



EXTRA! EXTRA! Read All About It!

In 1835, the publishers of *The New York Sun* newspaper wanted to sell more papers. So, on August 25, the first of a series of articles appeared claiming that British astronomer Sir John Herschel had used a gigantic telescope to discover life on the Moon. The reporter claimed that Herschel had seen blue unicorns, horned bears, beavers that walked on two feet, and humans with wings ("man-bats"), as well as sheep, zebras, pelicans, cranes, and other exotic creatures amid amethyst obelisks, volcanic mountains, and forests.

Readers were fascinated, and sales of the newspaper took off.

The articles ran for 6 days ending on August 31. Yet even before that



Sir John
Herschel

final account, people began asking why no other newspapers had reported the event. Some folks began to doubt the stories, but they enjoyed them all the same.

The articles became known as The Great Moon Hoax. No one at the newspaper ever admitted that the story was a fantasy, and the true identity of the writer was never revealed. Herschel, who was living in South Africa at the time, learned about the hoax months later.



Reports of the Moon's inhabitants described "man-bats," horned bears, and exotic creatures.



- ▶ We see the same side, or hemisphere, of the Moon all the time because Earth's gravity has slowed the Moon's rotation; now one Moon rotation and one Moon revolution around Earth take the same amount of time.
- ▶ The surface of the Moon may appear to be silvery gray, white, or pale yellow, but it is primarily charcoal gray. The presence of iron oxide creates reds, and titanium oxide introduces shades of blue. A full Moon may appear orange because Earth's atmosphere acts as a filter, minimizing the blues.

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On the surface of the Moon in 1971, *Apollo 15* lunar module pilot Jim Irwin prepared the lunar rover for the first lunar ride.

▶ **Moondust**, also called lunar regolith, is retroreflective. Like a road sign, it reflects light back to the source (the Sun). Some sunlight rays bounce off the Moon and travel to Earth. During a full Moon, Earth is roughly in the same direction as the Sun, so it receives more reflected sunlight than at other times.

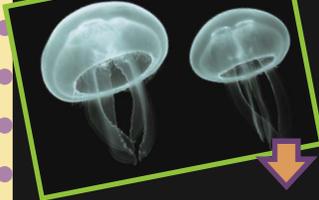
▶ Because the Moon reflects all light wavelengths and we most often view it at night against a black sky, it appears nearly white or yellowish most of the time.



DID YOU KNOW

Moonlight: a term that refers to holding a second job, usually at night

Moonflower: A member of the morning glory family, it blooms in the evening and usually closes by morning.



Moon jellyfish: Found in abundance in the mid-Atlantic Ocean, it has an 18-inch umbrella, or disc, that resembles a flying saucer.

COLOR CHECK

THE MOON'S FULL NAMES

The celestial body that revolves around Earth has many names . . .

- • • • • ● The English word "moon" comes from the Old English *MONA*.
- • • • • ● In Italian, Latin, and Spanish, the orb is called *LUNA*, for the Roman Moon goddess.
- • • • • ● In French, the word for moon is *LUNE*.
- • • • • ● Germans use *MOND*.
- • • • • ● Celestial bodies that hold the same position around other planets as the Moon does around Earth are collectively called "moons."



Jupiter's largest moons: Io, Europa, Ganymede, and Callisto

Get the date of the next full Moon at Almanac4kids.com/Sky. On the full Moon day, take a sheet of white paper and cut a hole in it about $\frac{1}{4}$ inch in diameter. On that night, look at the Moon through the hole, while holding the paper at arm's length and shining a white light on the paper. Now what color is the Moon? (The answer is below.)

Answer: dull gray

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One Size Fits All

Sometimes when a full Moon sits low on the horizon, it appears to be enormous.

Some people mistakenly believe that the full Moon appears large because our atmosphere magnifies our image of it. This is known as the "Moon illusion."

In fact, the Moon is not magnified nor does it change size:

- ▶ When the Moon is high overhead, it is dwarfed by the vast hemisphere of the heavens.
- ▶ When the Moon is low, it is viewed in proximity to earthly objects, such as chimneys or trees, the size and shape of which provide scale.



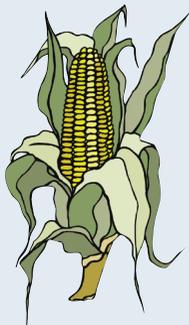
LORE

LUNAR

Myths and legends about the Moon abound. While they are not scientific, they have a long and colorful history. Here are a few:



- Build a fence when the Moon is setting, and the bottom rail will be buried in 3 years.



- Plant corn when the Moon is rising, and you will have a very tall stalk with the ear hanging straight down the stalk so that no water can enter.

