B6U2

Out of this world

Welcome

to the unit

+ Reading (1)

UNIT
2

Out of this world

The pursuit of the ultimate truth of the universe is the final objective and destination of civilization.

—Liu Cixin

universe beyond the earth's atmosphere in which all other planets and stars exist

out of this world

Collins COBUILD

PHRASE

If you say that something is out of this world, you are emphasizing that it is extremely good or impressive.

[*informal*, *emphasis*]

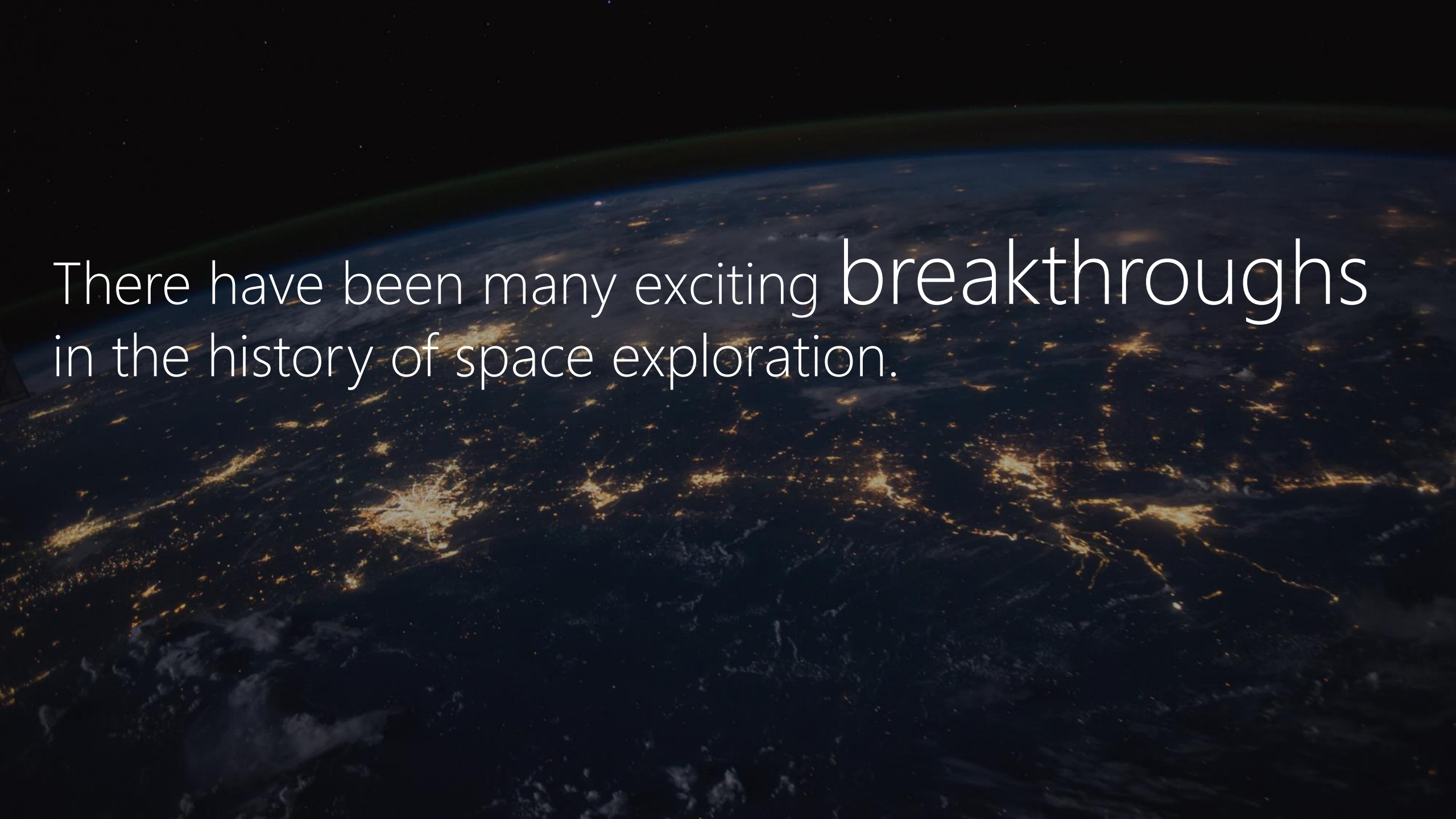
These new trains are out of this world.

The pursuit of the ultimate truth of the universe is the final objective and destination of civilization.

