



SUPER BLUE MOON - GEOGRAPHY

News: *On August 19, 2024, the night sky was illuminated by a rare phenomenon: a super blue moon. However, despite its name, this full moon was neither blue in colour nor super in size.*

- A super blue moon combines a **supermoon and a blue moon**.
- A supermoon occurs when the **moon aligns closely with Earth during its orbit, making it appear larger and brighter**.
 - This alignment, called **perigee, contrasts with apogee, when the moon is farthest in its elliptical orbit around earth. While the difference is subtle, near the horizon, an optical illusion can make it seem larger.**
 - The term "**supermoon**" was coined in 1979 by astrologer **Richard Nolle**.
- A blue moon is the **second full moon in a month**. Despite its name, **a blue moon isn't blue**; it's the traditional name for the second full moon in a month.
 - Sometimes, smoke or dust in the air can scatter red wavelengths of light, as a result of which the moon may, in certain places, appear more blue than usual, but this has **nothing to do with the name "blue" moon**.

The Moon

- Earth has only one satellite, that is, the moon.
- Its **diameter** is only one-quarter that of the earth.
- It appears so big because it is nearer to our planet than other celestial bodies.
- It is about **3,84,400 km away from Earth**.
- The moon moves around the earth in **about 27 days**.
- It takes exactly the same time to complete one spin. As a result, only one side of the **moon is visible to us on the earth**.

Occurrence of Phases:

- Unlike the Sun and the other stars, the **moon can't produce its own light**.
- Moon is visible because the **sunlight falling on it gets reflected towards Earth**.
- Only that part of the Moon is visible on which the light of the Sun is **reflected towards Earth**.
- The illuminated part of the moon visible from the Earth increases per day after the **new moon day**.
- After the full moon day, the part of the moon that is **sunlit and is visible decreases in size**.
- The moon revolves around the Earth. The Earth along with the moon, revolves around the Sun.
- The moon completes its **one revolution around the earth** along with one **rotation on its axis**.
- The duration between a full moon to the next full moon is **longer than 29 days**. This is known as a month in many calendar systems.
- As the cycle of the phases of the moon lasts approximately one month, **we typically experience 12 full moons each year**.



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- Many cultures have given distinct names to each month's full moon. **12 months, 12 full moons, 12 names.**
- The moon phases actually **take 29.5 days to complete** which means it takes just 354 days to complete 12 lunar cycles.
- So every 2.5 years or so a **13th full moon is observed within a calendar year.**
- **This 13th full moon doesn't conform to the normal naming scheme** and is referred to as the **Blue Moon.**

Will the Moon Look Blue?

- Even though it's called a blue moon, the moon **won't look blue.** The only time the moon might appear bluish is if there are certain **atmospheric conditions, like smoke or dust.**
- Normally, the moon will look more **yellow or orange** when it's close to the **horizon because of the way light scatters in the atmosphere.**

How often do Blue Moons occur?

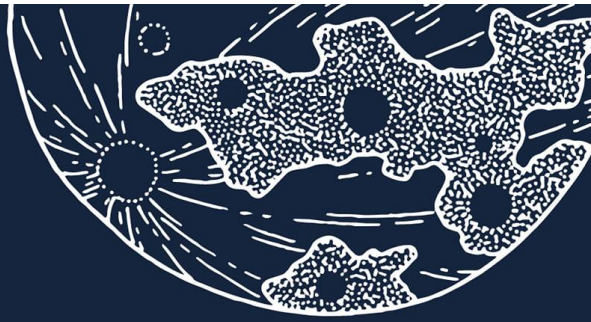
- Blue Moon happens approximately **every two to three years.**
- Since there are about 29.5 days between full moons, February will never have a monthly Blue Moon, as it only has **28 days in a common year and 29 in a leap year.**
- Occasionally, February may have no full moon at all, a phenomenon known as a **Black Moon**, according to Time and Date.

Source: <https://indianexpress.com/article/explained/everyday-explainers/super-blue-moon-raksha-bandhan-2024-9521732/>



#Moon in Different Colors

MOON PHENOMENON



BLOOD MOON (LUNAR ECLIPSE)

A lunar eclipse occurs when the Moon moves into the Earth's shadow. This can occur only when the Sun, Earth, and Moon are exactly or very closely aligned (in syzygy) with Earth between the other two, and only on the night of a full moon.

BLUE MOON

A **blue moon** is an additional full moon that appears in a subdivision of a year: either the **third of four full moons in a season**, or a **second full moon in a month of the common calendar**.



SUPER MOON

A supermoon is a new or full moon that occurs around the same time as perigee (the point in the Moon's orbit where it is closest to Earth). By this definition, there can be several supermoons in a year. Strict Definition: **A supermoon is the single closest new moon and full moon of the year.**

