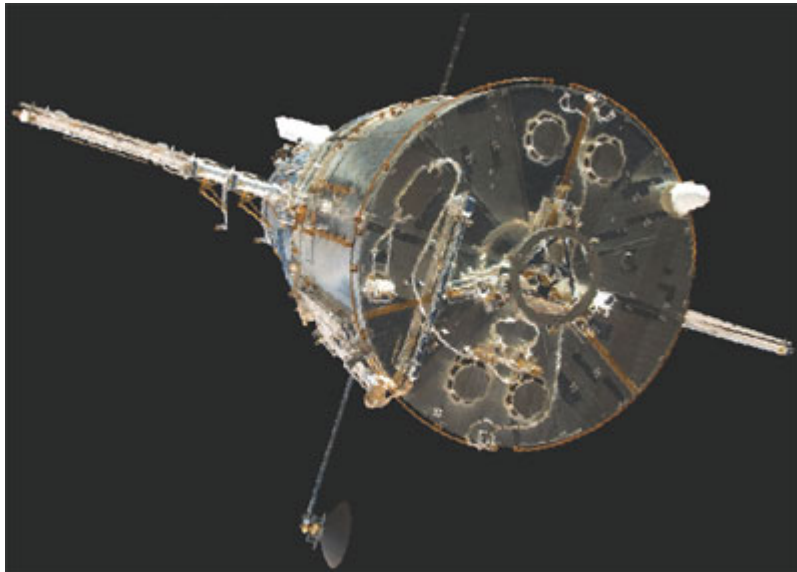


# A Final Journey

## An Even Better Hubble

**The famous telescope is now more powerful.**



*AP Photo/NASA*

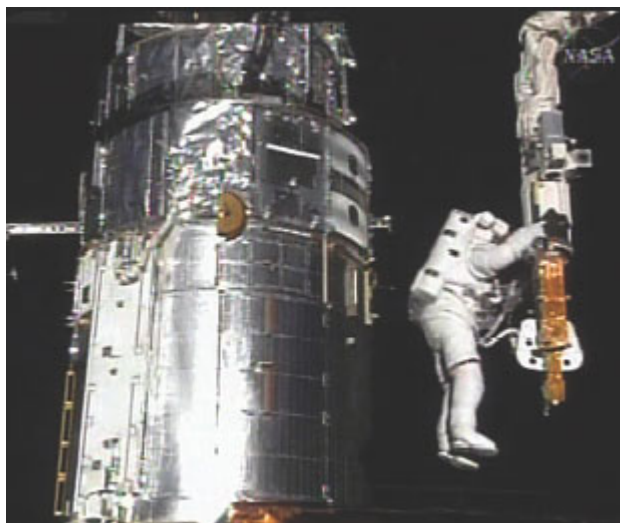
Hubble Space Telescope

The Hubble Space Telescope makes a full orbit around Earth every 97 minutes. If a car could move that fast, it could go from New York to California in fewer than 10 minutes!

The Hubble Space Telescope is high above Earth. It is a telescope in space. Hubble takes photos of planets, stars, and other space objects.

Hubble has been in space since 1990, but now it is better than ever. Astronauts make repairs and add parts. One of the parts is a huge camera. It is able to see deeper into space than ever before.

"This last mission to Hubble was the most difficult," says scientist Ken Carpenter. "It was a success because of the hard work of the astronauts in space and workers on the ground. Now Hubble is the best it's ever been!"

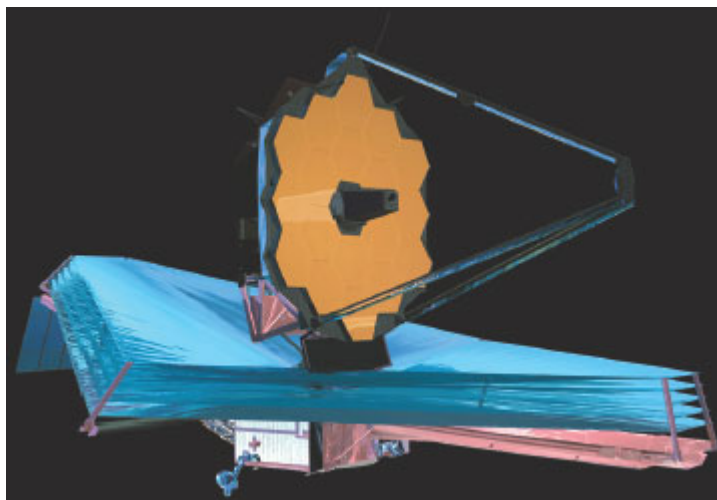


AP Photo/NASA TV

Astronaut John Grunsfeld makes repairs to the Hubble Space Telescope.