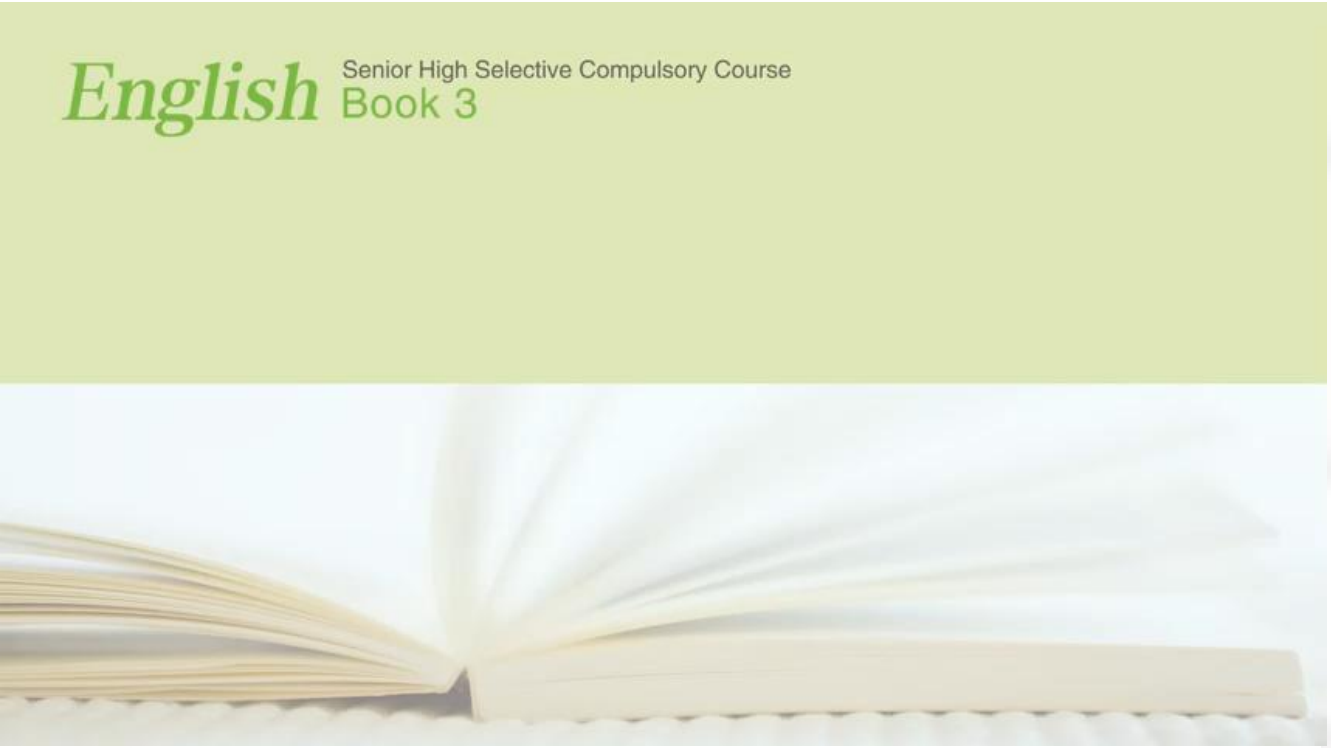
—Liu Cixin

对宇宙终极真理的追求，是文明的最终目标和归宿。

——刘慈欣


There have been many exciting breakthroughs
in the history of space exploration.

Video watching | P15



- In **1961**, Yuri Gagarin became the first man to journey into outer space.
- In **1969**, Neil Armstrong became the first man to walk on the Moon.
- In **1971**, David Scott and James Irwin became the first men to travel in a wheeled vehicle on the Moon.
- In **2000**, the first astronauts moved into the ISS.

ISS: International Space Station

ISS: a microgravity and space environment research laboratory where astronauts conduct experiments in biology, physics and other fields.

[Eng Sub] Shenzhou-13 teach 1st space lecture from Tiangong Space Station 中国空间站天宫课堂第一课

45K views • 4 months ago

CNSpace

#Shenzhou13 #SpaceLecture #ChinaSpaceStation #CNSA Follow https://www.twitter.com/TiangongStation, ...

CC


Life
on a space station

Global reading | P18-A1

Life on a space station

- **Sleeping**
- (1) **Working**
- (3) **Eating**
- (4) **Exercise**
- (5) **Leisure activities**

Performing tasks inside the space station

(2) **Performing tasks outside the space station**

Detailed reading | Para 1

1. What is the function of paragraph 1?

Para(s) 1 : Introduction
Para(s) 2–7 : Main body

2. What makes ordinary things strange on a space station?

Living in space is every would-be astronaut's dream. My six-month stay on a space station has come to an end, and it has been a challenging but magical adventure. I bet you'd love to know what daily life is like up in space and how it differs from that on the Earth—the low gravity definitely makes ordinary things strange!

