



TOOLS *for* SCHOOLS

Just for fun!

Engaging and enjoyable challenges, puzzles, poetry, games, maths and amazing facts all with a cycling theme.

Use at school or home, with family and friends
or on your own.

Contents

Art, design and craft
activities



(pg 1, 2, 7, 10, 12, 15,
20, 22, 24)

Board game & jigsaw



(pg 14, 15)

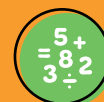
Geography fun



(pg 13, 14)



Maths & number
challenges



(pg 1, 5, 9, 14, 17)

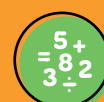
Poetry fun (pg 6)



Word puzzles &
challenges

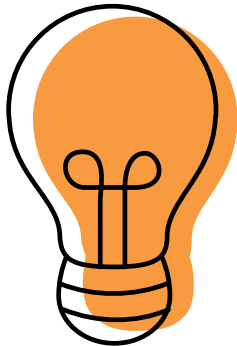


(pg 1, 4, 5, 8, 9,
11, 16, 17, 19, 21)



Answer page at the back

and amazing facts throughout!



A challenge to make a bike

Try making a bicycle from paper straws, Lego, or cardboard. See if you can create one where the wheels go round and the handle bars move.

World Record



According to the Guinness Book of World Records (2015) the longest bike is 41.42 m long. To win the record the bicycle had to be able to travel 100 meters without touching the ground. It is operated with pedals and a chain like any other bikes.



Convert 41.42m into cms and mm.

Word Wizard



O	V	E	R	T	A	K	E	R	W
P	R	I	M	A	R	Y	Q	O	E
C	E	L	J	G	T	R	M	N	R
X	L	S	I	G	N	A	L	I	V
N	B	P	Q	Z	A	D	F	M	U
R	I	L	O	R	T	N	O	C	E
U	S	I	G	N	S	O	E	P	O
T	I	S	T	O	P	C	Q	Y	N
U	V	G	L	D	E	E	P	S	A
B	B	R	A	K	E	S	J	D	M

Words to find

Primary	Brakes Control	Visible	Stop
Secondary	Speed	Signs	Minor
Overtake	Manoeuvre	U-trun	

Can you design your own Word Wizard for a friend to complete?



Words to find

Amazing bike fact

Brian Pankey balanced his bike on his forehead for 2 minutes and 48 seconds.

Don't try this yourself!



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Amazing bike fact

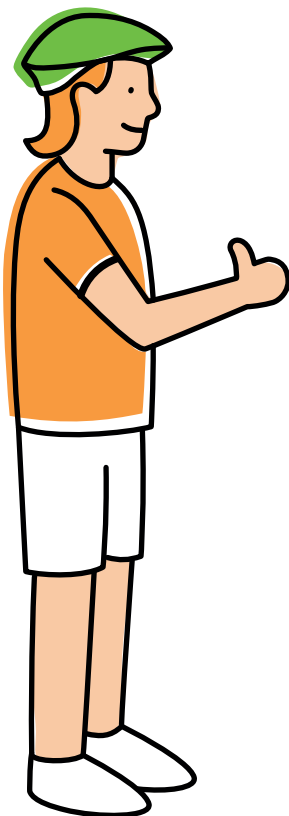
Rodney Hines balanced on the back wheel of his bike without holding the handlebars for 1 hour and 30 minutes. He travelled 16 miles.



Cycling! Cycling! Cycling!



Design a poster for school or the community or an advert for television to encourage everyone to get cycling!

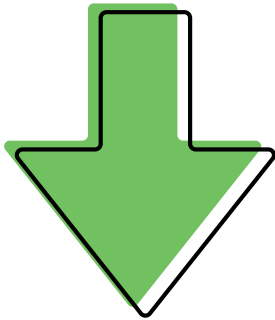
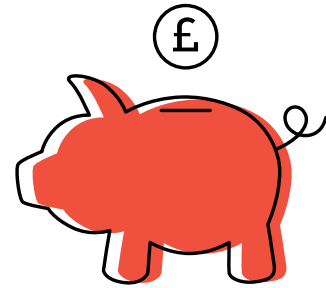


Amazing bike fact

It is 20 times cheaper to maintain a bicycle than a car.



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Amazing bike fact

The first mountain bikes were made in 1977.



Amazing bike fact

One of the most important discoveries in the history of bicycle was the pneumatic tyre. This invention was made by John Boyd Dunlop in 1887.



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Can you label the bike?



