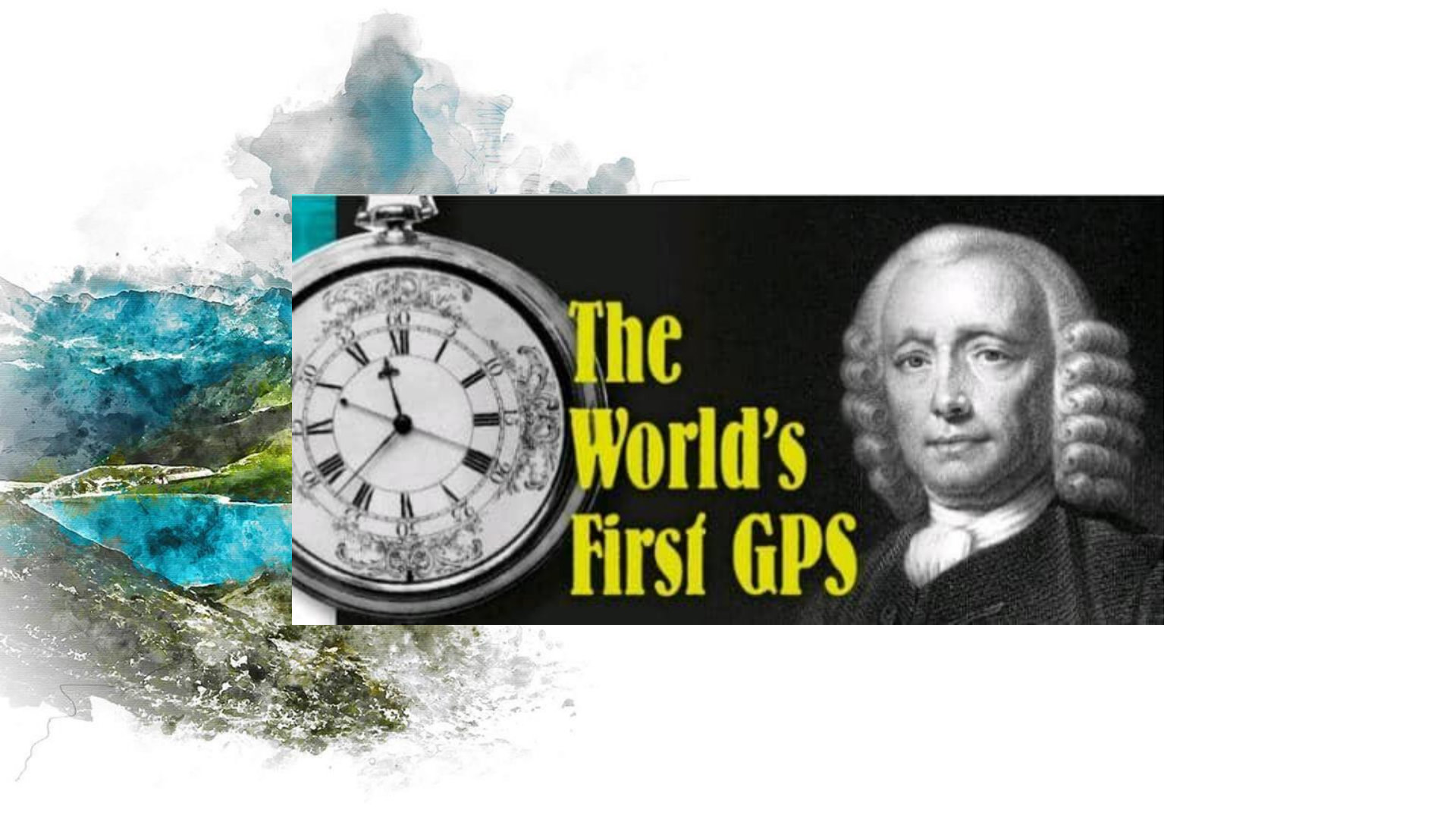






Hello



**The
World's
First GPS**




1 **SPEAKING** Work in pairs. Think of three important problems that the world faces today. How do you think we can solve them?