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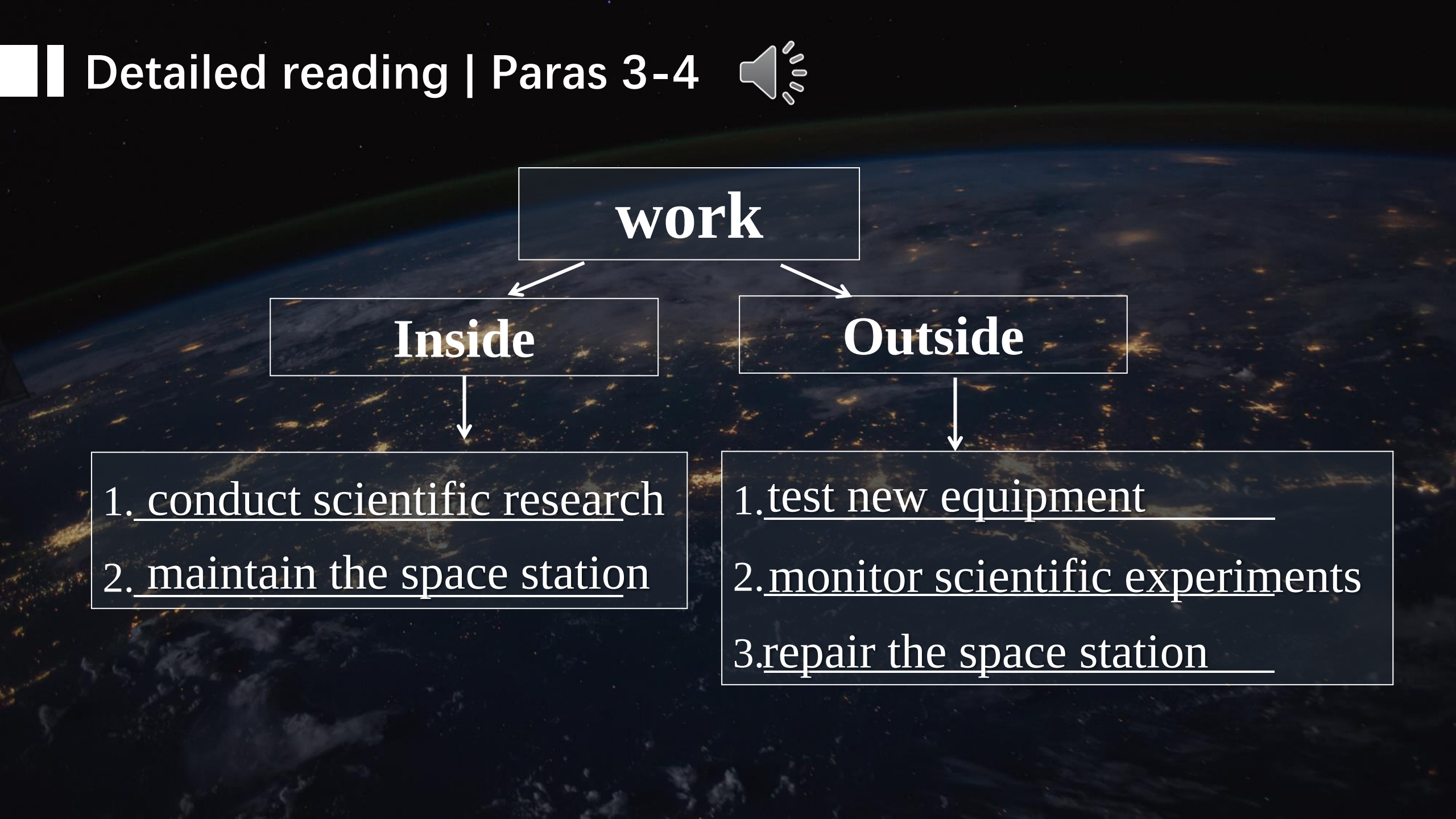
Detailed reading | Paras 3-4