1. _____

5. _____

2. _____

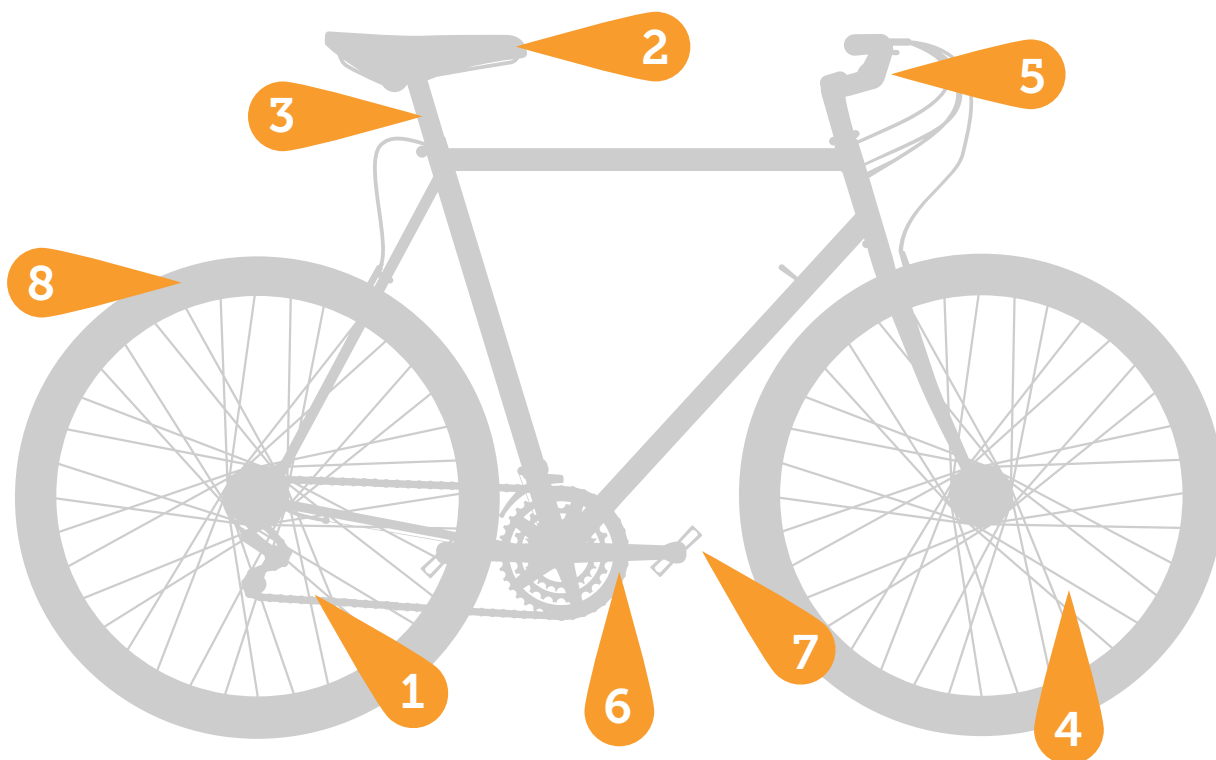
6. _____

3. _____

7. _____

4. _____

8. _____



Amazing bike fact

The word bicycle is created from the French word "bicyclette". Before this name, bicycles were known as velocipedes..



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Cycling on the road



What are the two standard positions for cycling on the road?

1. _____

2. _____

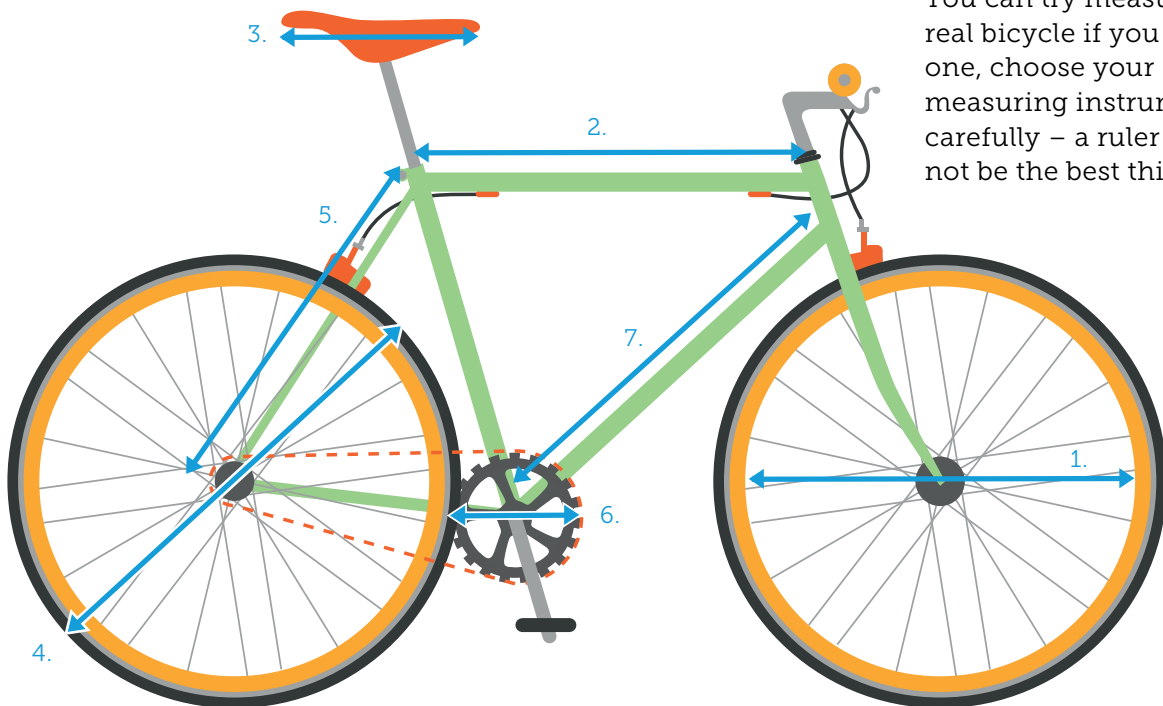
Measuring a bike



Measure the lengths of the different parts of the bike using a ruler. Record your answers in centimetres (cm)

And underneath challenge yourself to convert these measurements into millimetres (mms)

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



You can try measuring a real bicycle if you have one, choose your measuring instrument carefully – a ruler might not be the best thing!

Put the measurements in order from the longest to the shortest

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

Amazing bike fact

One car parking space can hold between 6 and 20 parked bicycles.



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Complete the limerick...



There was old man called Spike
Who went for a ride on his bike...



Can you write a poem about Spike and his bike?



