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**Abstract:** Describes the appearance of the moon, highlighting the changes it makes as it goes around Earth. Phases of the moon; Photographs of phases; Tips on how to re-enact these phases. INSET: The Moon's phases..

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## THE MOON'S DISAPPEARING ACT

### See what causes the Moon's changes.

Over a period of thirty days, the Moon seems to swell from a curved slice into a ball and then to shrink and vanish. A few days later, it reappears and begins to grow again.

But the Moon does not really grow, shrink, or disappear. These changes are tricks of light and shadows that repeat each time the Moon goes around Earth.

The Moon's cycle is divided into four parts, or phases. In the first phase--New Moon--we can't see the Moon at all. The photographs show the other three phases.

### [Try This!](#)

Make a room dark, then turn on only one lamp. A single, small lamp bulb without a shade might work best. You will be Earth, and this light will be your Sun. Use a ball as the Moon.

Face the light, but don't look directly into it. Hold the ball out in front of you without making it block the light. Only the dark side of the ball is facing you. This position is like the beginning of the Moon's path, or orbit, around Earth. This phase is the New Moon, and at this time we cannot see the Moon at all.

Still holding the ball out in front of you, watch it as you slowly turn to the left. Turn all the way around so the "Moon" makes a complete circle around "Earth." As you turn your back to the lamp, hold the ball higher so your shadow does not block the light. You should see the ball change gradually from one phase to the next just as the Moon does.

### [How It Works](#)

The Moon seems to change because we see it from a slightly different angle each night as it moves around the Earth. Only half of the Moon is lighted by the Sun at any time, and the other half is in darkness. Depending on the Moon's position, we may see a lot, a little, or none of the lighted side.

But there's an important difference between this experiment and how the moon appears. The dark side of the Moon often seems to vanish. The shadowy side of the ball does not disappear. We can see the "dark" side of the ball because some light is reflected onto it by the walls and furniture. In space, shadows can be as dark as night, and the dark side of the Moon looks just like the black sky. When the Moon blends with the sky, its disappearing act begins.

PHOTO (COLOR): The Moons dissappearing act: Try This!

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By Andy Boyles, Science Editor

**THE MOON'S PHASES...**

PHOTOS (BLACK & WHITE): First Quarter: The Moon has gone one-fourth of the way along its path around Earth. Full Moon: The Sun and Moon are on opposite sides of Earth. Third Quarter: The Moon has completed three-fourths of its orbit.

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