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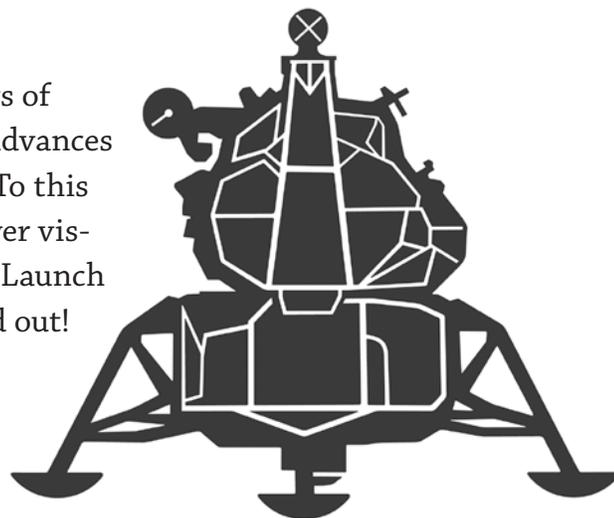
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## Moon Landing

For centuries, people have dreamed of exploring the wonders of space. In the mid-1900's, these dreams were realized when advances in technology allowed people to send spacecraft into space. To this day, the moon is the only object in space that people have ever visited. How much do you know about the first moon landing? Launch off on a webquest to explore the first moon landing and find out!

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### Find It!

*Find the answers to the questions below by using the "Search" tool to search key words. You can start this activity by searching the key word "Apollo" and learning about the space program that carried people to the moon.*

*Write the answers on the lines provided or below the question.*

1. During which years did NASA conduct the Apollo program?
2. How many astronauts did the Apollo program land on the moon?
3. Fill in the blanks about the first moon landing:
  - a. The first moon landing occurred on \_\_\_\_\_.
  - b. The first two astronauts to step on the moon were \_\_\_\_\_ and \_\_\_\_\_.
  - c. The first astronauts landed on a flat feature of the moon called the \_\_\_\_\_.
- 4 Answer the following questions about the two major Apollo disasters:
  - a. What happened on January 27, 1967?
  - b. What happened on April 14, 1970?

**\*Users of the Advanced database can find extension activities at the end of this webquest.**

5. Answer the below questions about the Saturn 5 rocket which propelled the astronauts to the moon?
  - a. How tall was the rocket?
  - b. How much did the rocket weigh?
  - c. The rocket carried a craft that consisted of what three parts?
6. Over the course of the Apollo program, the astronauts collected a total of about \_\_\_\_\_ pounds (\_\_\_\_\_ kilograms) of rocks and other samples.

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## The Moon

*Go to the "Moon" article and answer these questions about Earth's only natural satellite.*

7. The moon's average radius is \_\_\_\_\_ miles (\_\_\_\_\_ kilometers), about \_\_\_\_\_ percent of the radius of Earth.
8. The average distance from the center of Earth to the center of the moon is \_\_\_\_\_ miles (\_\_\_\_\_ kilometers).
9. The temperature at the moon's equator ranges from about \_\_\_\_\_ at night to \_\_\_\_\_ in the daytime.
10. What did the Luna 3 spacecraft do in 1959?
11. In 2009, the U.S probe LCROSS confirmed the presence of \_\_\_\_\_ near the moon's south pole.
12. In 2013, which country became the third country (after the Soviet Union and the United States) to safely land a craft on the moon?

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## Neil Armstrong

Go to the "Neil Armstrong" article and answer these questions about the first person to set foot on the moon.

13. Neil Armstrong was born on \_\_\_\_\_ in \_\_\_\_\_.
14. Armstrong flew 78 combat missions during which war?
15. When did Armstrong make his first space flight? What notable "first" occurred on that flight?
16. What did Armstrong say when he first stepped onto the moon?

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## Buzz Aldrin

Go to the "Buzz Aldrin" article and answer these questions about the second person to set foot on the moon.

17. Buzz Aldrin was born on \_\_\_\_\_ in \_\_\_\_\_.
18. What was Aldrin's original name? How did he get the name "Buzz"?
19. What did Aldrin do during the Gemini 12 space flight in 1966? What did his experience help prove?

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## Michael Collins

Go to the "Michael Collins" article and answer these questions about this Apollo 11 astronaut.

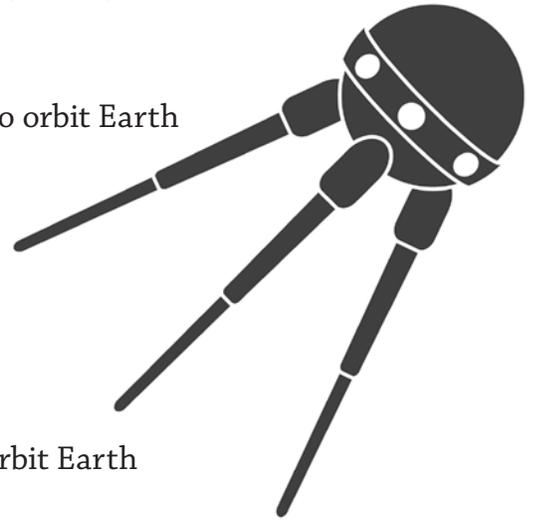
20. Michael Collins was born on \_\_\_\_\_ in \_\_\_\_\_.
21. What did Collins do during the Apollo 11 mission?
22. What did Collins do from 1971 to 1978?