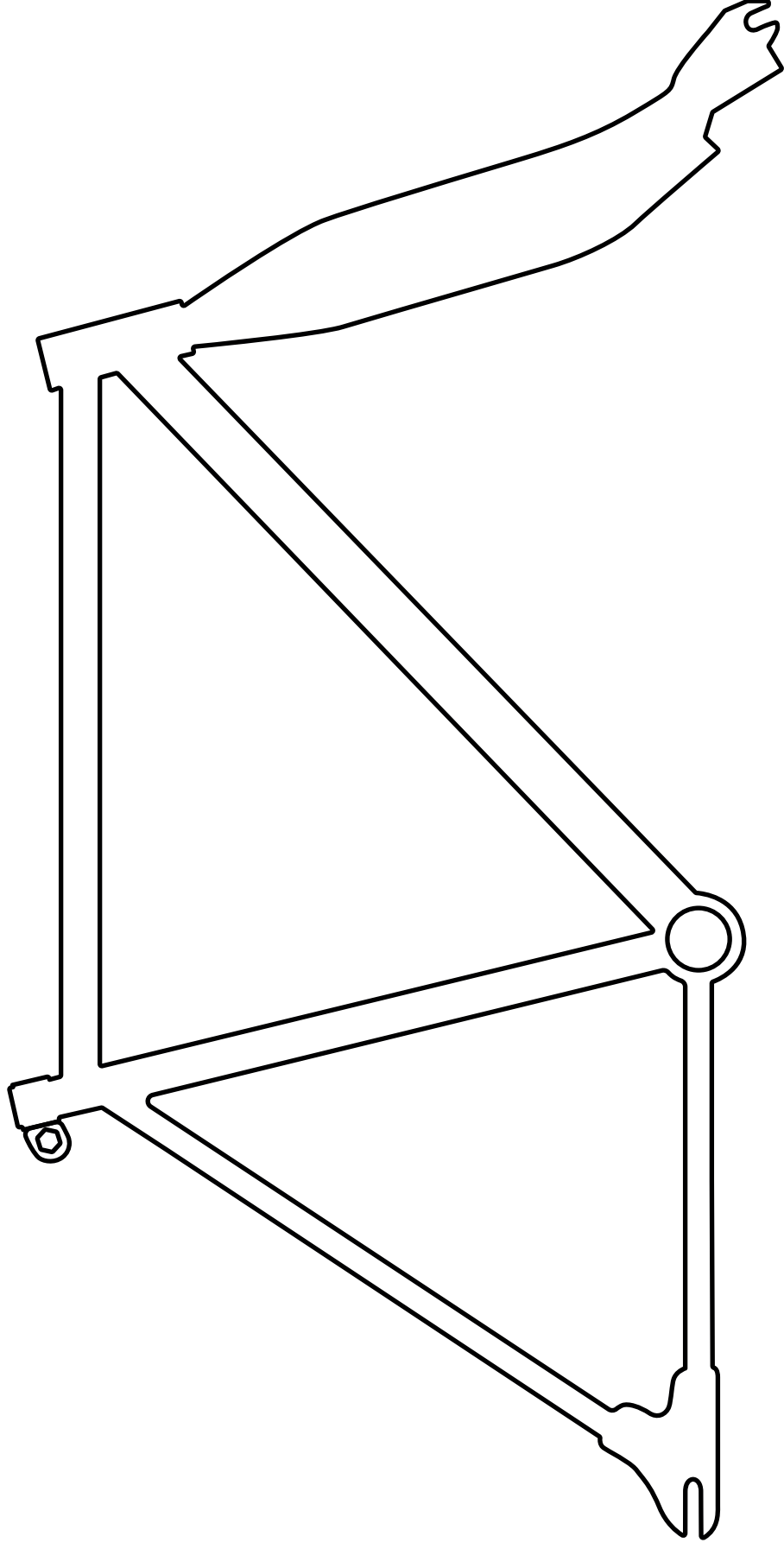
Design a bicycle frame



Create an eye catching bike frame, add tyres, seat and handle bars - can you create something amazing?



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Cycling for an hour can burn over 250 calories!

This is the same amount of calories as some hamburgers and some chocolate bars.



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What am I?



Draw an arrow from the clue to the correct answer and then draw the object onto the bike diagram.

I am used to slow down and stop

I am used on the front and the back so I can see and be seen

I should be checked every time you ride to make sure I'm not flat

You can use me as a warning to others

I need to be the right height for you

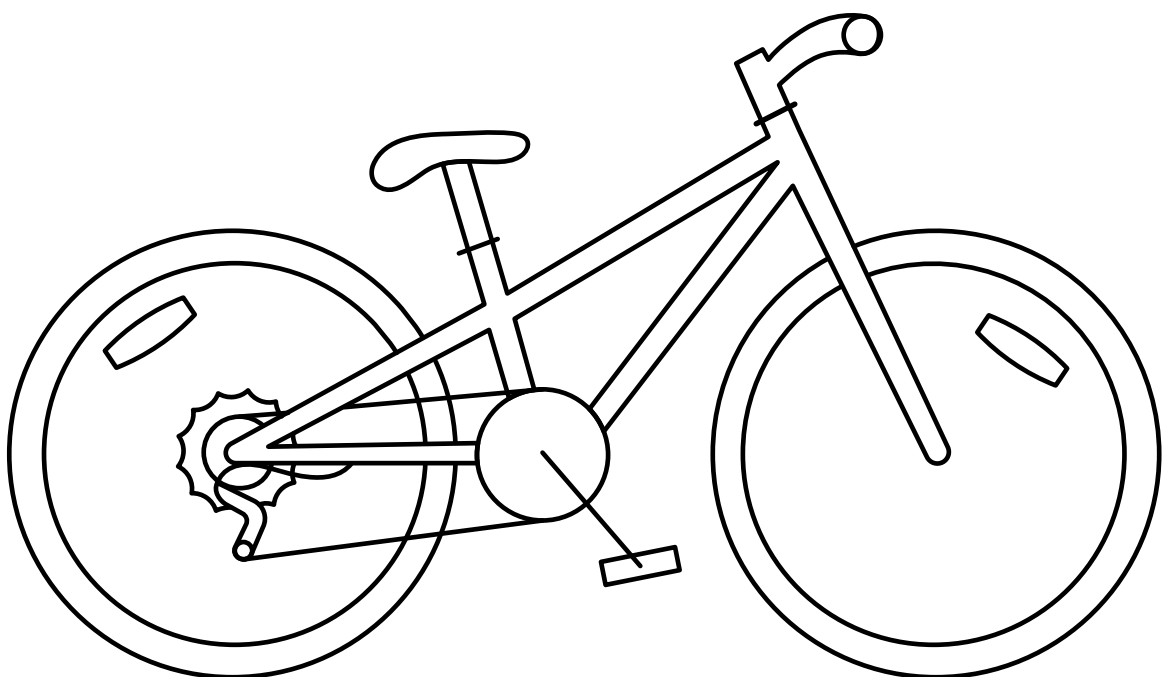
Bell

Tyres

Lights

Seat

Brakes



Amazing bike fact

In the late 1700s a Frenchman named Comte de Sivrac invented the Celerifere, a wooden hobby horse made of two wheels and joined by a beam. The rider would sit on the beam and move by pushing his or her feet against the ground. On bumpy ground, this must have been very, VERY uncomfortable!



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How many?

