

# Super English



**Unit 1 - Lesson 4 - The Universe**

# Vocabulary



9PLE

SEPREREN

SUPERSH

VUPEEOR

DEESESIS

VOBANLORY

EPBAL

VOCABEILARY

YSMAYHSAR

EXJO

SOYANULAGY

# Universe - Vocabulary



**observe:** (v) to watch carefully the way something happens or the way someone does something



She **observed** the stars at night with her telescope.

# Universe - Vocabulary



**magnify:** (v) to make something appear larger than it is, especially with a lens or microscope.



He **magnified** the small print with his magnifying glass.

# Universe - Vocabulary



**astronomy:** (n) the scientific study of the universe and of objects that exist naturally in space



He developed an interest in **astronomy** after his father bought him a telescope.

# Universe - Vocabulary



**interfere:** (v) to try to stop something from happening



The clouds could **interfere** with our ability to see the lunar eclipse.

# Let's Read!



# Exploring the Universe: Telescopes, Space Missions, and the Search for Life

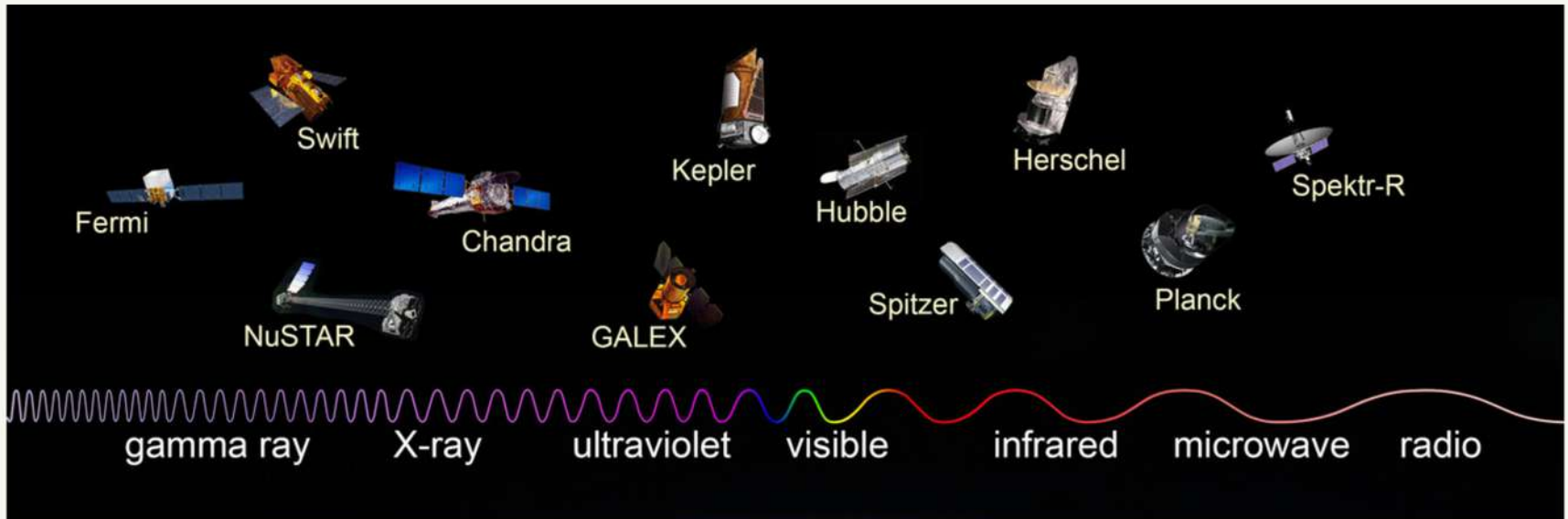


Welcome back to our cosmic adventure! Today, we're going to explore beyond our Solar System and dive into the vast universe. We'll learn about telescopes, space missions, and the search for extraterrestrial life. Let's get ready to explore the great unknown!