1. What scientific research does the author conduct in space? (example? subject? goal?)

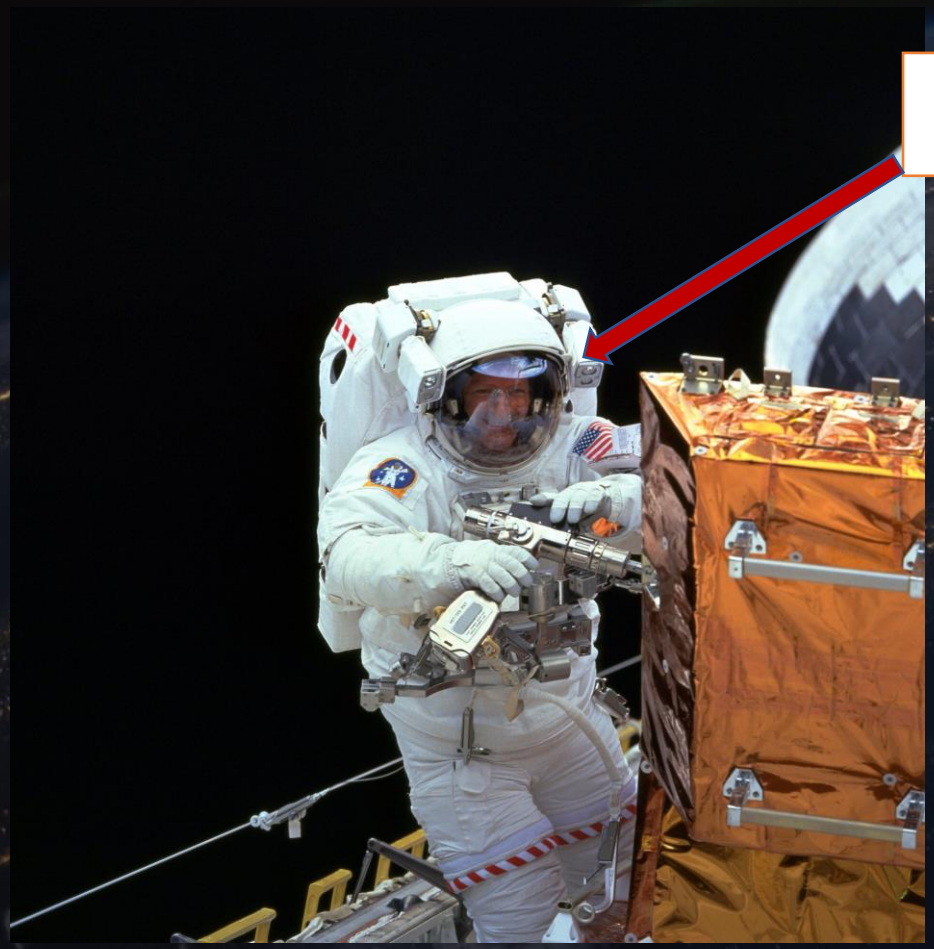
The routine tasks that occupy most of the day are demanding, but they can also be extremely rewarding. Our main mission is to conduct scientific research. We need to evaluate the effects of low gravity on animals and plants. Creatures such as mice, fish and mosquitoes have also been sent to the station! In a low-gravity environment, we can learn more about changes in cells and microorganisms under the microscope. As well as doing these biological experiments, we carry out experiments in other research fields. I have been working on one experiment which locates and tracks lightning over large regions of the Earth. Hopefully, it will cast new light on the Earth's climate and lead to better lightning protection. With so much going on, the space station needs a lot of maintenance, so we constantly check support systems and do some cleaning.

Inside jobs

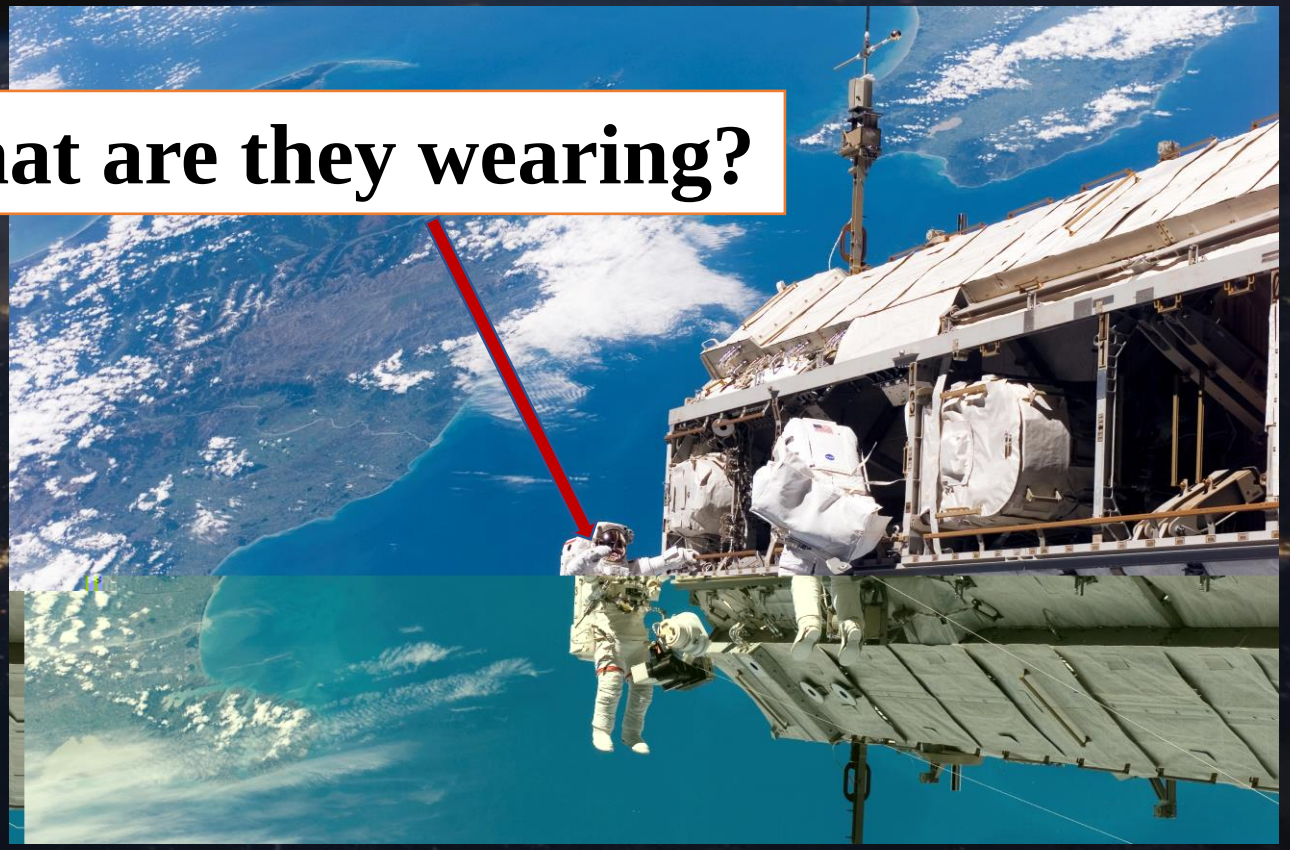
2. What tasks are done outside the space station?