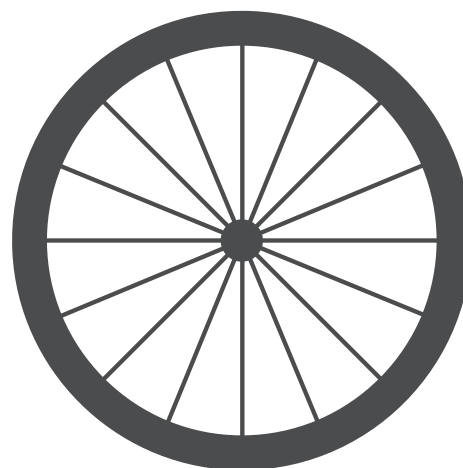


How many spokes does this wheel have? _____

How many spokes are there if there were $\frac{1}{2}$ as many? _____

How many spokes would there be if there was only a $\frac{1}{4}$ of them? _____

How many spokes make $\frac{3}{4}$ of the total number? _____



Road signs



Take a look at these road signs try to work out what they might mean. Check on the internet, in the highway code or with your teacher or instructor and record the correct answers.



The meaning of the signs is:

1. _____

4. _____

2. _____

5. _____

3. _____

6. _____

Design a bicycle of tomorrow

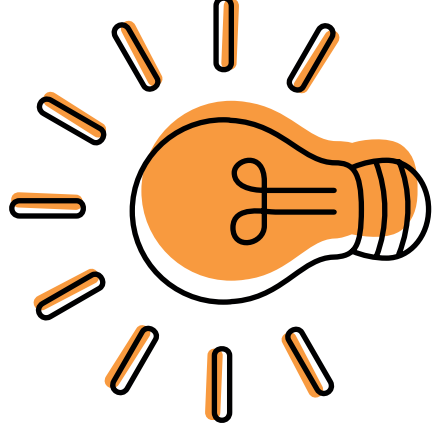


What do you think a bike will look like in the future?

Design a bike of the future. How out of this world will it be?



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Amazing bike fact

The youngest rider ever to win the Tour de France was Henri Comet – he was only 19 years old when he won in 1904.



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COPS

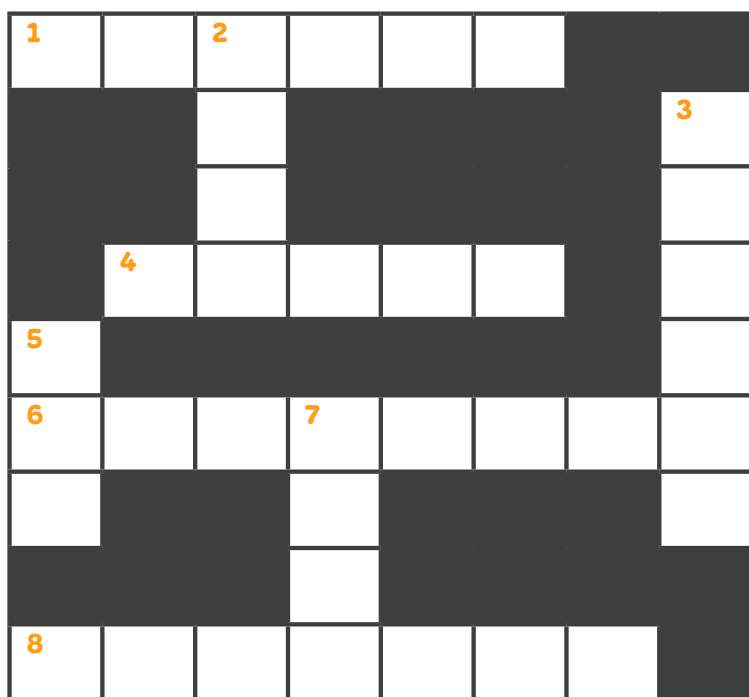


Whichever position you are riding, you should always remember 'COPS'.
Finish these words.

Contr_ _
Obse_ _ _ _ _
Pos_ _ _ _
S_ _ _ _



Crossword



Across:

1. How you tell other road users that you are going to turn
4. What you use to slow down or stop on a bike
6. Passing a stopped or very slow vehicle
8. Your position on the road

Down:

2. This makes pedalling up steep hills easier
3. This can help protect your head from injury
5. Sir Chris ... won a lot of Olympic gold medal for cycling
7. Give plenty of this when overtaking another bike

