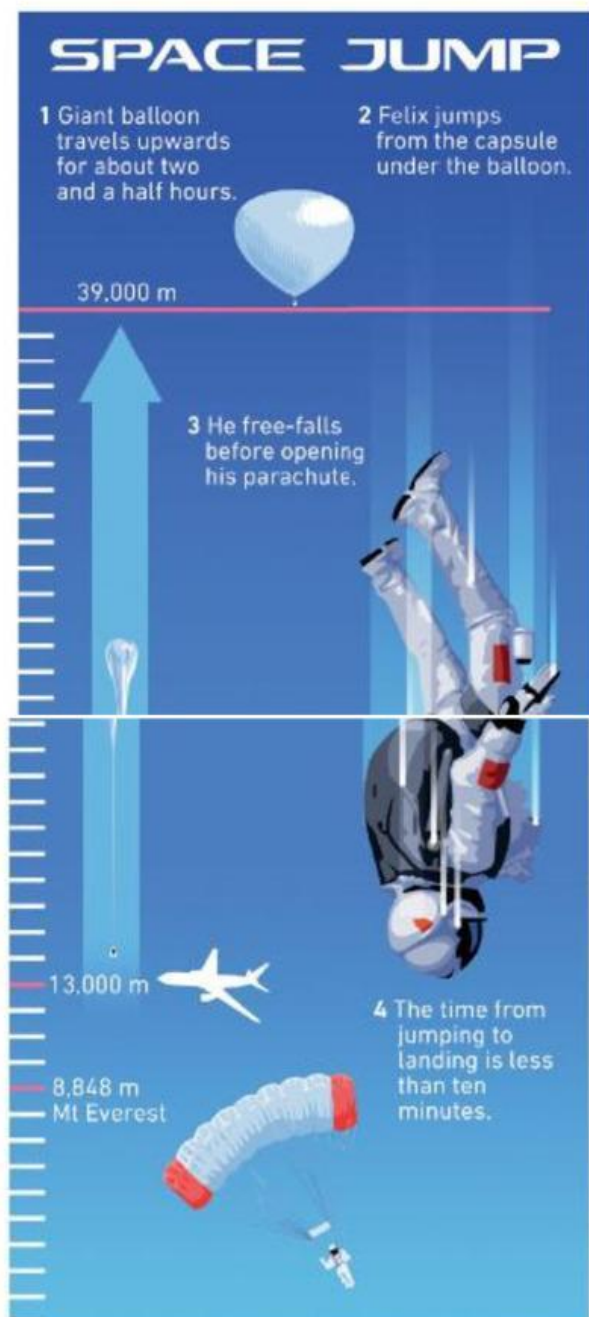


- 1 Would you jump out of a plane or a hot air balloon using a parachute? Why?/Why not?
- 2 5.13 Study the Vocabulary box and check you understand the words.

VOCABULARY Space science

balloon capsule engine force helium oxygen
parachute sound barrier

- 3 Look at the pictures in the infographic. Which words from the Vocabulary box can you see?



- 4 Choose the correct option.
 - 1 Humans need *oxygen* / *helium* to breathe.
 - 2 The *Concorde* was a jet plane which broke the *engine* / *sound barrier*.
 - 3 The *capsule* / *force* which attracts objects towards the Earth is gravity.
 - 4 *Oxygen* / *Helium* is a very light gas which is used in balloons.
 - 5 A jet *engine* / *balloon* is very powerful.
 - 6 If you jump out of a plane, you need a *balloon* / *parachute*.

- 5 Read the infographic in Exercise 3. What do you think happened? Why?

- 6 5.14 Listen to the first part of a report about Felix Baumgartner and check your ideas from Exercise 5. Then summarise what happened. Use these prompts to help you.

- 1 First, Felix put on ...
- 2 Then he got into ...
- 3 The balloon took him ...
- 4 When he reached the right height, ...
- 5 Finally, he opened ...

- 7 5.15 Listen to the second part of the report and complete the notes.