The most challenging work takes place when we need to perform tasks outside the space station, such as testing new equipment, monitoring scientific experiments or repairing the space station. In the circumstances, it's time for a spacewalk. First, we put on our spacesuits, which allow us to breathe in space and protect us from exposure to the cold and radiation. Then we head out, and sometimes perform tasks for hours at a time, with the beautiful Earth visible below. Splendid as the view of the Earth is, spacewalking is not as exciting as you might think. It's probably the most dangerous work, with potential risks such as electric shocks. That's why every spacewalk is carefully planned.

Outside jobs



What are they wearing?



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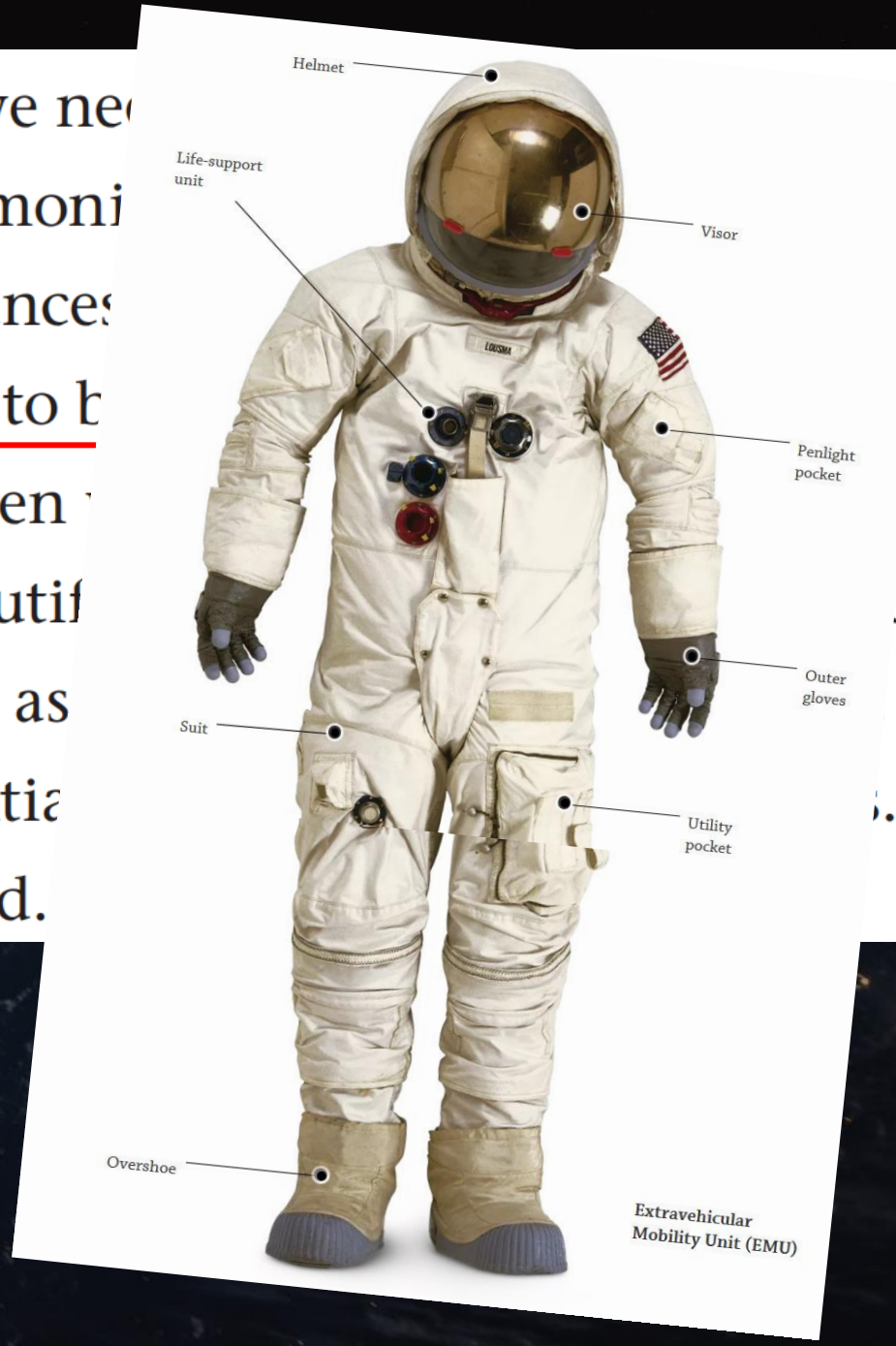