# Exploring the Universe: Telescopes, Space Missions, and the Search for Life

Super  
English



## Telescopes: Our Eyes in Space

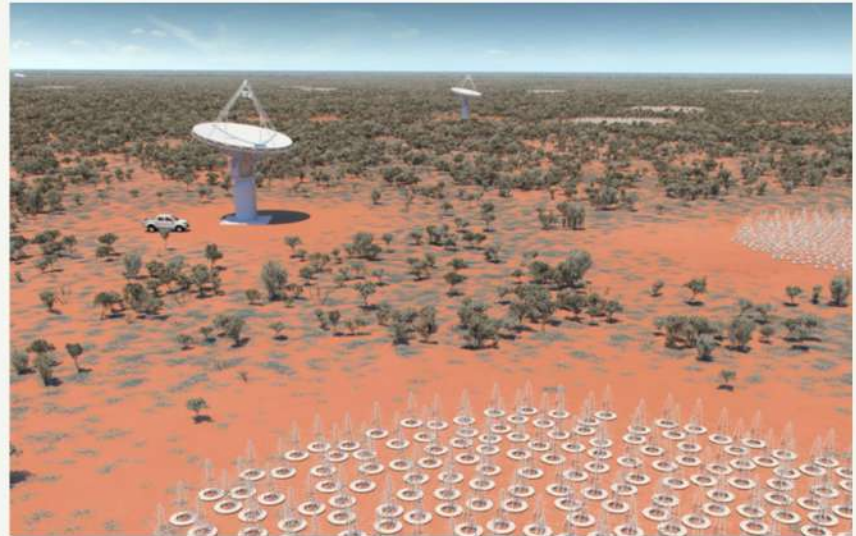
Telescopes are incredible tools that allow us to see distant objects in space. There are different types of telescopes, each designed to **observe** the universe in unique ways.

# Exploring the Universe: Telescopes, Space Missions, and the Search for Life



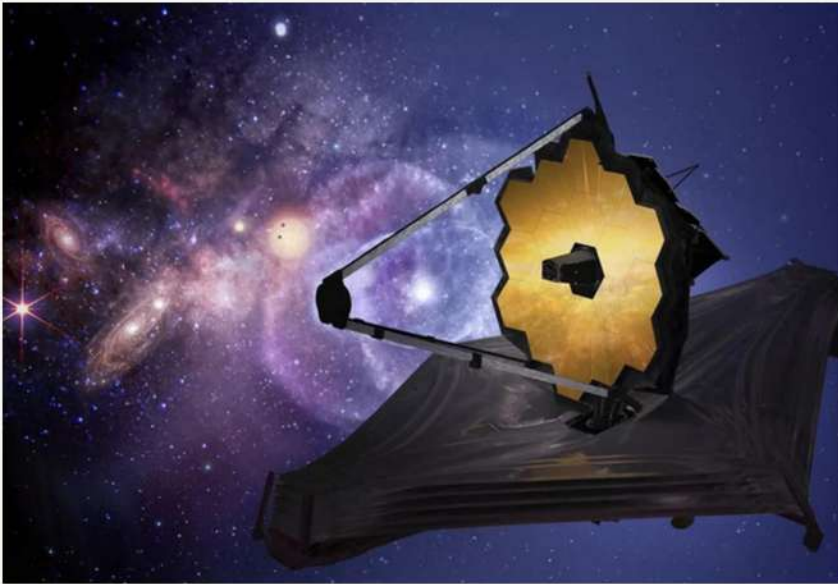
**Optical Telescopes:** These telescopes collect visible light and **magnify** objects in space. The Hubble Space Telescope has provided stunning images of galaxies and nebulae. Another powerful telescope, the Very Large Telescope (VLT) in Chile, consists of four main telescopes that can work together to form a giant 'super telescope'. The VLT has made groundbreaking discoveries, such as capturing the first image of an exoplanet and studying the supermassive black hole at the center of our galaxy.

# Exploring the Universe: Telescopes, Space Missions, and the Search for Life



**Radio Telescopes:** These detect radio waves from space. The SKA is a new radio telescope project, currently in the design study phase, which will have sensitivity 100 times greater than the most sensitive radio telescopes of the present generation, and an ability to survey the sky up to 1 million times faster.

# Exploring the Universe: Telescopes, Space Missions, and the Search for Life



**Space Telescopes:** Placed in orbit around Earth, space telescopes like the James Webb Space Telescope (JWST) can observe the universe without Earth's atmospheric **interference**. JWST is studying the formation of stars and galaxies, looking deeper into space than ever before.

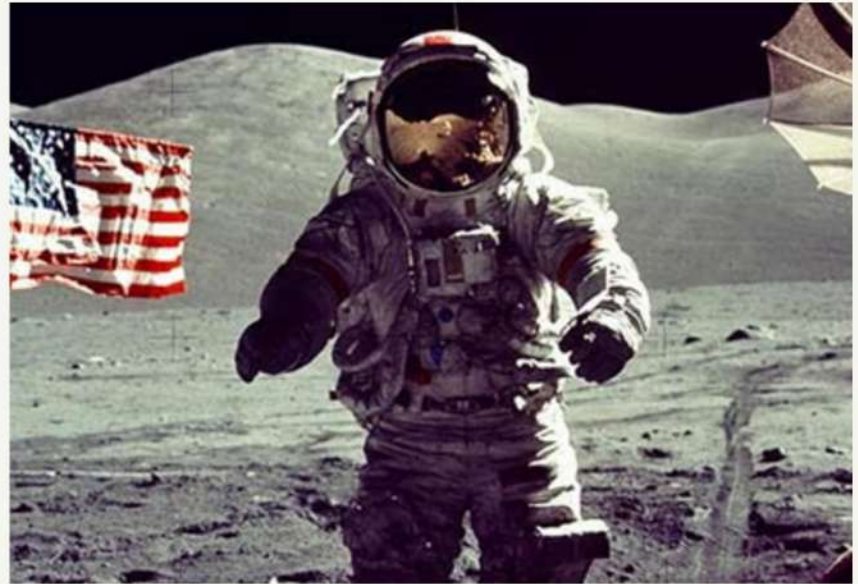
# Exploring the Universe: Telescopes, Space Missions, and the Search for Life