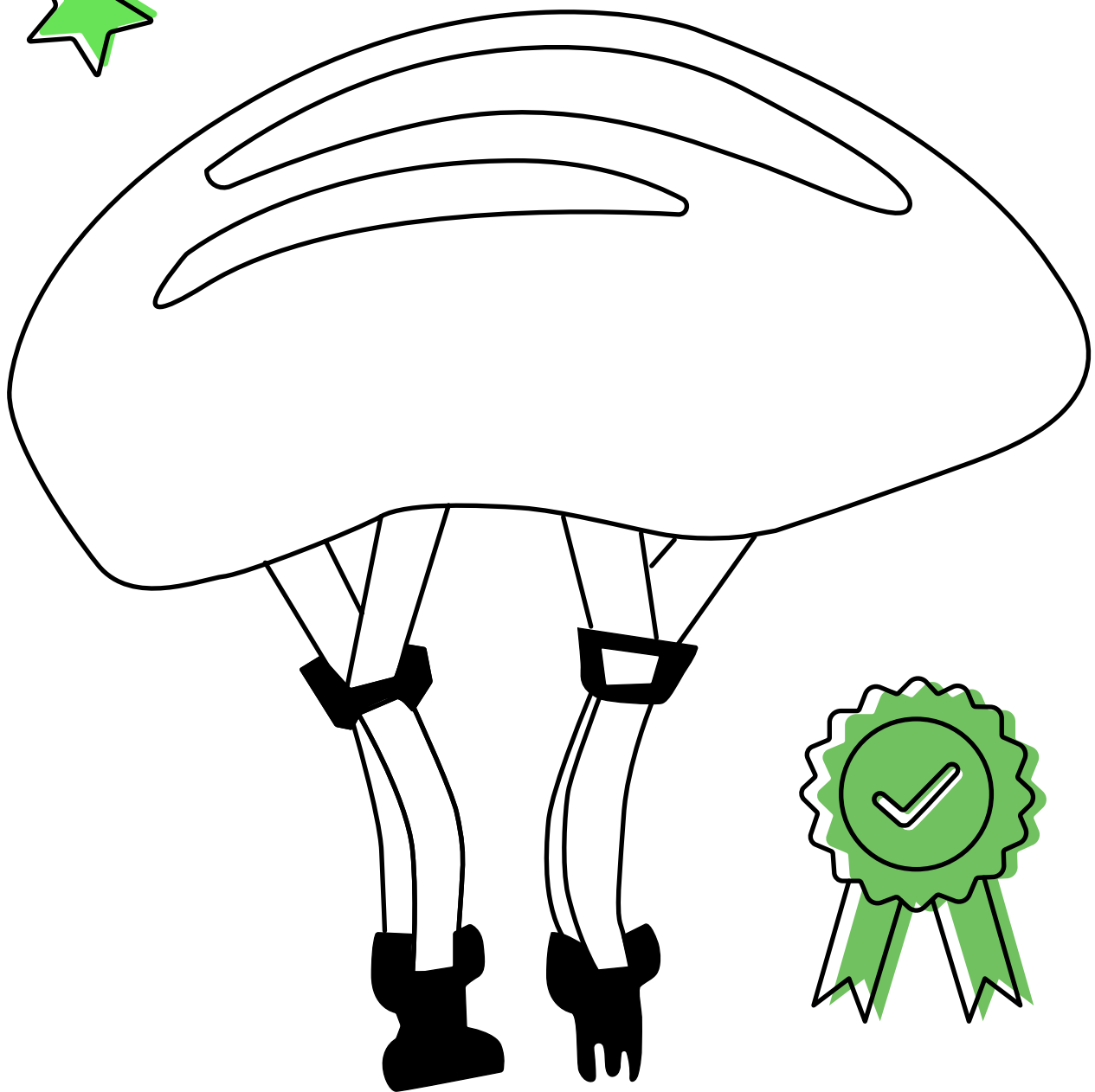


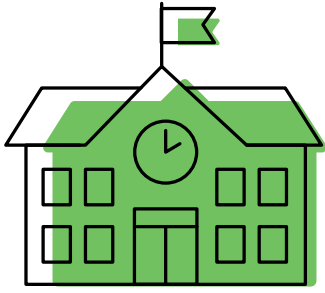


Design a bicylce helmet



A helmet is a very important bit of kit. It can protect your head from injury. Come up with a great design for the outside of the helmet. Make it as unique as possible!





**TOOLS for
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Plan and draw your route to school



Draw a route or map showing the journey between home and school or create an imaginary route. What might you see along the way?

A large empty rectangular box with rounded corners, intended for drawing a route or map between home and school.

1. What checks do you need to make on your bike before you start your journey?

2. What hazards might you see on your journey to school?

1.

2.

3.

4.

5.

6.

3. Share your route plan to school with a partner and explain what you will have to do to avoid the hazard safely.

4. What do you need to remember to do with your bike and equipment when you arrive at school?

Then draw them on your map.

$$\begin{array}{r} 5+ \\ = 82 \\ 3 \div \end{array}$$



How to play

Use a dice and try to get home from school. If you throw a six, you get another turn. You can play by yourself or with your friends (it's just like snakes and ladders!). You will need one dice and a counter for each player.



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46	47	48 Forgot to lock your bike. Go back to the start!	49	50  HOME
45	44 Use the bike lane. Move on three places.	43	42 	41 Lights not working - go back to square 22.
36 Traffic lights green. Throw again.	37	38 	39	40
35	34 	33	32	31 Wrong turn. Back two places
26 Puncture, miss a turn.	27	28 	29	30
25 You remembered your PE kit move on 4 places	24	23	22	21 
16	17 Zebra crossing empty move 3 places forwards.	18	19 	20
15 	14 Dropped books, move back three spaces.	13	12	11
6	7	8 Traffic lights at red, miss a turn.	9	10 
5 Down hill road, move on five places.	4	3 Forgot hi vis jacket. Back to the start!	2	1 START

Amazing bike fact

On a bike you can travel four times faster than you can walk, using a fifth of the energy!



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Jigsaw



Use the picture below, make a jigsaw by cutting on the lines marked, and try to put the picture back together again.



Try finding your own image of cycling or draw one and create your own jigsaw. Swap with someone else and try each other's.

Amazing bike fact

The oldest person to win the Tour de France was Firmin Lambot, who was 36 years and 4 months old when he won in 1922.



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Air Pollution



In a small group/pair read the following and discuss the missing words. See if you can work them out without looking at the word list below. Fill in the missing words when you have agreed.

We put _____ and diesel into cars, vans and lorries. These cause huge amounts of _____ pollution. This affects our health.

These chemicals come from car _____. Chemicals affect the quality of the air we _____ in and some people have difficulty breathing due to the poor air quality.

_____ is a mixture of smoke, gases and moisture and this can come from polluted areas.

Chemicals from car exhausts can create acid _____ when it mixes with water in clouds.

This can cause damage to _____ and _____.

Missing words

Rain Petrol Air Plants
Exhausts Breathe Animals Smog



Catchy slogan



Come up with a catchy slogan to encourage more pupils to cycle to school.

Examples: 'Use pedal power' or 'We need clean air! Cycle more drive less!' – What can you think of?

Amazing bike fact

The Tour de France is the world's largest annual (yearly) sporting event!

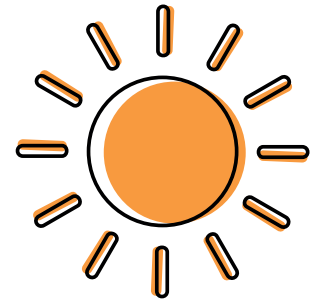


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A drop of water (This is pretty tricky!)



42,000 water bottles were used during the race. If each bottle contains 750ml, how many litres of water were drunk in total?



How fast?



If a stage of the Tour de France is 150 kilometres and a rider averages 20 kilometres per hour, how long will it take him to complete the stage?

Words, words, words



How many words can you make up using the letters from the words Tour de France? You may only use each letter once!

0-6 Good

7-12 Very good

13-20 Excellent!

More than 20.... Wow!!!

