Living on the Moon

By Lisa M. Guidone

NASA shoots for the moon, then Mars.

Only 12 people have set foot on the moon—so far. The last time was in late 1972, when two astronauts walked on its surface. Their final visit—the longest of any—lasted just three days. Now astronauts are preparing for another **mission**[1] to our space neighbor. This time, though, they plan to stay there.

NASA recently announced plans to build a **permanent**[2] base on the moon. Astronauts could be living and working there by 2020, according to the U.S space agency. The goal is to prepare astronauts for a trip to Mars in the future.

Under the plan, four-person crews will begin with week-long missions to the moon. By 2024, when more equipment has been set up, astronauts will be able to **reside,** or live, on the moon for as long as six months. Astronauts will travel in roving vehicles to explore the area near the **lunar** (moon) base.

Polar Plus

Unlike Earth, the moon has no air, wind, or weather. Its dusty **terrain,** or surface, is covered with deep craters. So how can humans survive on the moon?

NASA hopes to establish a lunar outpost near one of the moon's poles. "These locations experience sunlight for longer periods of time than other locations on the moon, which will make it possible to use solar power," NASA official Michael Braukus told *WR News.* Solar power is energy from the sun that can be used to generate electricity.

It is also likely that the polar regions are rich in natural resources, such as oxygen and hydrogen. While on the moon, astronauts plan to use natural resources for water and fuel.

[1] **mission:** a space trip with specific goals
[2] **permanent:** lasting for a very long time

Stepping Up Space Travel

The moon is the only place beyond Earth that humans have visited. About 238,900 miles away, the moon is Earth's closest space neighbor.

On July 20, 1969, Americans Neil Armstrong and Edwin "Buzz" Aldrin became the first humans to walk on the moon. Those space pioneers traveled to the lunar surface on the *Apollo 11* mission.

NASA's new direction is to **surpass,** or greatly exceed, the Apollo missions of the 1960s and early 1970s. "This is not your father's Apollo," says space policy expert John Logsdon at George Washington University in Washington, D.C.

As part of its new phase of space exploration, NASA **retired,** or stoped using, its aging space shuttle fleet in 2011. For their trek to the moon, astronauts will travel aboard the new *Orion* crew exploration vehicle, which is being developed. The vehicle, a modernized version of the *Apollo* craft, will attach to a lunar lander.

Next Stop: Mars

The moon mission is part of President George W. Bush's long-term space plan. The proposed base is the first step in the bold plan to prepare astronauts for their ultimate destination—Mars.

Because Mars is so far from Earth, traveling there will require humans to stay for long periods of time. Astronauts will not be able to bring enough supplies for the entire mission. They will have to use the elements on Mars to survive.

"By demonstrating we can survive on another world for a long time, we build confidence that we can venture much farther from Earth and stay for longer periods of time," says Braukus of NASA.

High-Priced Visit

While some supporters are jumping over the moon about launching a new era of space exploration, not everyone is pleased with the plan. Critics warn that it will be difficult to fund the moon program. So far, NASA has not put a price tag on the mission but welcomes participation by other countries to help carry out its plan.

U.S. Space Travel

In October 1957, the Soviet Union launched *Sputnik 1,* the first artificial satellite in space. The U.S. space program was established as a response. The "space race" between the two countries had begun. In 1961, President John F. Kennedy challenged Americans to send a person to the moon by the end of the 1960s.

Name: _____ Date: _____

1. What was the name of the first artificial satellite in space?

A Orion
B Sputnik 1
C Apollo 11
D Armstrong

2. How does the author describe the moon?

A as Earth's closest space neighbor
B as NASA's ultimate destination
C as a place humans have never visited
D as a place very similar to Earth

3. Why does the author include the paragraph subtitled "High-Priced Visit" in the article?

A to show how many people support space exploration
B to list all of the places that NASA plans to explore
C to describe why the new plan is such a wonderful idea
D to explain why some people are criticizing the plan

4. Read this sentence from the passage: "Solar power is energy from the sun that can be used to generate electricity."

In this sentence, the word **generate** means

A borrow
B withhold
C study
D produce

5. The primary purpose of this passage is to describe

A NASA's plan to build a permanent base on the moon
B American astronauts Neil Armstrong and Edwin "Buzz" Aldrin
C the space race between the Soviet Union and the United States
D why NASA decided to retire its aging space shuttle fleet in 2011

6. When did the first humans walk on the moon?

_____

_____

_____

7. What does space policy expert John Logsdon mean by "This is not your father's Apollo" when talking about NASA's new direction? [paragraph 9]

_____

_____

_____

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

Astronauts will travel around the moon _____ roving vehicles.

A for
B in
C and
D or

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

By 2024, NASA plans to have equipment set up on the moon so that astronauts can live there.

Who? _____

(does) What? _____

Where? on the moon

When? _____

Why? _____

10. Vocabulary Word: permanent: lasting for a very long time.

Use the vocabulary word in a sentence: _____

_____

_____