## Space Missions: Journeying Beyond Earth

Humans have always been curious about space, and we've sent many missions to explore our Solar System and beyond. Let's read about some of these amazing missions.

# Exploring the Universe: Telescopes, Space Missions, and the Search for Life



## **The Apollo Missions:**

In the 1960s and 70s, NASA's Apollo missions sent astronauts to the Moon. Apollo 11 was the first mission to land humans on the Moon in 1969.

# Exploring the Universe: Telescopes, Space Missions, and the Search for Life



## **Voyager Probes:**

Launched in 1977, Voyager 1 and Voyager 2 have traveled beyond our Solar System into interstellar space, sending back valuable data about the outer reaches of the universe.

# Exploring the Universe: Telescopes, Space Missions, and the Search for Life

Super  
English



**Mars Rovers:** NASA's rovers, including Curiosity and Perseverance, explore the Martian surface, searching for signs of life and studying the planet's geology. China's Tianwen-1 mission has also successfully landed a rover on Mars, adding to our knowledge about the Red Planet.



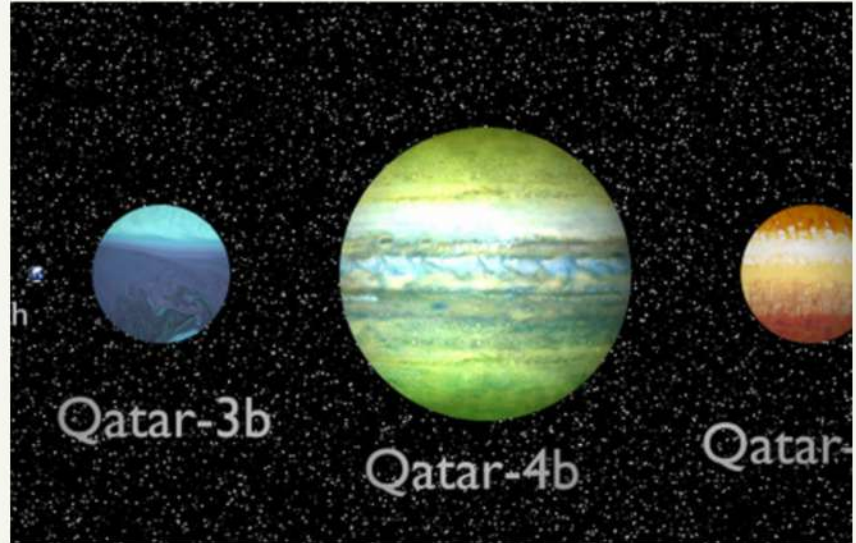
# Exploring the Universe: Telescopes, Space Missions, and the Search for Life



## The Search for Extraterrestrial Life

One of the most exciting questions in **astronomy** is whether we are alone in the universe. Scientists search for signs of life beyond Earth in several ways. Here are some discovery efforts being made.

# Exploring the Universe: Telescopes, Space Missions, and the Search for Life



**Exoplanets:** These are planets that orbit stars outside our Solar System. Telescopes like Kepler and TESS have discovered thousands of exoplanets, some in the habitable zone. JWST recently confirmed its first exoplanet, LHS 475 b, an Earth-sized planet that may provide clues about rocky planet atmospheres.

