

Name: _____

Our Moon

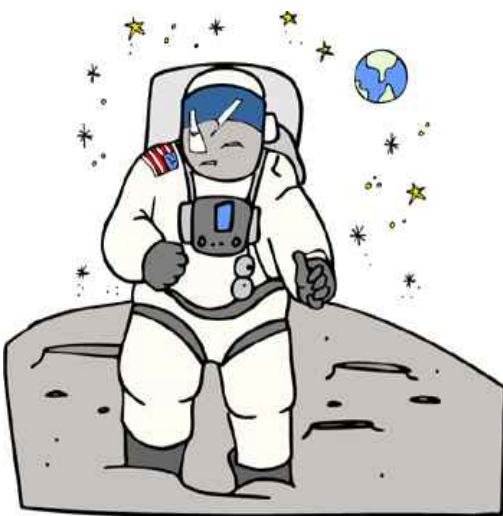
by Cynthia Sherwood

Jupiter and Saturn have more than sixty moons each. Neptune has thirteen. Mars has two. But if somebody says “the moon,” we know exactly what they’re talking about. It’s Earth’s moon, our closest neighbor in outer space.

The moon is the second brightest spot in the sky, after the sun. It orbits around the Earth once a month, going through “lunar phases.” Sometimes the moon will look like a skinny curved sliver called a “crescent.” Later, it becomes a glowing full moon. These phases are caused by the changing angles of where the Earth, moon, and sun are relative to one another.

The moon might be the closest thing to us in space, but it’s still far, far away—about a quarter of a million miles away! It’s also much smaller. About fifty moons could fit inside Earth. Temperatures can be extreme — as hot as 250°F or as cold as minus 250°F.

That’s why astronauts had to wear special spacesuits when they first landed on the moon. Besides protecting them from the extreme temperatures, the suits provided enough oxygen for the astronauts to breathe.



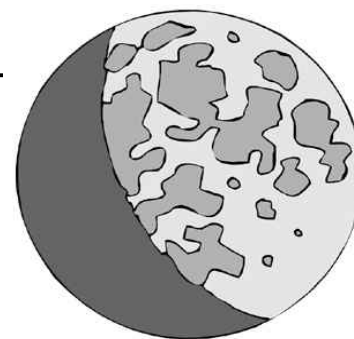
July 20, 1969 is one of the most important dates in history. It’s when America’s Apollo 11 astronauts landed on the moon. The first man to walk on the moon was Neil Armstrong. Right afterward, he said some of the most famous words ever: “That’s one small step for man, one giant leap for mankind.”

You might ask your parents, grandparents, or teachers where they were when we first landed on the moon. If they were born and weren’t too young, they’ll remember. Life has never been quite the same here on Earth now that we’ve explored our closest neighbor in space.

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1. The moon is about...
 - a. 500,000 miles from Earth
 - b. 250,000 miles from Earth
 - c. 25,000 miles from Earth
 - d. 100,000 miles from Earth

2. What famous words did Neil Armstrong say when he first stepped on the moon?

3. According to the information in the article, name two reasons astronauts who landed on the moon needed to wear special space suits.

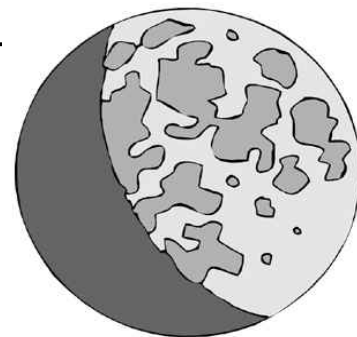
4. Chelsea's mom was born in 1968. When Chelsea asked her mom where she was when Neil Armstrong first landed on the moon, her mom said, "I'm not sure."
Why do you think Chelsea's mom said this?
 - a. Chelsea's mom wasn't born yet.
 - b. Television had not been invented yet.
 - c. Chelsea's mom was too old to remember it.
 - d. Chelsea's mom was too young to remember it.

5. Which statement is true?
 - a. Saturn has fewer moons than Mars.
 - b. Earth has more moons than Neptune.
 - c. Neptune has fewer moons than Jupiter.
 - d. Mars has more moons than any other planet.

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by **Cynthia Sherwood**



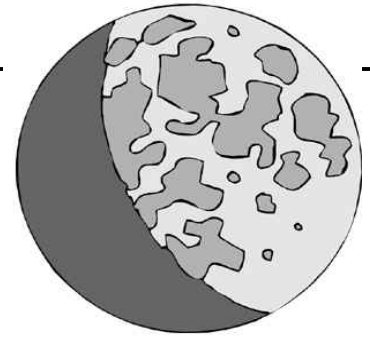
Imagine you had the opportunity to visit the moon for a two-week vacation. Would you want to go? Tell why or why not.

