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Level 5

Bacteria-filled concrete to end holes in roads

5th December, 2014

<http://www.breakingnewsenglish.com/1412/141205-potholes-5.html>

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Please try Level 4 (easier) and the 26-page Level 6 (harder).

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THE READING

From <http://www.breakingnewsenglish.com/1412/141205-potholes-5.html>

Drivers may soon have relief from potholes and cracks in the road. Scientists from three British universities have come up with a clever and innovative solution to plugging holes in roads and highways. They have created a bacteria-filled concrete to prevent cracks from becoming larger. The concrete is full of bacteria that open when water gets into a crack. The bacteria open and inject limestone into the crack, thus filling and repairing it to avoid more serious damage. The discovery could increase the lifespan of roads, reduce repairs, and lower roadwork costs by up to 50 per cent.

The new concrete is good news for the environment. Over seven per cent of CO2 emissions come from the production of cement. With less cement needed to repair roads, there will be less pollution. The new cement will also reduce accidents, injuries and deaths that result from potholes. Thousands of motorists and pedestrians die because drivers swerve to avoid holes in roads. There is also good news for governments. Thousands of drivers a year get compensation for damages to their car caused by potholes. The concrete could be in roads in the next 20 years.

Sources: <http://www.telegraph.co.uk/news/uknews/road-and-rail-transport/11268310/The-end-of-potholes-UK-scientists-invent-self-healing-concrete.html>
<http://www.dailymail.co.uk/news/article-2858316/Potholes-fix-Engineers-say-self-healing-concrete-use-bacteria-stop-cracks-gaps-getting-bigger-used-future.html#ixzz3Kula2kCB>
<http://eandt.theiet.org/news/2014/dec/future-highways-arup.cfm>

MATCHING

From <http://www.breakingnewsenglish.com/1412/141205-potholes-5.html>

PARAGRAPH ONE:

- | | |
|-------------------------------|-------------------------|
| 1. potholes and | a. roads |
| 2. innovative | b. from becoming larger |
| 3. prevent cracks | c. to 50 per cent |
| 4. The concrete is | d. into the crack |
| 5. inject limestone | e. full of bacteria |
| 6. avoid more | f. cracks |
| 7. increase the lifespan of | g. serious damage |
| 8. lower roadwork costs by up | h. solution |

PARAGRAPH TWO:

- | | |
|-----------------------|------------------------|
| 1. good news | a. to avoid holes |
| 2. CO2 | b. to repair roads |
| 3. the production | c. 20 years |
| 4. less cement needed | d. emissions |
| 5. reduce | e. for damages |
| 6. drivers swerve | f. for the environment |
| 7. get compensation | g. accidents |
| 8. in the next | h. of cement |

LISTEN AND FILL IN THE GAPS

From <http://www.breakingnewsenglish.com/1412/141205-potholes-5.html>

Drivers may (1) _____ from potholes and cracks in the road. Scientists from three British universities (2) _____ a clever and innovative solution (3) _____ in roads and highways. They have created a bacteria-filled concrete to prevent cracks from becoming larger. The concrete is (4) _____ that open when water gets into a crack. The bacteria open and inject limestone into the crack, thus filling and repairing (5) _____ serious damage. The discovery could increase the lifespan of roads, reduce repairs, and lower roadwork costs (6) _____.

The new concrete (7) _____ the environment. Over seven per cent of CO2 emissions come from the production of cement. With less cement needed (8) _____, there will be less pollution. The new cement will also reduce accidents, (9) _____ that result from potholes. Thousands of motorists and pedestrians die because drivers (10) _____ holes in roads. There is also good news for governments. Thousands of drivers a year (11) _____ for damages to their car caused by potholes. The concrete could be in roads in (12) _____.

ROADS SURVEY

From <http://www.breakingnewsenglish.com/1412/141205-potholes-5.html>

Write five GOOD questions about roads in the table. Do this in pairs. Each student must write the questions on his / her own paper. When you have finished, interview other students. Write down their answers.

	STUDENT 1 _____	STUDENT 2 _____	STUDENT 3 _____
Q.1.			
Q.2.			
Q.3.			
Q.4.			
Q.5.			

- Now return to your original partner and share and talk about what you found out. Change partners often.
- Make mini-presentations to other groups on your findings.

WRITE QUESTIONS & ASK YOUR PARTNER(S)

Student A: Do not show these to your speaking partner(s).

a)

b)

c)

d)

e)

f)

g)

h)

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WRITE QUESTIONS & ASK YOUR PARTNER(S)

Student B: Do not show these to your speaking partner(s).

a)

b)

c)

d)

e)

f)

g)

h)