How does Hubble take so many great photos? It has a great view! It is in **orbit** 350 miles above Earth. An orbit is a path that a space object travels around another space object.

The recent repairs to Hubble were the last. Scientists say it will work for at least five more years. Hubble will be replaced by the James Webb Space Telescope.



NASA

The James Webb Space Telescope will one day replace Hubble.

Name: \_\_\_\_\_

Date: \_\_\_\_\_

1. Where can the Hubble Telescope be found?

- A on a highway in California
- B in a museum in New York
- C in pictures on NASA TV
- D in orbit around the Earth

2. Reread paragraph 3 from the passage: "Hubble has been in space since 1990, but now it is better than ever. Astronauts made repairs and added parts. One of the parts is a huge camera. It is able to see deeper into space than ever before."

Which of the following describes the information communicated in this paragraph?

- A The paragraph describes how something was changed.
- B The paragraph makes a comparison.
- C The paragraph describes the order in which events occurred.
- D The paragraph provides a list of things.

3. The author most likely wrote this passage in order to

- A teach astronauts how to fix the Hubble Telescope while floating in space
- B inform readers about how astronauts made the Hubble Telescope better
- C describe photos taken by the Hubble Telescope of planets and other objects in outer space
- D persuade scientists that the James Webb Telescope is better than the Hubble Telescope

4. "'The last mission to Hubble was the most difficult,' says scientist Ken Carpenter."

In this sentence, the word **mission** most nearly means

- A a group that is sent to another country
- B a job that needs to be done in space
- C a letter sent from one person to another
- D a reason to do something or make something

5. The passage "A Final Journey" is mostly about

- A the speed of the Hubble Telescope in space
- B the path of the Hubble Telescope around the Earth
- C the repairs that astronauts made to the Hubble Telescope
- D the plan to replace the Hubble Telescope with the James Webb Telescope

6. According to the passage, what does the Hubble Telescope do in space?

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7. Review the photo of astronaut John Grunsfeld repairing the Hubble Telescope. Why might the mission to repair the Hubble Telescope be a difficult task? Use evidence from the text to support your answer.

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8. The question below is an incomplete sentence. Choose the word that best completes the sentence.

The Hubble Telescope takes gorgeous photos in space \_\_\_\_\_ it has a great view.

- A but
- B because
- C so
- D after

9. Answer the questions based on the sentence below.

The astronauts and workers fixed the Hubble Telescope by making repairs and adding new parts.

Who? the astronauts and workers

(did) What? \_\_\_\_\_

How? \_\_\_\_\_

**10.** Read the vocabulary word and definition below, and complete questions 10a, 10b, and 11.

**Vocabulary Word:** journey (jour · ney): a long trip from one place to another.

**10a.** Read the five sentences below, and underline the word **journey** in each sentence.

1. The astronaut was very excited for her journey into space.
2. Their cruise to the islands was an amazing journey, but the travelers were happy to finally get back home.
3. How long do you think it would take to make a journey around the world?
4. During the journey to the airport the movie star was followed by photographers.
5. We drove across the country for two weeks, visiting the national parks, and it was an amazing but long journey!

**10b.** Which photo below most likely represents a journey?



**11.** If you walk to your teacher's desk, is that a journey? Explain your answer.

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**Teacher Guide & Answers**

**Passage Reading Level:** Lexile 630

**Featured Text Structure:** Problem/Solution – the writer poses a problem and suggests possible solutions

**Passage Summary:** The Hubble Space Telescope was upgraded and now has a huge camera that allows the telescope to see deeper into space. Problem: the telescope needed repairs. Solution: astronauts and workers on the ground fixed the telescope and added an enormous camera.