3. How do you understand the sentence in lines 27-28 of paragraph 4?

The most challenging work takes place when we need to perform tasks outside the space station, such as testing new equipment, monitoring scientific experiments or repairing the space station. In the circumstances, it's time for a spacewalk. First, we put on our spacesuits, which allow us to breathe in space and protect us from exposure to the cold and radiation. Then we head out, and sometimes perform tasks for hours at a time, with the beautiful Earth visible below. Splendid as the view of the Earth is, spacewalking is not as exciting as you might think. It's probably the most dangerous work, with potential risks such as electric shocks. That's why every spacewalk is carefully planned.

3. What does the author think of her routine tasks in space?

The routine tasks that occupy most of the day are demanding, but they can also be extremely rewarding. Our main mission is to conduct scientific research. We need to evaluate the effects of low gravity on animals and plants. Creatures such as mice, fish and mosquitoes have also been sent to the station! In a low-gravity environment, we can learn more about changes in cells and microorganisms under the microscope. As well as doing these biological experiments, we carry out experiments in other research fields. I have been working on one experiment which locates and tracks lightning over large regions of the Earth. Hopefully, it will cast new light on the Earth's climate and lead to better lightning protection. With so much going on, the space station needs a lot of maintenance, so we constantly check support systems and do some cleaning.

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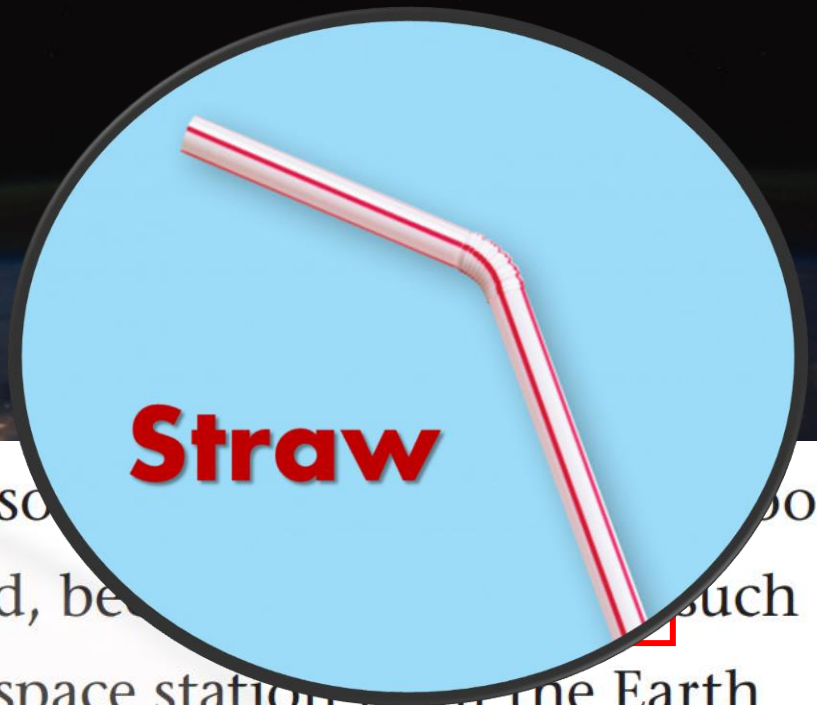
Detailed reading | Para 5

