

# beneath a blood red moon

**Beneath a Blood Red Moon** lies a captivating interplay of folklore, science, and artistry that has fascinated humanity for centuries. The phenomenon of a blood moon occurs during a total lunar eclipse when the Earth moves between the sun and the moon, casting a shadow that creates a reddish hue on the lunar surface. This striking visual not only evokes awe but also stirs the imagination, fueling myriad stories and cultural interpretations throughout history.

## The Science Behind the Blood Moon

Understanding the blood moon begins with a basic grasp of lunar eclipses. A lunar eclipse occurs when the Earth passes directly between the sun and the moon, blocking sunlight from reaching the moon. The specific conditions that lead to a blood moon include:

- **Total Lunar Eclipse:** This is when the entire moon falls into the Earth's shadow.
- **Rayleigh Scattering:** When sunlight passes through the Earth's atmosphere, shorter blue wavelengths scatter out, while longer red wavelengths filter through and illuminate the moon.
- **Orbital Alignment:** The moon's orbit must be in perfect alignment with the Earth and the sun for a total lunar eclipse to occur.

The combination of these factors results in the moon appearing vividly red—hence the term "blood moon." These events are not only rare but also predictable, occurring approximately every two to three years.