

TECHNOLOGY NEWS

The balloon will drift to the edge of space



Space Perspective

UP, UP AND AWAY

VISITING outer space is still a distant dream for anyone who isn't an astronaut, but a day trip to the stars is already open for bookings!

A new company, Space Perspective, is planning uncrewed tests next year. If successful, reaching the outer edges of the atmosphere could be as easy as flying abroad in a few years' time.

The plan will be for a crew and up to eight passengers to travel in Neptune, a pressurised capsule attached to a balloon the size of a football stadium filled with hydrogen.

They will drift upwards right to the edge of space, 30km above the Earth. There, space tourists will be able to look back at the Earth and out to dark space and the sight of millions of stars. Although the price is yet to be fixed, the luxury flight, which will take six hours, is likely to cost more than £100,000. Because the capsule remains within the Earth's atmosphere, no special suits or training are needed. It means that older people or those with health problems won't be excluded.

One downside (apart from the price!) may be the method of landing back on Earth. The balloon drifts back down from the stratosphere until it splashes down in the

sea. Passengers, crew, capsule and balloon are then recovered by ship.

Space Perspective will run tests from the Kennedy Space Center in Florida, but it has big plans to operate up to 500 flights from various sites across the USA by 2024.

The race to get tourists into space is hotting up. Neptune faces competition from the Stratollite, a balloon being developed by a company called World View Enterprises, while the super-rich Richard Branson, Jeff Bezos and Elon Musk are all pouring money into developing commercial space vehicles. The advantage of the balloon is that it will be cheaper than a space plane or rocket.

Space tourism may soon be a reality, but how visitors get there is still a very open question.



The Neptune capsule

Space Perspective

MEET THE SLOTHBOT!

CONSERVING endangered animals could be helped by the arrival of the SlothBot.

Currently being tested before being put to work, the cute-faced robot designed by scientists at the Georgia Institute of Technology in the US will monitor animals and plant life. It is powered by solar panels and hangs on a wire suspended between two trees. The energy-efficient SlothBot moves slowly like a real sloth, collecting information such as the temperature, weather and the carbon dioxide levels of the area.

With its strong outer casing that protects the machinery inside, the SlothBot can be left in place for months, saving scientists years of field research.



Rob Felt, Georgia Tech

A.I. ACTOR

AN Artificially Intelligent (AI) robot actor has been given a starring role in a \$70 million movie (£56.4m).

Meet Erica, the AI star of a new sci-fi film, called *b*, which is about an artificially intelligent woman, also called Erica, who escapes from the lab that created her.

Usually, Erica's part might be played by a CGI character, or an actor in make-up. Instead, the film-makers decided to work with Japanese scientists Hiroshi Ishiguro and Kohei Ogawa to actually build a robot actor.

One of the visual effects artists behind the film explained just what that meant. "She was created from scratch to play the role! [We had to] control the speed of her movements, talking through her feelings and coaching character development and body language."



Getty

TECHNOLOGY NEWS



GLOSSARY

atmosphere – The layer of gases surrounding the Earth
pressurised – Maintaining a raised pressure in order to keep gas within a container
capsule – A small case or container that is normally round or cylindrical in shape
hydrogen – A colourless, odourless and highly flammable gas
stratosphere – A layer of the Earth’s atmosphere that extends to 50km above the Earth’s surface
commercial – Intended to make a profit
conserving – Protecting from harm

endangered – Seriously at risk of extinction
solar panels – Units designed to absorb the sun’s rays to generate electricity
A.I. – Artificial Intelligence: computer systems performing tasks that normally require a human mind
CGI – Computer generated image: special visual effects created using computer software
coaching – Teaching; educating
body language – Expressing feeling and emotion through our bodies, eg, nodding your head if you agree with something

1. Match the news story to the type of **new technology** that is being reported in the news story, and the area it is being used in.

| HEADLINE | TYPE OF TECHNOLOGY | AREA OF USE |
|--------------------|--------------------------------------|---------------------|
| Up, up and away | Artificial Intelligence robot | Scientific research |
| Meet the SlothBot! | Space transport | Film industry |
| AI actor | Environmental data monitoring sensor | Tourist industry |

■ Look at the article ‘Up, up and away’.

2. Complete the factfile about a day trip to the stars.

| | |
|---------------------------------------|--|
| Space capsule name | |
| Destination | |
| Length of flight | |
| Cost of trip | |
| Number of people the capsule can hold | |
| Company planning these tourist trips | |

3. Describe the two different views that tourists will have when they reach the highest point of their trip.

4. The image shows an **artist’s impression** of the Neptune capsule in which the tourists will sit. Explain what is above the capsule and the job it is doing.

5. Trips in Neptune will be both **exclusive** and **inclusive**. Can you explain why?

■ Look at the article ‘Meet the SlothBot!’

6a. What data will the SlothBot be used to collect?

6b. What is the job of the outer casing of the SlothBot?

7. Why do you think scientists have named the robot ‘SlothBot’?

■ Look at the article ‘A.I. actor’.

8. Why do you think the film-makers decided to build a robot to play this character, rather than use CGI or an actor? What do you think the pros and cons were?

9. In the film, Erica the AI woman escapes from the lab that created her. Predict what might happen next.

■ Consider all the articles.

10. Two of these stories involve robots. The SlothBot is used for scientific research and Erica is an AI actor. If you could create a robot, what would your robot be used for?

| | |
|-------------------|--|
| Name: | |
| Shape/appearance: | |
| Purpose: | |
| Special skill: | |

TECHNOLOGY NEWS



GLOSSARY

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| Destination | |
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| Cost of trip | |
| Number of people the capsule can hold | |
| Company planning these tourist trips | |

3. Describe the two different views that tourists will have when they reach the highest point of their trip.

1.

2.