Name: Felix Baumgartner
 Date of jump: 14th October 2012
 Location: 2 _____, USA
 Nationality: 3 _____
 Age: 42
 Height of jump: about 4 _____ kilometres
 Speed: 5 _____ kilometres per hour
 Time in free fall: 6 _____ minutes and _____ seconds
 Cost: 7 _____ of US dollars

- 8 What is your opinion of Felix's achievement?

YOUR WORLD

- 9 In pairs, talk about what you would do and how you would feel if:
 - 1 you had to climb ten metres up a climbing wall to win a big prize.
 - 2 you won a bungee jump as a prize in a school lottery.
 - 3 your friend invited you to fly in a hot air balloon.

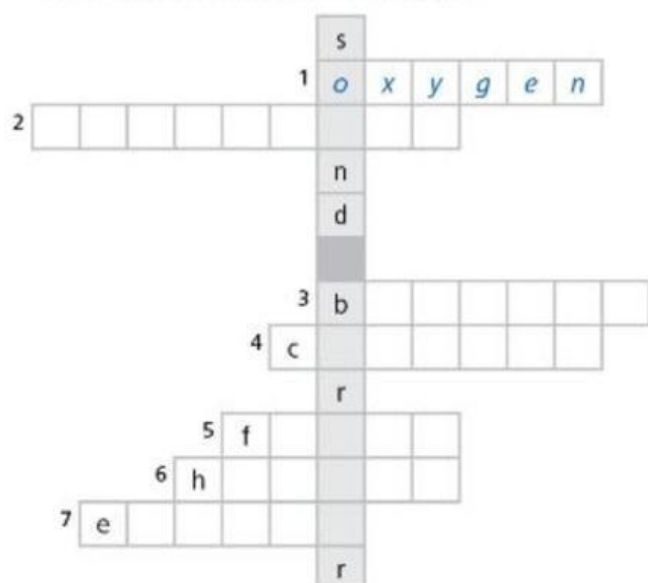
If I had to climb ten metres up a climbing wall, ...

5.5

Listening and Vocabulary

Space debris

- 1 Read the sentences and write the words in the crossword. What is the hidden word?



- 1 We need this gas to breathe.
- 2 This large piece of material fills with air and helps the wearer fall slowly to the ground.
- 3 A large bag filled with gas or air so that it can float in the air.
- 4 The part of a spacecraft which contains the astronauts.
- 5 Physical power which moves something.
- 6 A gas which is lighter than air and is often used to make things float.
- 7 A machine which produces power to make a vehicle move.

The hidden word is: _____.

- 2 Complete the words in the sentences.

- 1 After jumping from the plane, Sam opened his p a r a c h u t e and soon landed safely on the ground.
- 2 The f _____ e astronauts feel when they take off from Earth is very powerful.
- 3 The astronauts all felt nervous as the c _____ s _____ left the rest of the spacecraft.
- 4 We need o _____ g _____ to breathe.
- 5 The car has a very powerful _____ n _____ i _____ and can go from 0 to 100 kilometres per hour in nine seconds.
- 6 If you travel faster than 767 kilometres per hour, you break the s _____ d _____ b _____ r _____.

- 3 5.1 Listen to the first part of a podcast and choose the correct answer.

What is space debris?

- a a type of satellite
- b parts of old spaceships, satellites, etc. orbiting the Earth
- c everything that's in orbit around the Earth



- 4 5.2 Listen to the rest of the podcast and tick the topics which are mentioned.

- 1 ☐ the number of small pieces of debris
- 2 ☐ the problems large debris can cause
- 3 ☐ missions to other planets
- 4 ☐ the most dangerous area
- 5 ☐ space debris falling to Earth
- 6 ☐ Earth's orbit around the Sun
- 7 ☐ cleaning up the debris

- 5 5.2 Listen again and complete the notes.

Space debris

- more than ¹170 million pieces of debris smaller than 1 cm
- just one piece of debris can damage a ² _____ or satellite
- International Space Station (ISS) uses Whipple shields to make debris ³ _____
- nearly 30,000 pieces larger than ⁴ _____ cm
- some larger pieces can survive the ⁵ _____ temperatures of the atmosphere
- on average, one piece has landed on Earth every day for last ⁶ _____ years
- we don't clean it up because it's too ⁷ _____