

COMMUNICATION

Exploring the galaxy

LEVEL

Upper-Intermediate
(B2)

NUMBER

EN_B2_3051X

LANGUAGE

English



Learning outcomes

- I can discuss space exploration in detail using appropriate vocabulary.
- I can speculate about the future of space exploration and give reasons to support my views.



Warm-up

Outer space has dominated the imaginations and minds of humanity for thousands of years.
What do you find interesting about outer space?





Reading

Read the text and **answer** the questions below.

The universe has forever held a special place in the human imagination. Recently, science has given us a much greater understanding of the region of space outside our planet.

With the aid of telescopes, rockets and satellites, we have learned more about the mysterious world beyond our atmosphere. The realisation that Earth is but one planet in a system of extraordinarily large galaxies has inspired the curiosity of many and prompted a global push to explore the galaxy. Many claim the space age began when the Moon landings were televised in 1969.

1. What technologies have enabled our increasing understanding of outer space?
2. When is the space age thought to have begun?



Reading

Read the text and **answer** the questions below.

Traditional philosophers such as Aristotle and Descartes thought that space void could not exist, and that the entirety of space must be filled with matter. Our contemporary knowledge of astronomy tells us that most of the universe is actually space void, vast spaces of emptiness which contain very few or no galaxies.

Solar system is a term for a collection of planets, including our own, which orbit the sun. Our solar system consists of eight planets, their moons, asteroids, comets and lots of space debris. Each star makes up its own system of planets, moons and other matter. This means that there are likely billions of other solar systems in just the Milky Way galaxy.

1. Which philosophers are mentioned in the text? Had you heard of them before?
2. What does the term **space void** refer to?
3. What does the term **solar system** refer to?

space void

solar system

There are eight planets orbiting the sun in our **solar system**.
The majority of the universe is made up of **space void**.





Space exploration today

Read the sentences below.

1



We now know there is an **abundance of** other planets, solar systems and galaxies.

2



Space agencies continue the search for new planets and signs of life in **the cosmos**.

3



Scientists have already found evidence of **primitive life** in the history of Mars.

4



The chance to explore new planets offers a range of opportunities for humanity - we could potentially **inhabit** other planets...



What do these acronyms stand for?

These **acronyms** stand for major **space agencies** around the world.

1. Can you **guess** which countries they are based in?
2. What do you think it might be like to **work** for a national space agency?



ISRO

RFSA

CNSA

NASA



Space exploration today

Read the sentences below.

5



The exploration of space has required **groundbreaking innovation** in new technology.

6



Rockets and **space shuttles** allow people to be transported into space, while telescopes, probes and satellites help us to explore **deep space**.

7



The **International Space Station (ISS)** currently orbits Earth and serves as a research laboratory.

8



An international team of astronauts and scientists have been occupying the space station since 2000, **conducting experiments** in biology, physics and other fields.



deep space

Deep space is another term for outer space. It refers to the part of space beyond our moon.

The term is also used to describe the fictional space station in the TV series *Star Trek: Deep Space Nine*.



Life on the International Space Station

Imagine that you have been chosen to go and work on the ISS for one year.
Answer the questions below **in breakout rooms** or **as a class**.



What do you think you would **miss the most** about life on Earth?

Would you find it very difficult to be away from **friends and family** for a year?

If you were allowed to take one **item** with you from home, what would it be?

What would you be **most excited** about ahead of your space adventure?



Reading

Read the text and **answer** the questions.

The universe is a hazardous place, and space agencies must prioritise human safety. Even the launching of a rocket is a complicated process which, if it goes wrong, can be extremely dangerous.

Space is one of the most intense environments, threatening humans with extremely high and low temperatures. Other risks include damage to spaceships from meteors, space debris or other foreign bodies. For an astronaut in space, damage to or loss of equipment can be a matter of life and death.



What is a priority for space agencies?

What threats face humans who go into space?

Do you think you would have what it takes to be an astronaut? Why or why not?



Reading

Read the text and **answer** the questions.

Many are convinced that we need to look beyond the boundaries of Earth to ensure our own survival. Finding a habitable planet other than Earth could allow us to escape the problem of global warming.

Our planet is currently buckling under a host of environmental pressures brought on by overpopulation. Finding another planet with the ability to support human life could take much of this strain off Earth and allow it to recover.

The exploration of space also drives innovation, pushing the design of technology to new heights.

What problems might be solved by finding an inhabitable planet?

What might be some benefits of space exploration?

Do you like to keep up to date with the latest news in space exploration?



Reading

Read the text and **answer** the questions.

Many criticise space agencies for their enormous budgets, which, they argue, could be put to better use solving the problems and needs of people on Earth.

