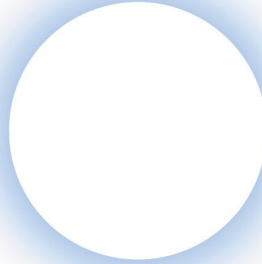


Celestial Wax and Wane: Learning about the Lunar Cycles

Moon phase for Thu, 11 Apr 2024 01:52:38 GMT



04/11/2024

Select a Date!

The Playlist

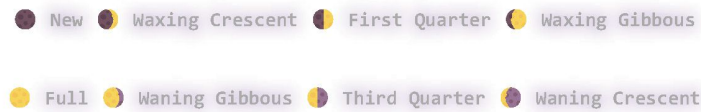
Penguin Music - Space Chillout
Ivy Music - Space Atmospheric Background
Lesfm - Ambient Feeling
Natures Eye - Space Race
DSTechnician - Deep Space Barrier
Kevp888 - Magic Moon
DJ Griffin - Piano Noodle
Funky Audio - Computer Room
Jena Jiejing - The Moon is the Guarantee of Life on Earth
Funky Audio - Energy Beams
Kevp888 - Falling Stars
Riley Garinger - Phase Plant

What Are the Moon's Phases?

We always see the same side of the Moon, because as Earth's natural satellite revolves around our planet, the Moon rotates, causing the same side to always face us. And yet, the Moon looks a little different every night. Sometimes the entire face glows brightly. Sometimes we only see a thin crescent. Other times the Moon seems to disappear entirely. Why does the Moon's appearance change?

The moonlight we see on Earth is sunlight reflected off the Moon's grayish-white surface. The amount of Moon we see illuminated changes over the month – lunar phases – because the Moon orbits Earth and Earth orbits the Sun. Everything is moving. When sunlight is illuminating only the Moon's far side – the side we can't directly see from Earth – that phase is called a new moon. When sunlight illuminates only the Moon's near side – the side that always faces Earth – we call that a full moon. The rest of the month, we see a different amount of the daytime side of the Moon each day. These continually changing views of the sunlit part of the Moon are the Moon's phases. The eight lunar phases are, in order: new moon, waxing crescent, first quarter, waxing gibbous, full moon, waning gibbous, third quarter and waning crescent. The cycle repeats once a month (every 29.5 days).

We have a slightly different view of the Moon each night. We describe how the Moon looks with the eight Moon phases, or shapes:



Understanding Lunar Eclipses

A lunar eclipse occurs when the Moon passes through the Earth's shadow, just as a solar eclipse occurs when part of the Earth passes through the Moon's shadow. So why don't eclipses happen twice a month? The reason is that the Moon's orbit around the Earth is tilted relative to the Earth's orbit around the Sun. But if that's the case, why do eclipses happen at all? Throughout the year, the Moon's orbital tilt remains fixed with respect to the stars, meaning that it changes with respect to the Sun. About twice a year, this puts the Moon in just the right position to pass through the Earth's shadow, causing a lunar eclipse.

As the Moon passes into the central part of the Earth's shadow, called the umbra, it darkens dramatically. Once it's entirely within the umbra, the Moon appears a dim red due to sunlight scattered through the Earth's atmosphere. In fact, if you watched the eclipse from the surface of the Moon, you'd see the Sun set behind the entire Earth, bathing you in a warm red glow. Back home, you'll have to stay up late to watch a lunar eclipse, but if you do you'll see the Moon in rare form, and you'll catch a brief glimpse of our own planet's long shadow.

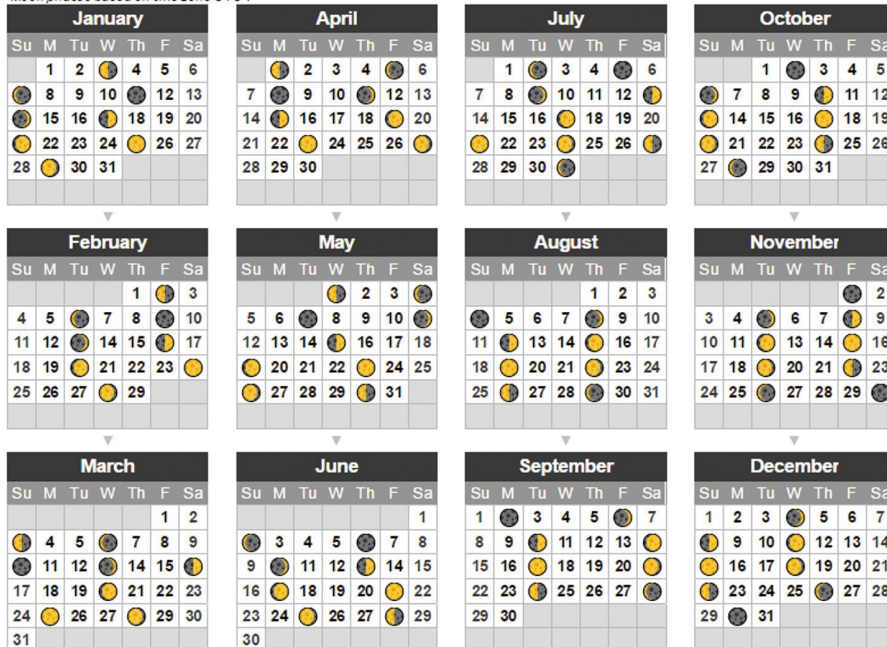
Information Gathered VIA timeanddate.com

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2024

Moon Phase Calendar

Moon phases based on time zone UTC-7



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<https://www.vertex42.com/calendars/moon-phase-calendar.html>