Amazing bike fact

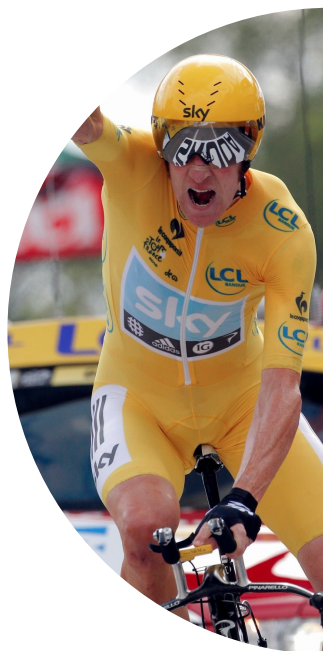
Around 12 million people come to watch the race every year.



TOOLS for
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Le Tour De France

The leader's jersey is yellow, the top sprinter wears green, and the fastest young rider wears white. The best mountain racer wears a red and white spotted jersey.



The first British rider to win the race was Bradley Wiggins in 2012. Chris Froome has since won the Tour in 2013, 2015, 2016 and 2017. Geraint Thomas won for Great Britain in 2018.



The Highway Code



First seen in 1931 and cost one old penny (under half of 1p). It included advice to drivers of horse-drawn vehicles to 'wave the whip above the head; then lean the whip to the right or left to show the direction in which the turn is to be made.'

It only showed ten road signs. Cyclists were hardly mentioned.

Today's Highway Code has a section of rules just for cyclists. How many rules can you find in the Highway Code?

Looking after your bike



Looking after your bike in five easy steps...

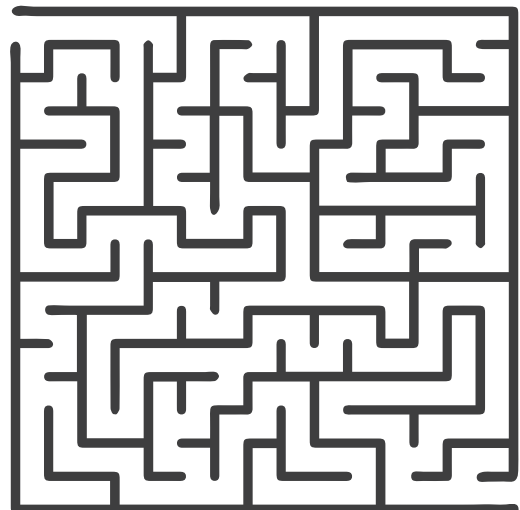
1. Keep the tyres fully inflated.
2. Use your bike regularly.
3. Lubrication - little and often, less is more.
4. Have your cables (wires) at the correct tightness (you may need an adult to show you how to do this the first time).
5. Check the brake pads.
6. Write a set of instructions about how to pump up bicycle tyres and then swap with a partner and have a go at following these instructions. Are they helpful?

How to pump up bicycle tyres safely.

Bicycle maze



Can you draw a bicycle maze? You'll need squared paper, a pencil and an eraser. Once you've drawn it, swap with a partner and try to solve it..



Amazing bike fact

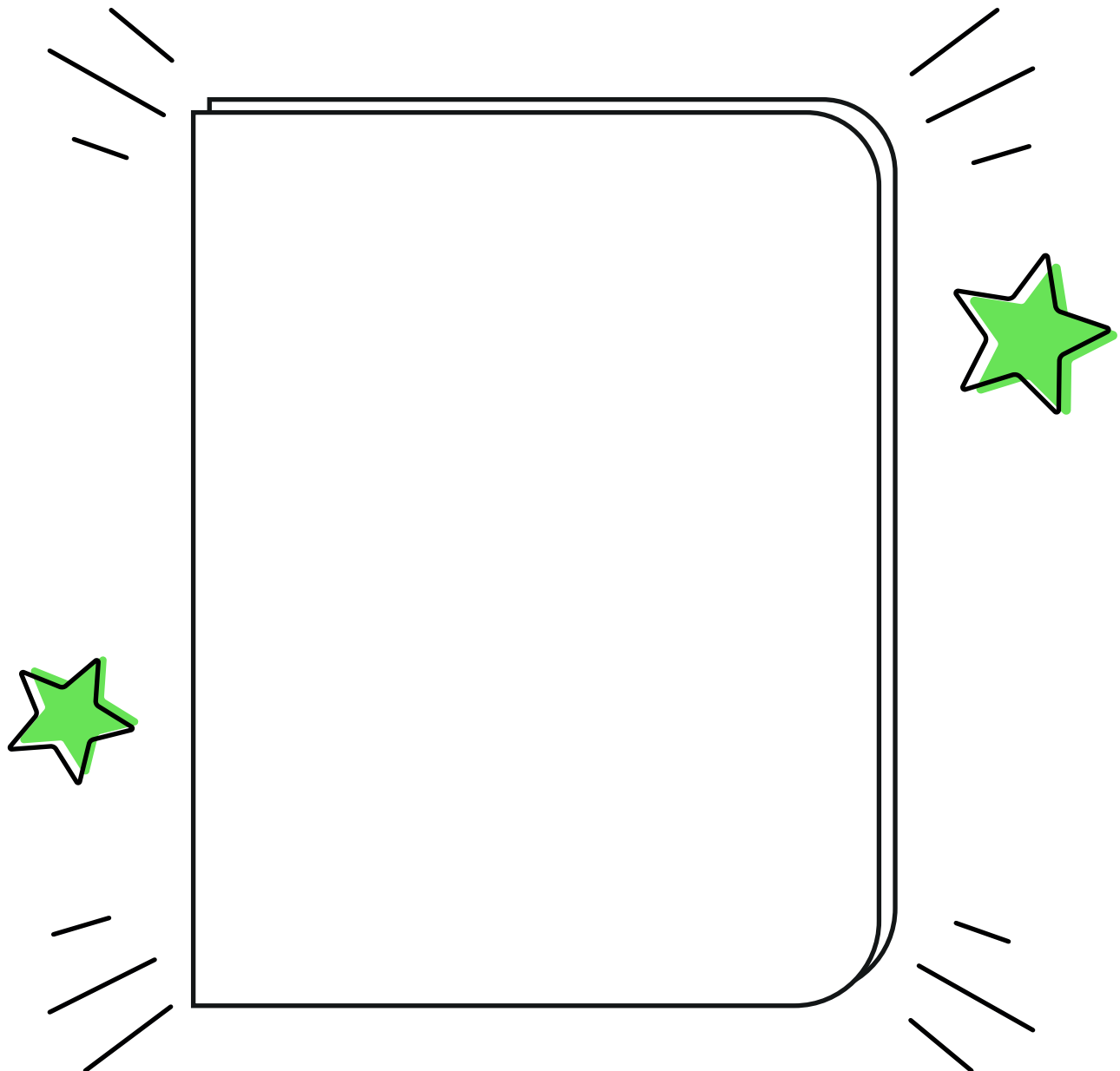
The first commercially sold bicycle "Bonshaker" weighed 80 kg when it appeared for sale in 1868 in Paris.