Others are concerned about the potential catastrophes that we do not know about. Unknown diseases in the atmosphere could potentially cause havoc upon the planet. Space missions also leave a large amount of debris and waste in the atmosphere. Space junk such as old satellites, dust and other man-made items orbit Earth continually.

Why do people criticise space agencies, according to the text?

What are some concerns about space exploration?

Do you share any of the concerns mentioned in the text?



Expressing opinions

Respond to the opinions expressed below.



We could solve world hunger with all of the money spent on chasing after the stars!

Moving beyond our planet will give our species its best chance of survival in the future.



Space agencies should send robots into space instead of people. It is safer that way.

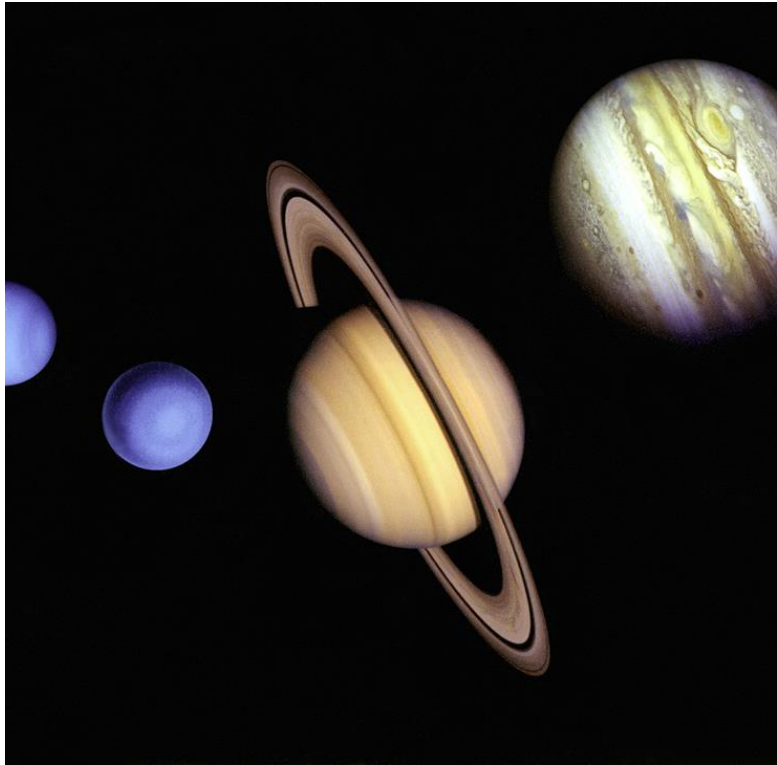
Being an astronaut would be the most stressful job I could imagine, but also the most rewarding.





Discuss

Discuss the questions below.



Would you like to live on a different planet?

What might some complications of life on a space colony be?

Can you think of any movies that are related to space exploration?

Do you like reading books or watching films in the science fiction genre? Why or why not?



End of the lesson

Idiom

to be on another planet

Meaning: often used to refer to someone who has unrealistic ideas about something

Example: She thinks we can make it in an hour. She's literally on another planet.



Additional practice



Build sentences

Build sentences to practise using the words from the lesson.



