 400 million bicycles in the world.
2. A quindem is a five-seater bicycle.
3. The world speed record on a bicycle is 334.6 kilometres per hour.
4. On average, people in North America use their bicycles for 5% of all trips they make around town.
5. A football helmet will work just as well as a bicycle helmet.
6. Most bicycles contain enough metal to trigger the vehicle detector wire loops cut into the pavement that help control traffic light signals.
7. It is safer to ride facing traffic.
8. Thirty per cent of vehicle-bicycle collisions occur at intersections.
9. On average, cities in developed countries such as Canada use about 11% of all land for roads and parking lots for motor vehicles.
10. Before 1869, bicycle "tires" were made of iron.
11. There are 100 bikes for each automobile in China.
12. In a school in the United States, learners are allowed to ride unicycles in the halls between classes.
13. The longest cycling trail in the world is 2,700 miles in length, and spans from Banff, Canada, all the way to Antelope Wells, New Mexico.
14. Every Sunday, on average, 1.7 million people in South America ride or walk the trails and paths on streets in their city.
15. The most efficient machine on earth for the weight it can move for the amount of energy used is a bicycle.
16. Since 1985, the average distance that children cycle has increased by 58%.
17. One hundred bicycles can be produced for the same energy and resources it takes to build one medium-sized car.

Cycling: True or False? Answer Key

1. There are about 400 million bicycles in the world.
 - a. **FALSE:** There are about 400 million bicycles in China, and there are over a billion bicycles in the world. That means there are about twice as many bicycles in the world than automobiles. Every year, about 100 million new bicycles—and 78 million new cars—are produced.
2. A quindem is a five-seater bicycle.
 - a. **TRUE:** The first quindem was built in 1940. The longest tandem or “bicycle built for two” ever made was for thirty-five people. It is almost 20 metres long and weighs about as much as a small car.
3. The world speed record on a bicycle is 334.6 kilometres per hour.
 - a. **TRUE:** The world speed record on a bicycle is held by Bruce Bursford, a British sportsman who broke the record for the fastest speed on a bicycle on a treadmill at 334.6 km/h in 1995.
4. On average, people in North America use their bicycles for 5% of all trips they make around town.
 - a. **FALSE:** People in North America use their bicycles for less than 1% of all their trips around town. In Italy, 5% of all trips around town are on bicycle. In Japan, it is 15%, and in the Netherlands it’s 30%.
5. A football helmet will work just as well as a bicycle helmet.
 - a. **FALSE:** Only a bicycle helmet is made to protect the head from the kinds of falls that can occur while biking. Other helmets and hard hats are made to protect the head from other kinds of injury.
6. Most bicycles contain enough metal to trigger the vehicle detector wire loops cut into the pavement that help control traffic light signals.
 - a. **TRUE:** You can increase the likelihood of detection by stopping your bike inside and near the edge of diamond and circle shaped sensor lines and by leaning the bike closer to the ground (holding it with one hand).
7. It is safer to ride facing traffic.
 - a. **FALSE:** It is only safe to ride on the right, with traffic. Riding against traffic can confuse and surprise drivers. It can also make you hard to see by drivers turning at intersections and coming out of driveways. Almost one quarter of all bicycle-car collisions result from bicyclists riding against traffic or riding on the sidewalk.
8. Thirty per cent of vehicle-bicycle collisions occur at intersections.
 - a. **FALSE:** It’s actually double that. Sixty per cent of vehicle-bicycle collisions occur at intersections and most of these occur when the cyclist is moving straight ahead. Because intersections are places where people travelling in different directions cross paths and often change directions, the potential for collisions is high. Pedestrians and cyclists are most vulnerable. Travel safety information can be sourced from local transportation groups (e.g., in BC, see www.bikesense.bc.ca).

Cycling: True or False? Answer Key

9. On average, cities in developed countries such as Canada use about 11% of all land for roads and parking lots for motor vehicles.
- a. **FALSE:** Cities of developed countries typically use at least three times that (or 1/3 of their land) for roads and parking lots for motor vehicles.
10. Before 1869, bicycle “tires” were made of iron.
- a. **TRUE:** They were made of iron.
11. There are 100 bikes for each automobile in China.
- a. **FALSE:** There are 250 bikes for each automobile in China. Bicycles are an important means of transportation in China, and most Chinese still ride an all-purpose, one-speed bike. In the 1980s, it was common in China for an entire family of three to travel on a single bike. Usually dad would pedal, the child would sit on a kind of make-shift seat behind the handlebars, and mom would sit side-saddle on the rear rack.
12. In a school in the United States, learners are allowed to ride unicycles in the halls between classes.
- a. **TRUE:** At St. Helen’s School in Newbury, Ohio, unicycling is a mandatory subject. Surprisingly, there are not many collisions!
13. The longest cycling trail in the world is 2,700 miles in length, and spans from Banff, Canada, all the way to Antelope Wells, New Mexico.
- a. **TRUE:** The Great Divide Mountain Bike Route is the longest in the world with an intense 2,700 miles in length. The path was created back in 1997 and still holds the place as the longest stretch of continuous trails in the world, spanning from Banff, Canada, all the way to Antelope Wells, New Mexico.
14. Every Sunday, on average, 1.7 million people in South America ride or walk the trails and paths on streets in their city.
- a. **TRUE:** There are streets in many countries of South America that are closed to automobiles on Sundays and holidays.
15. The most efficient machine on earth for the weight it can move for the amount of energy used is a bicycle.
- a. **TRUE:** The most efficient machine on earth for the weight it can move for the amount of energy used is a human on a bicycle.
16. Since 1985, the average distance that children cycle has increased by 58%.
- a. **FALSE:** Since 1985, the average distance that children cycle has declined by 58%. Since that time, walking has also decreased among children, by 19%. Over the same time period, the average distance traveled in an automobile has increased by 70%.
17. One hundred bicycles can be produced for the same energy and resources it takes to build one medium-sized car.
- a. **TRUE**

Sources

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