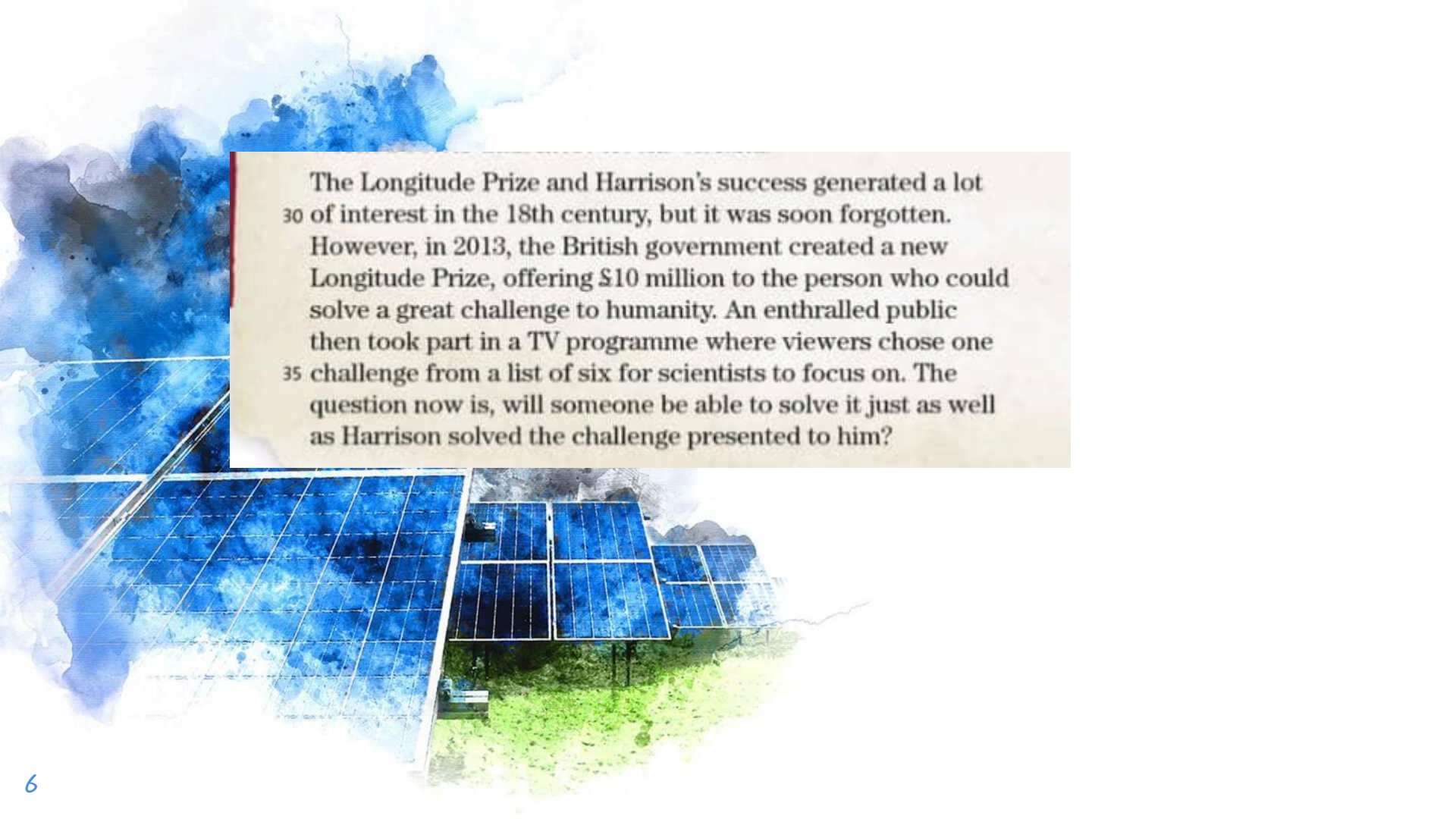


4.12

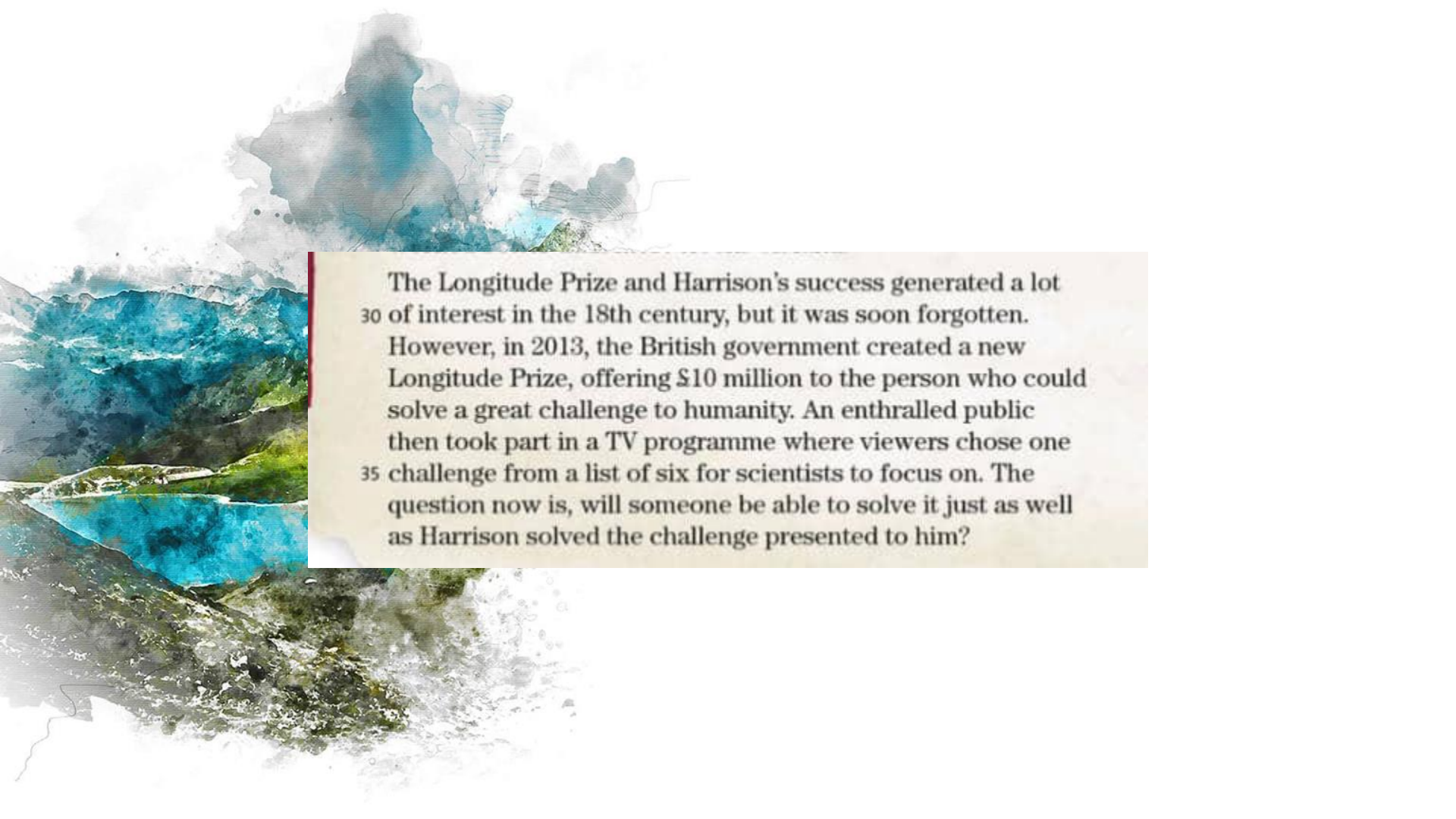
On a stormy night in 1707, four ships struck rocks off the south coast of England and sank. One thousand, four hundred sailors were drowned. The ships had crashed because they had no way of knowing how far they had travelled in a particular direction; they could not calculate their longitude, which required accurate time measurement. It was the most serious in a series of accidents at sea, and a stunned British government decided to act. In such difficult circumstances, they believed that the best response to the disaster was a competition: the Longitude Prize.



The Longitude Prize was no ordinary competition. To win it, someone had to find a way of calculating how far a ship had travelled east or west from its point of departure. Geniuses such as Sir Isaac Newton had failed to find a solution, so to
15 ensure the interest of Britain's greatest scientific minds, the government offered a prize of £20,000 – the equivalent of £2.6 million in today's money. But to everyone's surprise, it wasn't a famous academic who solved the problem, but an unknown carpenter.

The background of the slide features a collage of solar panels in the lower half, with vibrant blue watercolor splashes and textures in the upper half. The text is centered in a white box with a thin red border on the left side.

The Longitude Prize and Harrison's success generated a lot
30 of interest in the 18th century, but it was soon forgotten.
However, in 2013, the British government created a new
Longitude Prize, offering \$10 million to the person who could
solve a great challenge to humanity. An enthralled public
then took part in a TV programme where viewers chose one
35 challenge from a list of six for scientists to focus on. The
question now is, will someone be able to solve it just as well
as Harrison solved the challenge presented to him?

A watercolor-style illustration of a mountain landscape. The scene features a large, rugged mountain range in shades of blue and green, with a calm lake in the foreground reflecting the sky. A waterfall is visible on the right side, cascading down a rocky slope. The overall style is soft and artistic, with visible brushstrokes and a mix of colors including blues, greens, and greys.

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Marcus Oh, no, what a nightmare!