What do astronauts eat? How do they

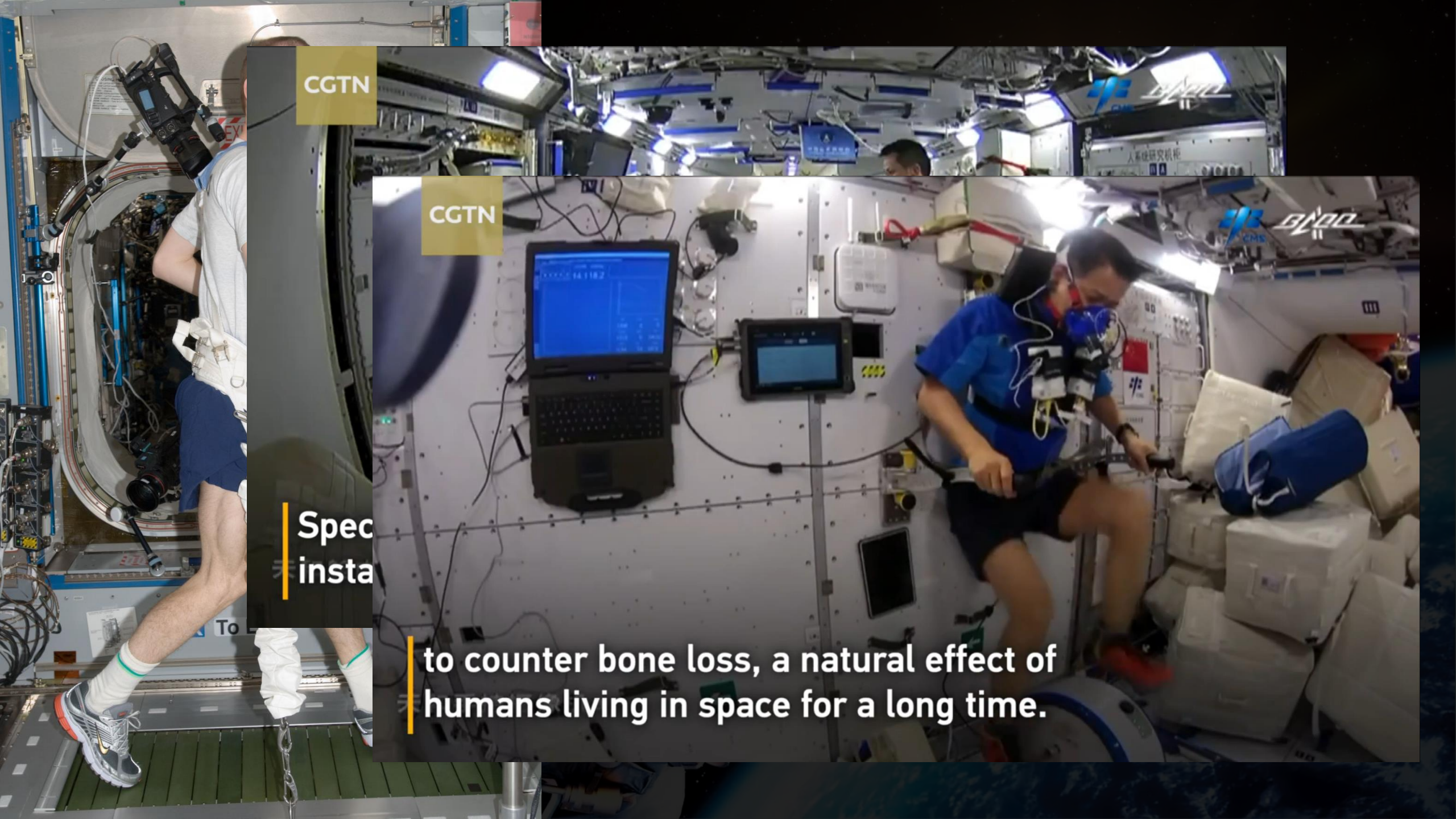


In view of the low-gravity environment, eating is also
od
is dried or freeze-dried. It's a luxury to eat fresh food, be
uch
as fruit and vegetables can only be delivered to the space station
the Earth
every couple of months. Salt and pepper are only in liquid form, so that they will
35 not float away and block the air pipes. However, liquids can't be easily controlled in
space. We must drink water or any other liquids out of a bag through a thin tube of
plastic. Furthermore, to keep our body healthy, we must ensure a balanced supply
of nutrients by taking pills.

Detailed reading | Para 6

- Why do astronauts need to spend some time in the gym?
- What are these negative effects?
- How long do they exercise per day?
- How do they do exercise?

Spending some time in the gym is of vital importance to astronauts' health. Did you know that in just five months, astronauts could lose a significant amount of muscle and bone mass? Considering these negative effects low gravity has on the human body, we discipline ourselves to do at least two hours of exercise every day. Exercise in space is not your average workout. We have to be tied onto specially designed exercise equipment to stop ourselves from floating around.


CGTN
Spec
insta
CGTN
to counter bone loss, a natural effect of
humans living in space for a long time.

Fun & proud fact:
Chinese taikonauts have a special treat in keeping healthy

Detailed reading | Para 7

What do astronauts do during their leisure time?

45 During our leisure time, there's nothing we like more than to sit back with the rest of the crew and watch our remarkable planet go by, taking pictures for our family and friends back home. As the space station travels at a speed of about 17,500 miles per hour, we get to see the sunrise every 90 minutes. In these precious moments, all the challenges of life in space seem worth it.