The Highway Code



The Highway Code promotes road safety. It is a set of information, advice and rules that must be followed by all road users in the United Kingdom. The Highway Code applies to drivers of animals, pedestrians, cyclists, motorcyclists and drivers. Design a new front cover- think about the colours and message you want to share.





Cycling and your health



Read the following statements and
decide if they are true or false.

- | | | | |
|-------------------------------|----|--------------------------------|---|
| <input type="checkbox"/> True | or | <input type="checkbox"/> False | 1. Cycling regularly will help you sleep better. |
| <input type="checkbox"/> True | or | <input type="checkbox"/> False | 2. Cycling can help you increase your brain power. |
| <input type="checkbox"/> True | or | <input type="checkbox"/> False | 3. If you cycle in a figure of 8 you will get dizzy and fall off. |
| <input type="checkbox"/> True | or | <input type="checkbox"/> False | 4. Cycling only uses your arms and leg muscles. |
| <input type="checkbox"/> True | or | <input type="checkbox"/> False | 5. Cycling is an activity you can only do on your own. |
| <input type="checkbox"/> True | or | <input type="checkbox"/> False | 6. Your heart will become more efficient if you cycle regularly. |



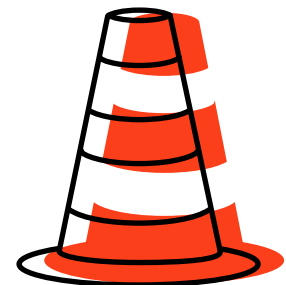
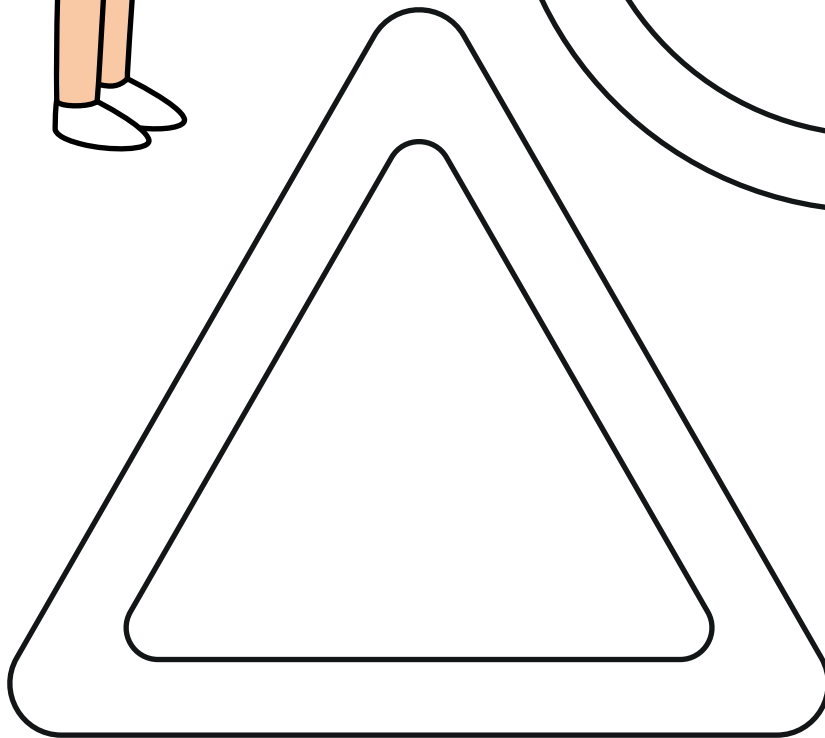
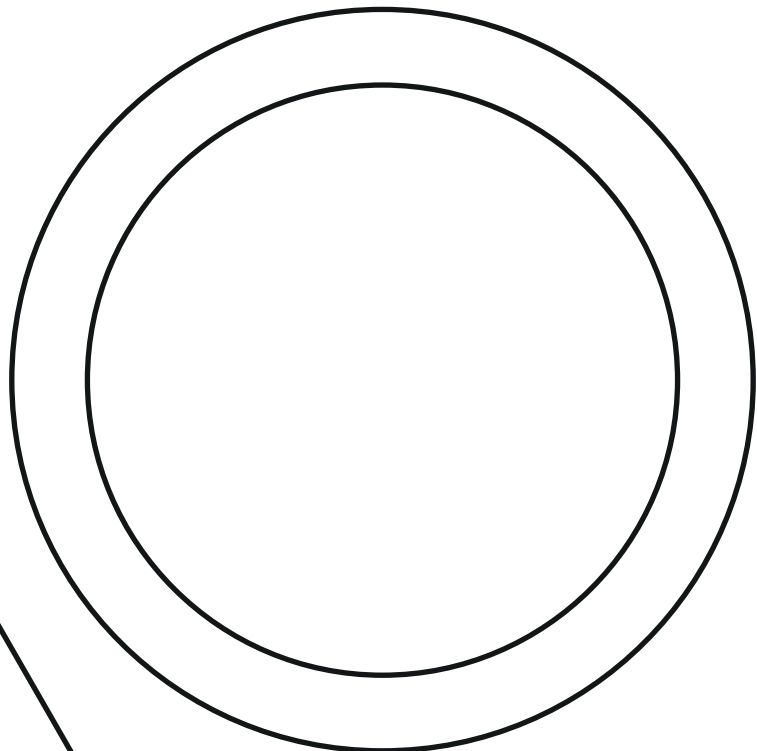
Amazing bike fact

A bike can stay upright on its own. As long as the bike is moving at a speed of 8 miles per hour or more, it will stay up-right as it zooms along without its rider!

Create a road sign



Road signs have to communicate information or warnings quickly and clearly. Design a road sign to let drivers know there are young cyclists ahead, or come up with a design for a message about cycling that you want to communicate.