1. Where can the Hubble Telescope be found?

- A on a highway in California
- B in a museum in New York
- C in pictures on NASA TV
- D **in orbit around the Earth**

2. Reread paragraph 3 from the passage: "Hubble has been in space since 1990, but now it is better than ever. Astronauts made repairs and added parts. One of the parts is a huge camera. It is able to see deeper into space than ever before."

Which of the following best describes the information communicated in this paragraph?

- A **The paragraph describes how something was changed.**
- B The paragraph makes a comparison.
- C The paragraph describes the order in which events occurred.
- D The paragraph provides a list of things.

3. The author most likely wrote this passage in order to

- A teach astronauts how to fix the Hubble Telescope while floating in space
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- C describe photos taken by the Hubble Telescope of planets and other objects in outer space
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4. "The last mission to repair Hubble was the most difficult," says scientist Ken Carpenter."

In this sentence, the word **mission** most nearly means

- A a group that is sent to another country
- B **a job that needs to be done in space**
- C a letter sent from one person to another
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5. The passage "A Final Journey" is mostly about

- A the speed of the Hubble Telescope in space
- B the path of the Hubble Telescope around the Earth
- C **the repairs that astronauts made to the Hubble Telescope**
- D the plan to replace the Hubble Telescope with the James Webb Telescope

6. According to the passage, what does the Hubble Telescope do in space?

**Suggested answer:** The Hubble Telescope takes pictures of different space objects such as planets and stars. [paragraph 1]

7. Review the photo of astronaut John Grunsfeld repairing the Hubble Telescope. Why might the mission to repair the Hubble Telescope be a difficult task? Use evidence from the text to support your answer.

**Suggested answer:** It was difficult to repair the Hubble Telescope because the astronauts had to add a huge camera. Making these types of repairs and improvements in space, where there is no gravity, could be really challenging. The picture shows an astronaut floating outside the telescope to repair it. It looks like it could be difficult to use tools in space with the large gloves the astronauts have to wear. [paragraphs 2 and 4]

8. The question below is an incomplete sentence. Choose the word that best completes the sentence.

The Hubble Telescope takes gorgeous photos in space \_\_\_\_\_ it has a great view.

- A but
- B because**
- C so
- D after

9. Answer the following questions based on the sentence below.

The astronauts and workers fixed the Hubble Telescope by making repairs and adding new parts.

Who? the astronauts and workers

(did) What? **fixed the Hubble Telescope**

How? **by making repairs and adding new parts**

10. ReadWorks recommends that you teach this vocabulary word to the whole class out loud using the four steps listed below.

**Vocabulary Word:** journey

**Step 1:** Introduce the word

- a. Teacher writes the word on the board and divides it into syllables: (jour • ney)
- b. Teacher says: "This word is journey. What is the word?" [All students reply together out loud: "journey."]

**Step 2:** Provide a child-friendly definition

- a. Teacher says: "A journey is a long trip from one place to another."
- b. Teacher says: "The word journey is usually used to talk about a trip that takes a long time or that is over a long distance. In this passage the Hubble Telescope has to travel a long distance, or make

a journey, through space.”

- c. Teacher says: “What is the word?” [All students reply together out loud: “journey.”]

**Step 3:** Practice the word

Teacher provides examples and additional opportunities to repeat the word. Read the first sentence out loud to your students. Begin reading it again and when you come to the vocabulary word, prompt students to say the vocabulary word out loud. Then finish reading the sentence out loud to your students.

- 10a.**
1. The astronaut was very excited for her journey into space.
  2. Their cruise to the islands was an amazing journey, but the travelers were happy to finally get back home.
  3. How long do you think it would take to make a journey around the world?
  4. During the journey to the airport the movie star was followed by photographers.
  5. We drove across the country for two weeks, visiting the national parks, and it was an amazing but long journey!

**Step 4:** Check for student understanding

This step can be completed as a whole class activity or as an independent practice.

- 10b.** Which photo below most likely represents a journey?



- 11.** If you walk to your teacher’s desk, is that a journey? Explain your answer.

**Suggested answer:** To walk from my desk to the teacher’s desk would not be a journey. A journey is defined as a long trip from one place to another. Walking from my desk to the teacher’s desk would not take much time or cover a long distance.

*Suggested Additional Vocabulary:* mission, repair