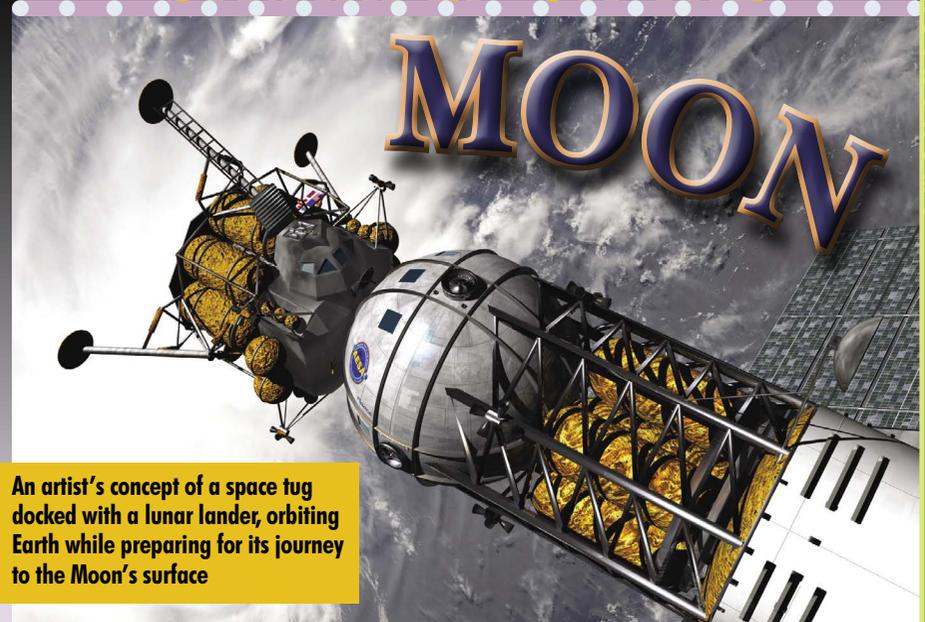
- Plant potatoes when the Moon is setting, or the crop will be shallow and every potato will be badly sunburned.



- Nails and hair grow faster if cut by the light of the Moon.

STRANDED ON THE

MOON



An artist's concept of a space tug docked with a lunar lander, orbiting Earth while preparing for its journey to the Moon's surface

Imagine that you are part of a space exploration mission flying from a space station orbiting the Moon to an occupied base on the Moon itself. An instrument malfunction causes you to crash on the Moon on the daylight side about 75 miles from the base. At this location, the Moon's day has just begun (daytime on the Moon lasts about 2 Earth weeks). Your spacecraft is in need of repair, and your survival depends on reaching the Moon base as soon as possible.

Of the 15 items that were not damaged in the crash, which would be most important for the trip? Rank the items from most important (#1) to least important (#15), then compare your rankings with those assigned by experts.

- box of matches
- food concentrate
- 50 feet of nylon rope
- parachute silk
- solar-powered heating unit
- two .45 caliber pistols
- one case of powdered milk
- two tanks of oxygen
- stellar map of the Moon's constellations
- self-inflating raft that uses carbon dioxide canisters for inflation
- self-igniting signal flares
- magnetic compass
- 5 gallons of water
- solar-powered FM walkie-talkie
- first aid kit containing needles (for vitamins, medicine, etc.) that will fit through a special aperture in spacesuits

turn the page to see rankings by experts

EXPERTS' RANKINGS

An artist's impression of a manned lunar base



- 1.** two tanks of oxygen, essential for survival
- 2.** 5 gallons of water, to replace the tremendous liquid loss on the lighted side of the Moon
- 3.** stellar map of the Moon's constellations, your primary means of navigation
- 4.** food concentrate, an efficient means of supplying energy requirements
- 5.** solar-powered FM walkie-talkie, used for communication with the rescue party at the Moon base (Note: FM requires line-of-sight transmission and short ranges.)
- 6.** 50 feet of nylon rope, for scaling cliffs
- 7.** first aid kit: the vitamins, medicines, etc., help to sustain health
- 8.** parachute silk, to provide protection from the Sun's rays
- 9.** self-inflating life raft: the CO₂ bottle in it may be used for propulsion
- 10.** signal flares, specially designed for an environment with no oxygen, for sending distress signals
- 11.** two .45-caliber pistols, a possible means of self-propulsion when fired
- 12.** one case of powdered milk, useful but bulkier than food concentrate
- 13.** solar-powered heating unit: not needed unless you are on the dark side
- 14.** magnetic compass: worthless for navigation because the magnetic field on the Moon is not polarized
- 15.** box of matches: virtually worthless because there is no oxygen on the Moon to sustain flame