Space Telescope Launched To Study First Stars

Discussion > Advanced 9

Exercise 1 – Vocabulary

cosmos	The universe, especially when considered as a well-ordered whole.
[noun]	*Ex: The book explores the origins of the **cosmos**, and humankind's attempts to understand it through history.*

unfurl	To make or become open from a rolled up or folded state.
[verb]	*Ex: The boat quickly began to move forward as soon as we **unfurled** the extra sail.*

eternal	Existing or continuing forever.
[adjective]	*Ex: The witch promised **eternal** life to anyone who would drink the potion.*

erupt	To express anger, amusement, etc. in a sudden and loud way.
[verb]	*Ex: The crowd **erupted** as Beckham scored his third goal of the match.*

jubilant	Feeling or showing great happiness.
[adjective]	*Ex: Soccer fans around the country were **jubilant** when their team qualified for the World Cup.*

backdrop	The background for a scene, situation, etc.
[noun]	*Ex: The village is located in the heart of the Alps, set against a **backdrop** of towering mountains.*

Exercise 2 – Reading

Read the text aloud with your tutor and discuss the key points.

Space Telescope Launched To Study First Stars

The world's largest and most powerful space telescope has been launched to study the first stars and galaxies and search the universe for signs of life.

NASA's James Webb Space Telescope took off from French Guiana on South America's northeastern coast. It traveled into space on a European Ariane Rocket on Christmas morning, December 25, 2021.

The $10 billion space telescope will fly 1.6 million kilometers into space, or more than four times beyond the moon. It will take a month to get there and another five months before it's ready to start scanning the cosmos.

First, the telescope's enormous mirror and sunshield will unfurl, which will allow the 6.3-tonne telescope to see back in time 13.7 billion years, or within just 100 million years of the Big Bang.

NASA Administrator Bill Nelson called Webb a time machine that will give us "a better understanding of our universe and our place in it: who we are, what we are, the search that's eternal."

Planned to be a successor to the Hubble Space Telescope, the James Webb is named after NASA's administrator during the 1960s. NASA partnered with the European and Canadian space agencies to build and launch the telescope, with thousands of people from 29 countries working on it since the 1990s.

The launch had been planned for earlier in December, but weather and other technical issues delayed the launch.

Around the world, astronomers and countless others tuned in to watch the launch broadcast, anxious to see Webb finally taking flight after years of setbacks. Cheers and applause erupted in and outside Launch Control following Webb's flawless launch, with jubilant scientists embracing one another amid shouts of "Go Webb!"

Cameras on the rocket provided one last glimpse of the telescope against a backdrop of Earth, before it sped away.

NASA is planning for the James Webb to be operational for about ten years. The fuel tank is accessible to visiting spacecraft to refill — if and when that technology becomes available.

Exercise 3 – Discussion

Discuss the following questions with your tutor.

1. What are your thoughts on the launch of the James Webb Space Telescope?
2. What do you make of the fact that the telescope will be able to see back in time 13.7 billion years?
3. Do you expect scientists to find signs of life in the universe in the near future?
4. What excites you most about space exploration?
5. Have you ever seen a rocket launch? If so, when and where? If not, would you like to?
6. Are there any planned space missions you're looking forward to?
7. How important would you say it is to invest in space exploration?
8. “Our future lies with today's kids and tomorrow's space exploration.” What do you make of this?