6 Write questions from the prompts. Use the past simple form of *be* and *can*.

1 swim / four

Could you swim when you were four?

2 count to ten in English / seven

3 write your name / three

4 talk / two

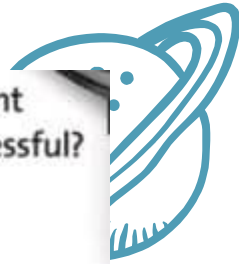
5 walk / one

6 ride a bike / six

7 SPEAKING Work in pairs. Take turns to ask and answer the questions in exercise 6. (If you don't know the exact ages, just guess!)

Could you swim when you were four?

Yes, I could. /
No, I couldn't.



2 Read the text. What solution did the British government suggest for a problem in the 18th century? Was it successful?

3 Read the text again. Answer the questions.

- 1 What was the situation that the British government decided to deal with?
- 2 Why did the government think it was necessary to interest the best scientists in Britain?
- 3 What surprised people about the winner of the Longitude Prize?
- 4 Why didn't sailors use mechanical clocks to calculate their positions?
- 5 Why do you think the successful sea clock was called H4?
- 6 How was the challenge for the new Longitude Prize decided on?



decided on:

4 **SPEAKING** Work in pairs. The Longitude Prize is a prize for anyone that can solve one of the problems in the list. Which one would you choose to be the challenge for the new Longitude Prize? Why?

THE LONGITUDE PRIZE CHALLENGES

Flight – How can we fly without damaging the environment?

Food – How can we make sure everyone has nutritious, sustainable food?



Antibiotics – How can we prevent the rise of resistance to antibiotics?

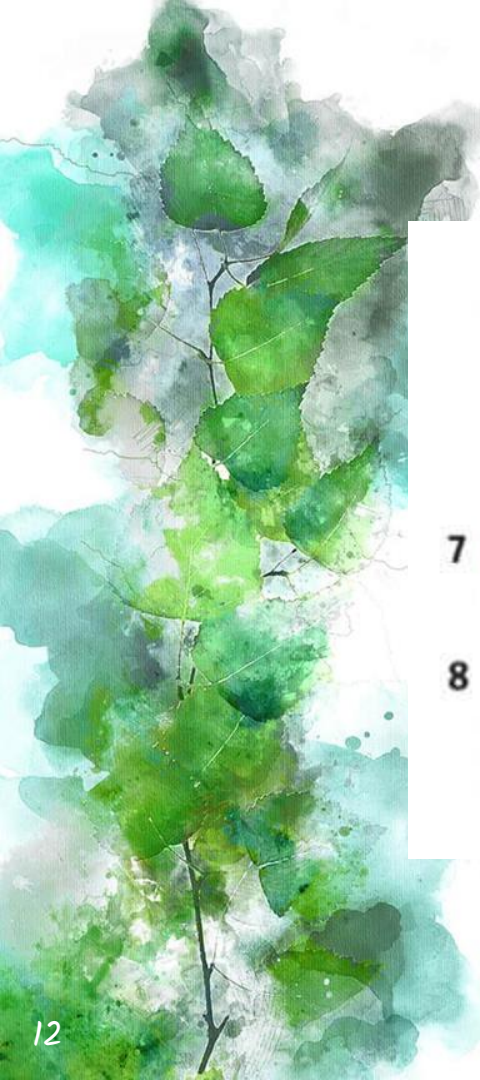
Paralysis – How can we restore movement to disabled people?

Water – How can we provide access to safe and clean water for everyone?

Dementia – How can we help people who are losing their memories and other mental abilities?



- 5  4.13 Listen to a podcast. Which problem from exercise 4 was chosen as the challenge for the Longitude Prize?
- 6  4.13 Listen again. Choose the correct answers (a–c).
- 1 On the podcast, they begin by talking about what happened
a on a TV programme. b on a podcast.
c in a government debate.
 - 2 The prize is being offered to
a any scientist. b government scientists.
c famous scientists.
 - 3 Dr Kenny uses the example of the warplane to demonstrate that the prize money
a is a lot. b is reasonable.
c isn't so much.
 - 4 World health organisations are worried that antibiotics
a endanger people's lives. b are less successful.
c have become unnecessary.

- 
- 5 If nobody wins the challenge, in the future, doctors may not be able to
- a carry out some types of surgery.
 - b treat patients for certain illnesses.
 - c work in hospitals.

7 **SPEAKING** Work in pairs. What important problem in the world would you add to the list in exercise 4?

8 **INTERNET RESEARCH** Find out if someone has won the Longitude Prize 2014. If they have, who are they? If they haven't, what is the current situation? Share your information with the class.