

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.



Space Perspective

The Neptune capsule

## MEET THE SLOTHBOT!

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



Rob Felt, Georgia Tech

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.

## A.I. ACTOR



Getty

**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."

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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:	