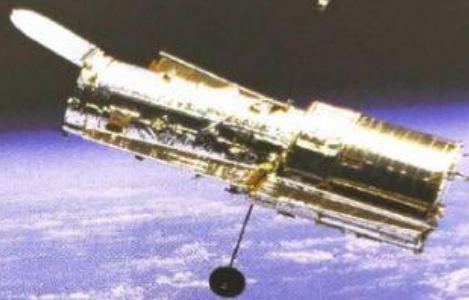


3 Space telescope



Before you read

1. What is a telescope used for?
Have you ever looked through a telescope?
2. Have you heard of the Hubble Telescope?
3. Do you know what it is used for?

Reading

- 1 Since 1990, the Hubble Space Telescope has been working day and night to discover the secrets of the universe. Before they had Hubble, scientists couldn't answer questions such as how old the universe is, and how fast it is expanding. Thanks to Hubble, they can now answer both of these questions and many more.
- 2 The Hubble Space Telescope was sent into space in 1990. But the first pictures it sent back to Earth weren't as clear as they should have been. There was something wrong with the telescope. In 1993 a team of astronauts was sent to fix the telescope, and scientists started getting the spectacular pictures they had been waiting for. Telescopes here on Earth can't get very clear pictures of objects in space because the Earth's atmosphere makes the pictures unclear. A telescope in space doesn't have that problem. The Hubble Space Telescope can take pictures that are ten times clearer than any taken on Earth.
- 3 Hubble gave us the first clear pictures of the dwarf planet Pluto, and spectacular views of Comet Shoemaker-Levy 9 hitting Jupiter in 1994. It has shown us new stars being born and old ones dying. It has helped us discover new planets. Hubble, and other telescopes like it, could one day help us answer the biggest question of all—are we alone in the universe?

Vocabulary

A. Complete each sentence with the correct word.

telescope comet clear atmosphere universe

1. This photograph isn't very _____. I can't tell who is in it.
2. A _____ is a flying space object with a long tail made of ice and dust.
3. The Earth is surrounded by a layer of air called the _____.
4. Have you ever looked through a _____? It's amazing – you can see the planets and stars so clearly!
5. Isaac Asimov has written dozens of science-fiction stories about people travelling across the _____ in amazing spacecraft.

B. Choose the correct word or phrase with the same meaning as the blue words in each sentence.

repair group of people who work together getting bigger
found things that we don't know about

1. Science is our way of understanding the **secrets** of the world. Yet there are still some things, like UFOs, that even science can't explain.
2. My dad is putting on weight. His stomach is **expanding**!
3. A **team** of scientists is studying the two-thousand-year-old skeleton.
4. My computer stopped working yesterday, but I was able to **fix** it.
5. An Italian scientist named Galileo **discovered** four of Jupiter's moons.

In other words

A. What is the main purpose of the passage? Circle 1, 2 or 3.

1. To describe some of the problems of the Hubble Space Telescope.
2. To describe the history of the Hubble Space Telescope.
3. To compare the Hubble Space Telescope to telescopes on Earth.

B. Match each heading to the correct paragraph in the passage.

1. Paragraph _____ Hubble helps scientists unlock the secrets of the universe.
2. Paragraph _____ Spectacular views and new discoveries.
3. Paragraph _____ The clearest pictures of space – eventually!

General understanding

Circle T for true or F for false for each of the following statements.

1. Scientists cannot say how fast the universe is expanding. T / F
2. The first pictures sent back by the Hubble Space Telescope were unclear. T / F
3. The Hubble Space Telescope now takes pictures that are ten times clearer than any taken on Earth. T / F
4. In 1993 nobody could fix the Hubble Space Telescope. T / F

In detail

Write short answers to the following questions.

1. Why did scientists build the Hubble Space Telescope?

2. When was the Hubble Space Telescope sent into space?

3. Who fixed the Hubble Space Telescope in 1993?

4. What is the problem with telescopes here on Earth?

5. What are some of the spectacular pictures that Hubble has taken so far?

6. Scientists hope that Hubble and other telescopes will help them answer one of the biggest questions facing humanity. What is that question?

In focus

Singular or plural? Read the following sentences carefully and circle the correct word.

1. The Hubble Space Telescope (was/were) sent into space in 1990.
2. In 1993 a team of astronauts (was/were) sent to fix the Hubble Telescope.
3. The first pictures sent back by Hubble (wasn't/weren't) as clear as they should have been.
4. Telescopes here on Earth can't get clear pictures of objects in space because the Earth's atmosphere (make/makes) the pictures unclear. Telescopes in space (doesn't/don't) have that problem.
5. Space telescopes (help/helps) scientists discover new planets.