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TEACHER ANSWERS

AIM OF THE NEWS COMPREHENSIONS: News reports are unique non-fiction texts. Being real, they naturally engage students, and with the range of topics that are covered, help to develop pupils' knowledge and understanding of the wider world outside the classroom. The reports are ideal for short, focused comprehension or discussion activities. Along with the opportunity to find fascinating facts and appreciate the opinions of those involved, there is plenty to be inferred and deduced to understand in more depth what is being reported. Like authors, journalists play with language, so news 'stories' are rich nuggets of text to investigate and provide the opportunity for literacy programmes.

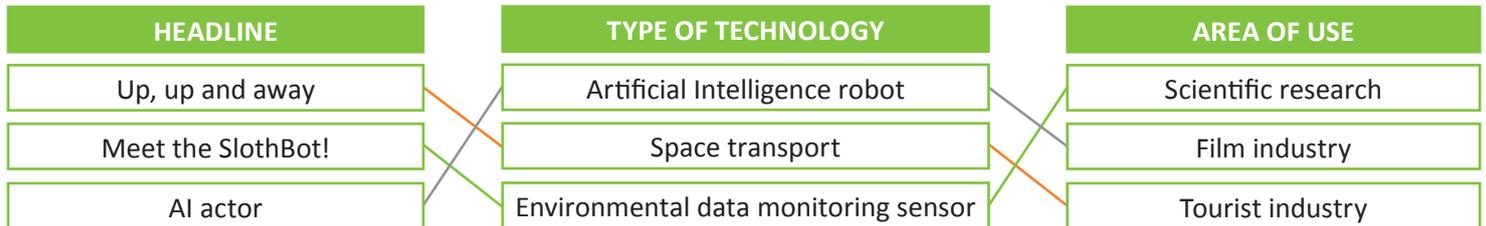
TEACHER ANSWER GUIDE: The teacher answers are intended to provide a quick reference guide. Suggestions are given for the 'Expected response' or starting point that pupils could give. The 'Development' then gives more in-depth ideas that students can work towards as they develop their reading comprehension skills.

For a list of the reading skills used, please email schools@firstnews.co.uk.

1. Match the news story to the type of new technology that is being reported in the news story, and the area it is being used in.

READING SKILL – Find and explain information (NC 2a)

Expected response



■ Look at the article 'Up, up and away'.

2. Complete the fact file about the day trip to the stars:

READING SKILL – Find and explain information (NC 2a)

Expected responses

| | |
|--|-------------------------------|
| Space capsule name | Neptune |
| Destination | Outer edges of the atmosphere |
| Length of flight | Six hours |
| Cost of trip | £100,000 |
| Number of people the capsule can hold | Eight passengers plus crew |
| Company planning these tourist trips | Space Perspective |

3. Describe the two different views that tourists will have when they reach the highest point of their trip.

READING SKILL – Find and explain information (NC 2a)

Expected responses

1. They can look back at the Earth.
2. They can also look out into dark space and the millions of stars there.

4. The image shows an artist's impression of the Neptune capsule in which the tourists will sit. Explain what is above the capsule and the job it is doing.

READING SKILL – Find and explain information (NC 2a)

– Infer information based on own knowledge (non-text-based inference)

Expected response

- A balloon that lifts the capsule up to the top of the atmosphere.

Developed response

- The balloon is the size of a football pitch and is filled with hydrogen, which is lighter than air, so enables the capsule to float up to the top of the atmosphere.

5. Trips in Neptune will be both exclusive and inclusive. Can you explain why?

READING SKILL – Understand vocabulary in context (NC 2a)

Expected responses

- They will be exclusive as only very rich people will be able to afford the tickets, which are around £100,000.

- However, no special training or suits are needed, so older people or people with health problems won't be excluded from taking part.

■ **Look at the article 'Meet the SlothBot!'**

6a. What data will the SlothBot be used to collect?

READING SKILL – Find and explain information (NC 2a)

Expected response

- Temperature, weather and carbon dioxide.

6b. What is the job of the outer casing of the SlothBot?

READING SKILL – Find and explain information (NC 2a)

Expected response

- To protect the machinery inside.

Developed response

- The casing is strong so that the bot can be left in place for months at a time to record data.

7. Why do you think scientists have named the robot 'SlothBot'?

READING SKILL – Recognising effect of language choices (NC 2f & 3)

Expected response

- Because it is an amalgamation of the words, 'sloth' and 'robot'. It is a robot that is like a sloth. Its appearance is similar with its big eyes and it also moves very slowly, just like a sloth.

Developed response

- It also sounds good as it uses the same 'o' sound in both 'sloth' and 'bot'.

■ **Look at the article 'A.I. actor'.**

8. Why do you think the film-makers decided to build a robot to play this character, rather than use CGI or an actor?

What do you think the pros and cons were?

READING SKILL – Infer information based on own knowledge (non-text-based inference)

Expected response

- To make it as realistic as possible, so the AI robot character in the film really behaves as AI would. It would have been really challenging as this is the first time this has been done.

Developed response

- Perhaps the film-makers decided to work with the Japanese scientists in order to understand how AI works. They may have had to change the storyline as Erica developed, but they now have a better understanding and might make a better film because of it.

9. In the film, Erica the AI woman escapes from the lab that created her. Predict what might happen next.

READING SKILL – Make justified predictions NC 2d)

Personal creative responses

■ **Consider all the articles.**

10. Two of these stories involve robots. The SlothBot is used for scientific research and Erica is an AI actor. If you could create a robot, what would your robot be used for?

READING SKILL: Develop personal ideas from reading news stories (NC 6, 7 & 8)

Personal, creative responses

| | |
|--------------------------|--|
| Name: | |
| Shape/appearance: | |
| Purpose: | |
| Special skill: | |