[illegible]

ANSWER KEY

Our Moon

by Cynthia Sherwood



1. The moon is about... **b**
 - a. 500,000 miles from Earth
 - b. **250,000 miles from Earth**
 - c. 25,000 miles from Earth
 - d. 100,000 miles from Earth
2. What famous words did Neil Armstrong say when he first stepped on the moon?
"That's one small step for man, one giant leap for mankind."
3. According to the information in the article, name two reasons astronauts who landed on the moon needed to wear special space suits.
1. to protect them from extreme temperatures
2. to provide oxygen for the astronauts to breathe
4. Chelsea's mom was born in 1968. When Chelsea asked her mom where she was when Neil Armstrong first landed on the moon, her mom said, "I'm not sure."
Why do you think Chelsea's mom said this? **d**
 - a. Chelsea's mom wasn't born yet.
 - b. Television had not been invented yet.
 - c. Chelsea's mom was too old to remember it.
 - d. **Chelsea's mom was too young to remember it.**
5. Which statement is true?
 - a. Saturn has fewer moons than Mars.
 - b. Earth has more moons than Neptune.
 - c. **Neptune has fewer moons than Jupiter.**
 - d. Mars has more moons than any other planet.



Moon Survival Activity

You are a member of a space crew originally scheduled to rendezvous (meet up) with a mother ship on the lighted side of the Moon. Due to mechanical difficulties, however, your ship was forced to land on a lighted spot some 320 kilometers (about 200 miles) from the rendezvous point. During landing, much of the equipment aboard was damaged, and since survival depends on reaching the mother ship, the most critical items available must be chosen for the trip. On the "Survivor on the Moon" sheet, you will see 15 items listed that were left undamaged. Your task is to rank these items in terms of their importance to your crew in allowing them to reach the rendezvous point.

Step 1: Use the "Survivor on the Moon" sheet to rank the items from 1 to 15 with #1 being the most important and #15 being the least important. Rank the items under "your ranking."

Step 2: (Optional) Ask a family member to discuss the rankings with you and together, rank the items from 1-15 under "team ranking."

Step 3: Now pull out Nasa's ranking and compare it to your individual] and team numbers. Under "your error points," list how many numbers you were away from Nasa's ranking. For example, if you ranked the food concentrate 8 and Nasa ranked it 10, the difference or error would be 2. Repeat this step under the "team error points" if you completed Step 2.

Interpretation of scores:

- 0 – 25 – Excellent - You must be a trained astronaut
- 26 – 32 – Good - You can apply for astronaut training.
- 33 – 45 – Average – Ok, you still have some things to learn.
- 46 – 55 – Fair – Study up on the moon.
- 56 – 70 – Poor - Study up on the moon a lot more.
- 71 – 112 Very Poor - Better stay on Earth!

The First-Ever Space Rescue Vehicle

Survivor on the Moon

Worksheet

Name: _____

<i>Item</i>	Your Ranking	Team Ranking	NASA Ranking	Your Error Points	Team Error Points
Box of matches					
Food concentrate					
50 meters of nylon rope					
Parachute silk					
Solar-powered portable heating unit					
Two .45-caliber pistols					
One case of dehydrated milk					
Two 50 kg-tanks of oxygen					
Stellar map of Moon's constellations					
Self-inflating life raft					
Magnetic compass					
Fifty liters of water					
Signal flares					
First-aid kit including injection needles					
Solar powered, FM receiver/transmitter					
Your Total Error Points					
Team Total Error Points					



Answer Sheet

Items	NASA's Reasoning	NASA's Ranking
Box of matches	No oxygen on Moon to sustain flame	15
Food concentrates	Efficient means of supplying energy	4
50 m nylon rope	Useful in scaling cliffs, tying injured together	6
Parachute silk	Protection from Sun's rays	8
Solar-powered portable heater	Not needed unless on dark side	13
Two .45-caliber pistols	Possible means of self propulsion	11
Dehydrated milk	Bulkier duplication of food concentrate	12
2 x 50 kg Oxygen	Most pressing survival need	1
Stellar map of Moon's constellations	Primary means of navigation	3
Self-inflating life raft	Carbon dioxide canister is a mean for propulsion	9
Magnetic compass	Magnetic field on Moon is not polarized; Worthless for navigation	14
50 liters water	Replacement for tremendous fluid loss on light side	2
Signal flares	Distress signal when another ship is sighted	10
First-Aid Kit	Needles for vitamins and medicines will fit apertures in space suits	7
Solar-powered, FM receiver-transmitter	For communication with mother ship; but FM requires line-of-sight transmission and short range	5



Moon Journal Directions

Making direct observations of the Moon throughout the month is an important part of understanding the pattern of the Moon phases. This journal allows a student to record observations of the Moon over time.



If possible, try to observe the moon at the same time each night. Draw what it looks like in the box and record the date/time. There is an example drawing down at the bottom of the journal page.

Try to answer the following questions after your journal is complete:

Was the moon the same color during each observation?

How did the shape of the moon (in appearance) change during the month?

Was the moon in the same place in the sky during each observation?

On a cloudy night, what evidence do you have that the moon is still there?

What patterns do you see in your drawings?

Could you label each of the phases in your journal?



MOON JOURNAL



MONTH _____

YEAR _____

SUNDAY		MONDAY		TUESDAY		WEDNESDAY		THURSDAY		FRIDAY		SATURDAY	
DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME
MOON		MOON		MOON		MOON		MOON		MOON		MOON	
DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME
MOON		MOON		MOON		MOON		MOON		MOON		MOON	
DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME
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MOON		MOON		MOON		MOON		MOON		MOON		MOON	
DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME
MOON		MOON		MOON		MOON		MOON		MOON		MOON	

INSTRUCTIONS:

1 DATE	5:30PM TIME
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1. Write in the month, year, date and time that you are viewing the Moon.



2. Draw a picture of what the Moon looks like at that date and time.