abundance

the cosmos

groundbreaking
innovation

space shuttle

deep space

to conduct an
experiment

to inhabit

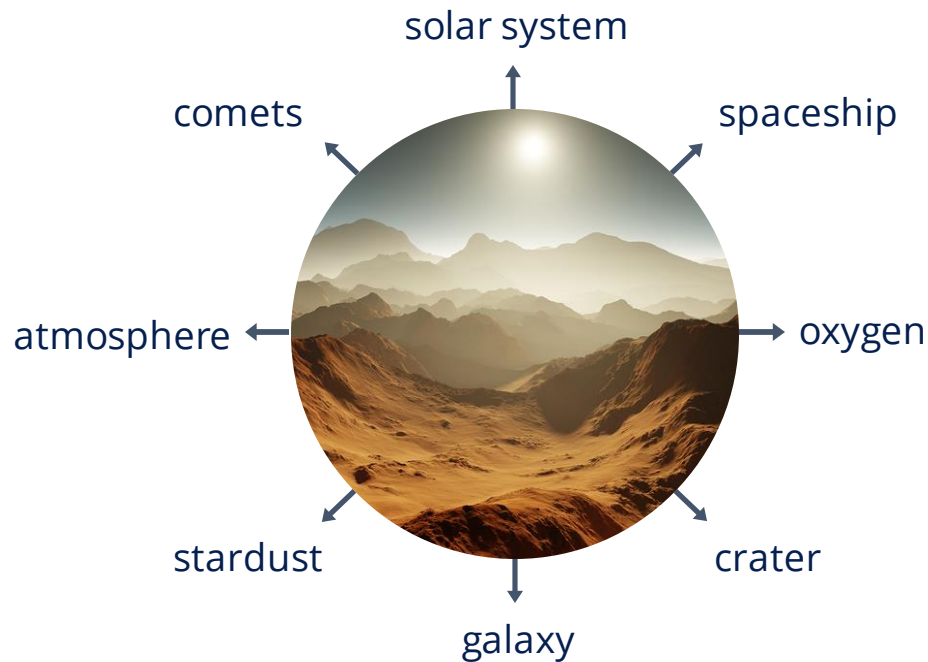
space agency

primitive life



Space vocabulary

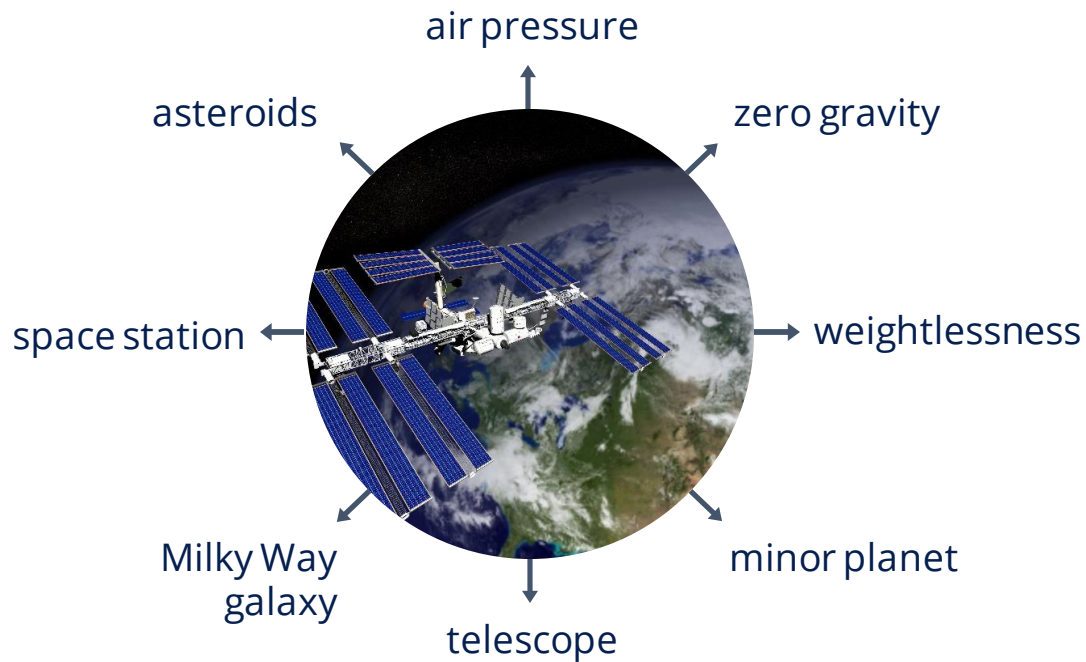
Go through the vocabulary below. Ask classmate or your teacher about any words that are new for you.





Space vocabulary

Go through the vocabulary below. Ask classmate or your teacher about any words that are new for you.





Writing activity

Choose one of the items related to space that you saw in the **mind maps** on the previous slides.



Note: you can use a search engine to help you come up with facts!

Write three facts about your chosen item, without naming it!

E.g.: *This job requires highly specific and intensive training.*

Send your facts into the chat.

Your classmates will **guess** what you're describing!





Answer key

P.8:

ISRO - Indian Space Research Organisation

RFSA – Russian Federal Space Agency

CNSA – China National Space Administration

NASA National Aeronautics and Space Administration



Summary

Space vocabulary:

- *space void; solar system; the cosmos; deep space*
- *There are eight planets orbiting the sun in our **solar system**.*
- *The majority of the universe is made up of **space void**.*

Space exploration vocabulary:

- *space agency; space shuttle; International Space Station*
- *abundance; primitive life; to inhabit*
- *Rockets and **space shuttles** allow people to be **transported** into space, while **telescopes**, probes and **satellites** help us to explore deep space.*

The future of space exploration:

- *Moving beyond our planet will give our species its best chance of survival in the future.*
- *Space agencies should send robots into space instead of people. It is safer that way.*



Vocabulary

space void

solar system

abundance

space agency

the cosmos

primitive life

to inhabit

space shuttle

International Space Station

deep space



Notes