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## Space Firsts

*Neil Armstrong was the first person to walk on the moon. Go to the "Space exploration" article and find these other space firsts.*

- \_\_\_\_\_ 23. First artificial satellite to orbit Earth
- \_\_\_\_\_ 24. First person in space
- \_\_\_\_\_ 25. First woman in space
- \_\_\_\_\_ 26. First U.S. astronaut to orbit Earth
- \_\_\_\_\_ 27. First person to walk in space
- \_\_\_\_\_ 28. First American to walk in space
- \_\_\_\_\_ 29. First female commander of the International Space Station
- \_\_\_\_\_ 30. First probe to make close observations of Pluto
- \_\_\_\_\_ 31. First astronauts to drive across the moon's surface



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## Watch It!

*Within the "Space exploration" article, you will find the video "Space exploration: Apollo 11." Watch the video and answer the following questions.*

- 32. From where did the Apollo 11 astronauts blast off on July 16, 1969?
- 33. What was the name of the module that separated from the command module and landed on the moon?
- 34. What did Neil Armstrong and Buzz Aldrin do while they were on the moon?

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## Extension Activity 1

Imagine that you could interview one of the Apollo 11 astronauts. What three questions would you ask him about the Apollo 11 mission? Explain why you asked him those questions. How do you think he will answer your questions?

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## Extension Activity 2

Assuming that you could safely travel anywhere in the solar system, where would you go? Why did you choose that place or places? What do you expect to see? Would you go if you knew that you could never return to Earth?

### **Read more about space exploration and the moon by visiting World Book's eBook collection:**

*Earth and Earth's Moon*. Chicago: World Book, 2013. Explore the Solar System. *World eBook Web*. 11 Jan. 2019. <<http://www.worldbookonline.com/wb/ebooks/mall/instit/catalog/urn:ISBN:978-0-7166-1893-5/detail.do>>.

*Human Space Exploration*. Chicago: World Book, 2013. Explore the Solar System. *World eBook Web*. 11 Jan. 2019. <<http://www.worldbookonline.com/wb/ebooks/mall/instit/catalog/urn:ISBN:978-0-7166-1896-6/detail.do>>.

*Stargazing to Space Travel: A Timeline of Space Exploration*. Chicago: World Book, 2013. A Timeline of ... *World eBook Web*. 11 Jan. 2019. <<http://www.worldbookonline.com/wb/ebooks/mall/instit/catalog/urn:ISBN:978-0-7166-3554-3/detail.do>>.



# Teacher Page

## Answers

1. NASA conducted the Apollo program between 1961 and 1975.
2. The Apollo program landed 12 astronauts on the moon.
3.
  - a. The first moon landing occurred on July 20, 1969.
  - b. The first two astronauts to step on the moon were Neil Armstrong and Buzz Aldrin.
  - c. The first astronauts landed on a flat feature of the moon called the Sea of Tranquility.
4.
  - a. On January 27, 1967, a fire during a launch pad test killed three astronauts.
  - b. On April 14, 1970, a short circuit caused an explosion that severely damaged the systems that supplied electricity and oxygen to the command modules. The astronauts were able to return safely to Earth.
5.
  - a. The rocket was 363 feet (111 meters) tall.
  - b. The rocket weighed 6.2 million pounds (2.8 million kilograms).
  - c. The rocket carried a craft that consisted of the command module, the service module, and the lunar module.
6. Over the course of the Apollo program, the astronauts collected a total of about 842 pounds (382 kilograms) of rocks and other samples.
7. The moon's average radius is 1,079.6 miles (1,737.5 kilometers), about 27 percent of the radius of Earth.
8. The average distance from the center of Earth to the center of the moon is 238,897 miles (384,467 kilometers).
9. The temperature at the moon's equator ranges from about  $-280^{\circ}\text{F}$  ( $-173^{\circ}\text{C}$ ) at night to  $260^{\circ}\text{F}$  ( $127^{\circ}\text{C}$ ) in the daytime.
10. In 1959, the Luna 3 spacecraft took the first photographs of the side of the moon that faces away from Earth.
11. In 2009, the U.S probe LCROSS confirmed the presence of water ice near the moon's south pole.
12. In 2013, China became the third country to safely land a craft on the moon.
13. Neil Armstrong was born on August 5, 1930, in Auglaize County, Ohio.
14. Armstrong flew 78 combat missions during the Korean War.
15. Armstrong made his first space flight in 1966. Armstrong and David Scott performed the first successful docking of two vehicles in space on that flight.

16. Armstrong said, “That’s one small step for a man, one giant leap for mankind.” when he first stepped onto the moon.
17. Buzz Aldrin was born on January 20, 1930, in Montclair, New Jersey.
18. Aldrin’s original name was Edwin Eugene Aldrin, Jr. “Buzz” was short for Buzzer, his young sister’s pronunciation of the word *brother*.
19. During the Gemini 12 space flight, Aldrin left the spacecraft and “walked” in space. This experience helped prove that people can work outside an orbiting vehicle.
20. Michael Collins was born on October 31, 1930, in Rome, Italy.
21. Collins piloted the command module, *Columbia*, as it orbited the moon.
22. From 1971 to 1978, Collins was director of the Smithsonian Institution’s National Air and Space Museum.
23. Sputnik (later referred to as Sputnik 1)
24. Yuri Gagarin
25. Valentina Tereshkova
26. John H. Glenn, Jr.
27. Alexei A. Leonov
28. Edward H. White II
29. Peggy Whitson
30. New Horizons
31. David R. Scott and James B. Irwin
32. The Apollo 11 astronauts blasted off from Cape Kennedy, now called Cape Canaveral.
33. The lunar module separated from the command module and landed the astronauts on the moon.
34. While on the moon, Armstrong and Aldrin set up scientific equipment and collected rocks and soil samples.

**Extension Activities 1 and 2:** Answers will vary.