Amazing bike fact

The Netherlands has more bike users than any other country, with almost 30% of all trips across the country being made by bike.



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The M check



Here's how to do an M check:

Start with the front wheel – It should be tightly fitted, check that the nuts on both sides of the wheel are secure if it does not have a quick release lever.

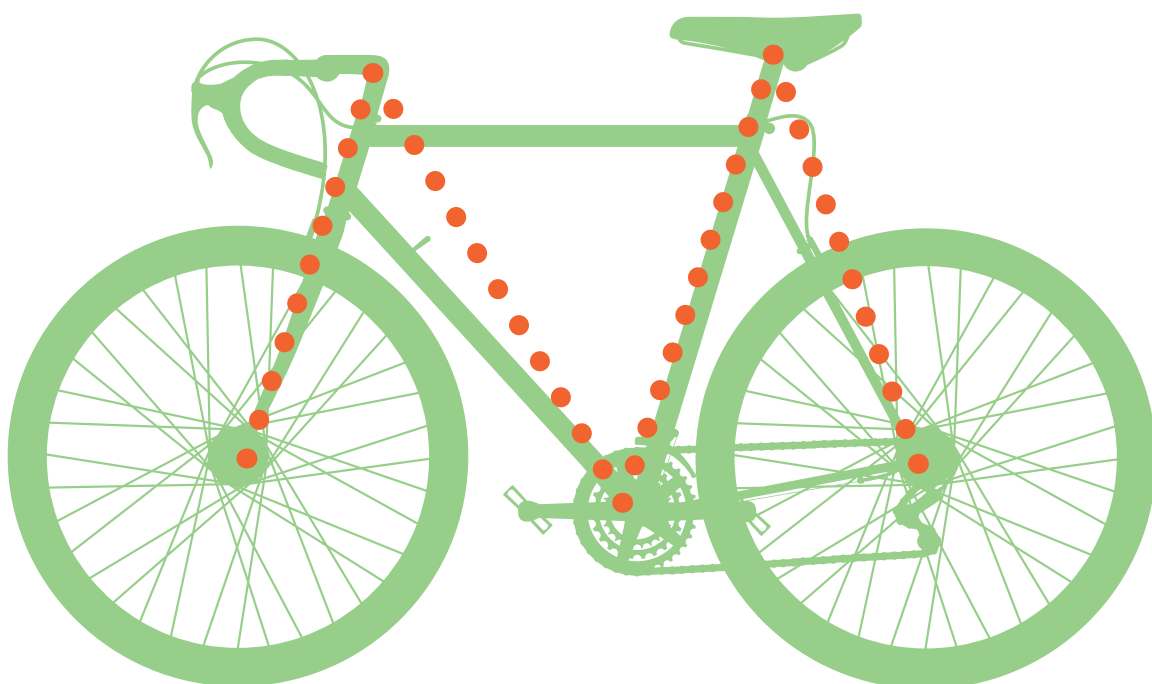
Move up to the handlebars – The handlebar clamp bolts must be tight. Perform this check by standing in front of the bike, holding the front wheel between your knees, and twisting the handlebars. Stop any movement by tightening the stem bolts and the handlebar clamp with an allen key.

Move down to the pedals and chainset – The chain should be clean and oiled, the pedals should spin smoothly.

Move up to the saddle and seatpost – Check the seat post is not loose, you can use an allen key to tighten the seat post clamp.

Move down to the rear wheel – It should be tightly fitted, check that the nuts on both sides of the wheel are secure if it does not have a quick release lever.

Starting at the front wheel join the dots to show the M shape – Draw an arrow between the M check statements and the diagram.

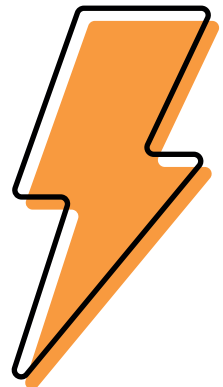
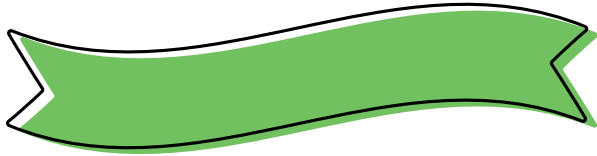




Design a cycling jersey



Be seen and look smart! Design a cycling jersey that would make sure you were noticed when cycling.





Answers

Page 1

World Record

4142cm, 41420mm

Page 4

Label the bike

1. Chain
2. Saddle/seat
3. Seat post
4. Spoke
5. Handle bars
6. Crank
7. Pedal
8. Tyre

Page 5

Cycling on the road

Two positions are primary position and secondary position

Page 8

Bicycle safety – What am I?

- Brakes
- Lights
- Tyres
- Bell
- Seat

Page 9

How many?

Total number 16

$$\frac{1}{2} = 8$$

$$\frac{1}{4} = 4$$

$$\frac{3}{4} = 12$$

Road Signs

The meaning of the signs is:

1. Dead end street except for cyclists
2. Give way to oncoming vehicles
3. Cycle route ahead
4. No cycling
5. Stop
6. Traffic signals ahead

Page 11

COPS

Control
Observation
Position
Speed

Crossword

Across:

1. Signal
4. Brake
6. Overtake
8. Primary

Down:

2. Gear
3. Helmet
5. Hoy
7. Room

Page 16

Air Pollution

We put **petrol** and diesel into cars, vans and lorries. These cause huge amounts of **air** pollution. This affects our health. These chemicals come from car **exhausts**. Chemicals affect the quality of the air we **breathe** in and some people have difficulty breathing due to the poor air quality. **Smog** is a mixture of smoke, gases and moisture and this can come from polluted areas. Chemicals from car exhausts can create acid **rain** when it mixes with water in clouds. This can cause damage to **plants** and **animals**

Page 17

A drop of water

31,500 litres

How fast?

7 and $\frac{1}{2}$ hours

Page 21

Cycling and your health

1. TRUE
2. TRUE
3. FALSE
4. FALSE
5. FALSE
6. TRUE



TOOLS *for* SCHOOLS

For more information on Bikeability
please go to
www.bikeability.org.uk

contact us at
contactus@bikeability.org.uk



BikeabilityUK



BikeabilityUK



BikeabilityTrust



Bikeability