PHILOSOPHIAE
NATURALIS PRINCIPIA
MATHEMATICA (1822)
ISAACO NEWTONO
esa
European Space

Post-reading

Talking about her attitudes toward space life, the author has expressed her mixed feelings. Find out her attitude towards each aspect of life.

exciting ← *astronauts' dream (L1)*

strange ← *sleep (L5; L8)*

demanding ← *routine tasks(L11)*

rewarding ← *routine tasks(L11)*

challenging ← *outside job(L22)*

dangerous ← *spacewalk (L29)*

boring ← *food & entertainment(L31)*

WORTHWHILE(L49)

Free talk

1. What other major breakthroughs in space exploration do you know about?

No Image

SpaceX

Aerospace company

spacex.com

Space Exploration Technologies Corp. is an American aerospace manufacturer, a provider of space transportation services, and a communications corporation headquartered in Hawthorne, California. Wikipedia

CEO: Elon Musk (2002–)

Founder: Elon Musk

Founded: March 14, 2002

Headquarters: Hawthorne, California, United States

MAKING HUMANITY MULTIPLANETARY

Building on the achievements of Falcon 9 and Falcon Heavy, SpaceX is working on a next generation of fully reusable launch vehicles that will be the most powerful ever built, capable of carrying humans to Mars and other destinations in the solar system.

SpaceX's family of Falcon launch vehicles are the first and only rockets capable of reflight(or reusable).

- When was the first successful land landing?
- When was the first droneship landing?

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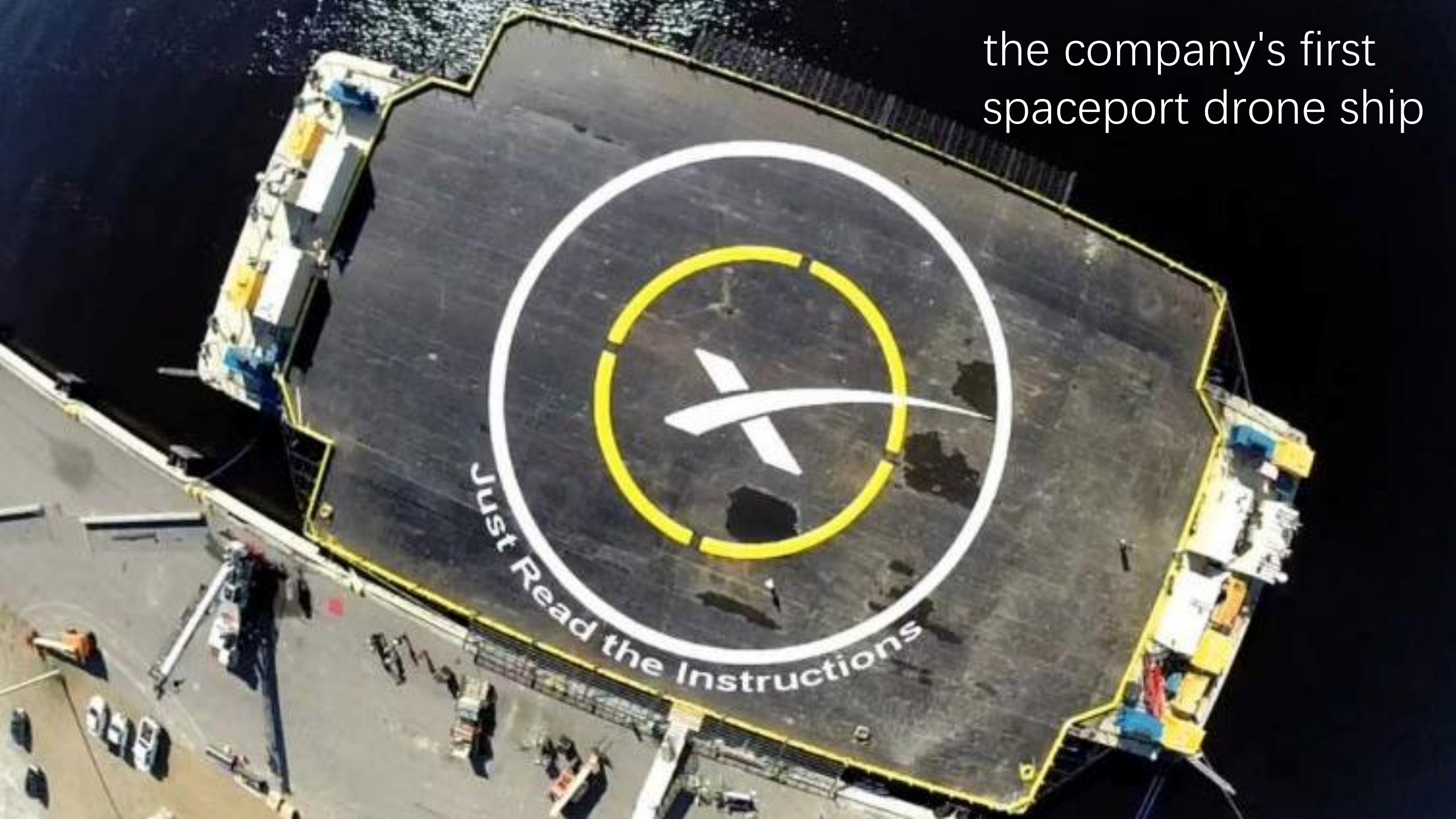
- When was the first droneship landing?



the company's first
spaceport drone ship

Free talk

2. If you had the chance, would you like to go into space? Why or why not?