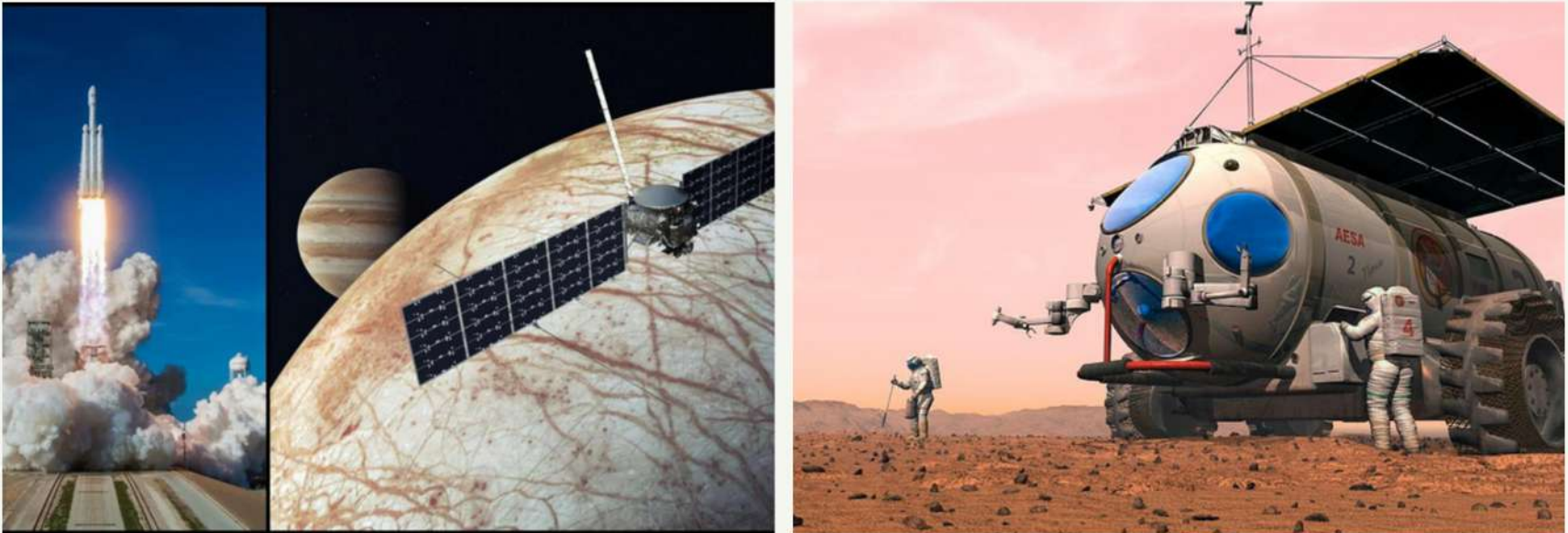
# Exploring the Universe: Telescopes, Space Missions, and the Search for Life



## SETI:

The Search for Extraterrestrial Intelligence (SETI) uses radio telescopes to listen for signals from alien civilizations. Although no signals have been found yet, the search continues.

# Exploring the Universe: Telescopes, Space Missions, and the Search for Life



**Mars and Europa:** Mars and Jupiter's moon Europa are prime targets for the search for life. Europa has a subsurface ocean beneath its icy crust, which could potentially harbor life. Future missions, such as NASA's Europa Clipper, aim to explore these worlds in more detail

# Exploring the Universe: Telescopes, Space Missions, and the Search for Life



## Future Missions

Future missions include the European Space Agency's (ESA) JUICE mission to study Jupiter's icy moons and China's Chang'e program, which aims to return samples from the Moon. NASA's Artemis program plans to return humans to the Moon and eventually to Mars.

As we continue our journey through space, remember that the universe is vast and full of mysteries waiting to be uncovered. Who knows what incredible discoveries await us in the future? Maybe one day, you'll be part of the team exploring the final frontier!





# might / may + not + be

We use '**might not be**' and '**may not be**' when we are unsure if something is true or will happen.

He might not be here on time because he has a doctor's appointment.



The package may not be delivered today because of the snow storm.

# could + not + be

We use '**could not be**' to express that something is impossible or could not possibly be true.

The noise could not be coming from the bedroom because no one is in there.



He could not be the thief; he was with me the entire evening.



# Let's Talk!



# Dialogue - Universe



Ava: Hey Jake, stargazing last night was awesome! Did you have a favorite part?

**Jake: The shooting stars were the best, without a doubt. It's crazy how tiny we are compared to the universe, right?**

Ava: For sure! By the way, have you heard about the new Mars exhibit at the planetarium?

**Jake: No, I didn't catch that. What's it like?**

Ava: It's all about the Mars rovers. They've got models and interactive maps to explore their journeys.

**Jake: That sounds cool. We should check it out. Maybe it could help with your science project?**

# Dialogue - Universe



Ava: Exactly my thought! How about we go this Saturday?

**Jake: That works for me! It'd be cool to see the rover models. Plus, the planetarium shows are always mind-blowing.**

Ava: Great, I'll look up the times. Maybe we can catch a show after checking out the Mars stuff.

**Jake: Sounds like a plan! I can't wait to learn more about Mars with you.**

Ava: Me too. I'll text you the details. See you Saturday!

**Jake: Catch you later, Ava. I'm looking forward to it!**



# Space words

Practice reading these 'space' words!

Radiation  
Microgravity  
Cosmos  
Hubble  
Interstellar  
Spectroscopy



Spacesuit  
Trajectory  
Lunar Module  
Rocket  
Thruster  
Atmosphere

# Super English

See you  
Next time!

