Phases of the Moon

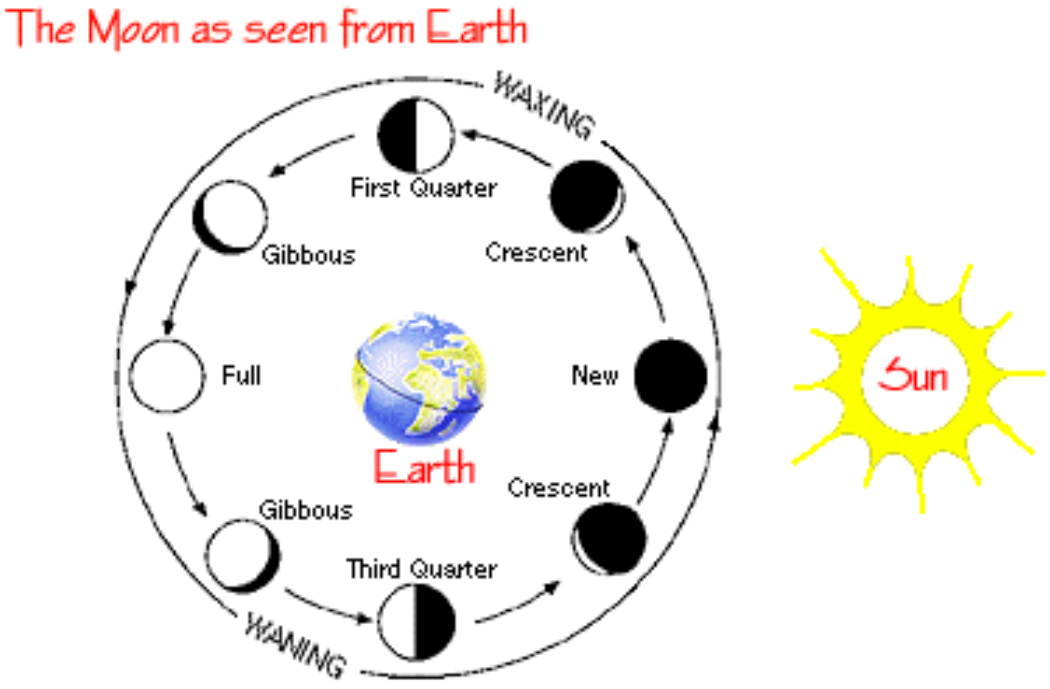
Have you ever looked up at the sky and noticed how the Moon changes shape each night? Ever wondered why… And how?

Well, here's the answer – the Moon doesn't change shape at all! Let's take a look at the phases of the Moon…

The Moon doesn't make its own light. The 'moonlight' we see is actually the Sun's light reflecting off the lunar surface. The Moon is a sphere, like Earth, so the Sun can only shine on one side of the Moon at a time. Just like there is day and night on Earth, the Moon has a day side and a night side too.

So, as the **Moon orbits Earth**, we – on Earth – see different parts of the sunlit side of the Moon, making it seem as if the Moon is changing shape. Actually, it's just *our view* of it that's changing as the Moon orbits.

When the Moon appears to be getting bigger, it's **waxing** and when it looks like it's getting smaller, it's **waning**. Once the sunlit face of the Moon is fully turned toward the Sun, it's a **Full Moon**, and we see the full disc of the Moon. But, as the Moon moves around the Earth, the sunlit face pointing towards us gradually becomes smaller until the nighttime side is facing Earth and we can't see it at all – this is a **New Moon**.



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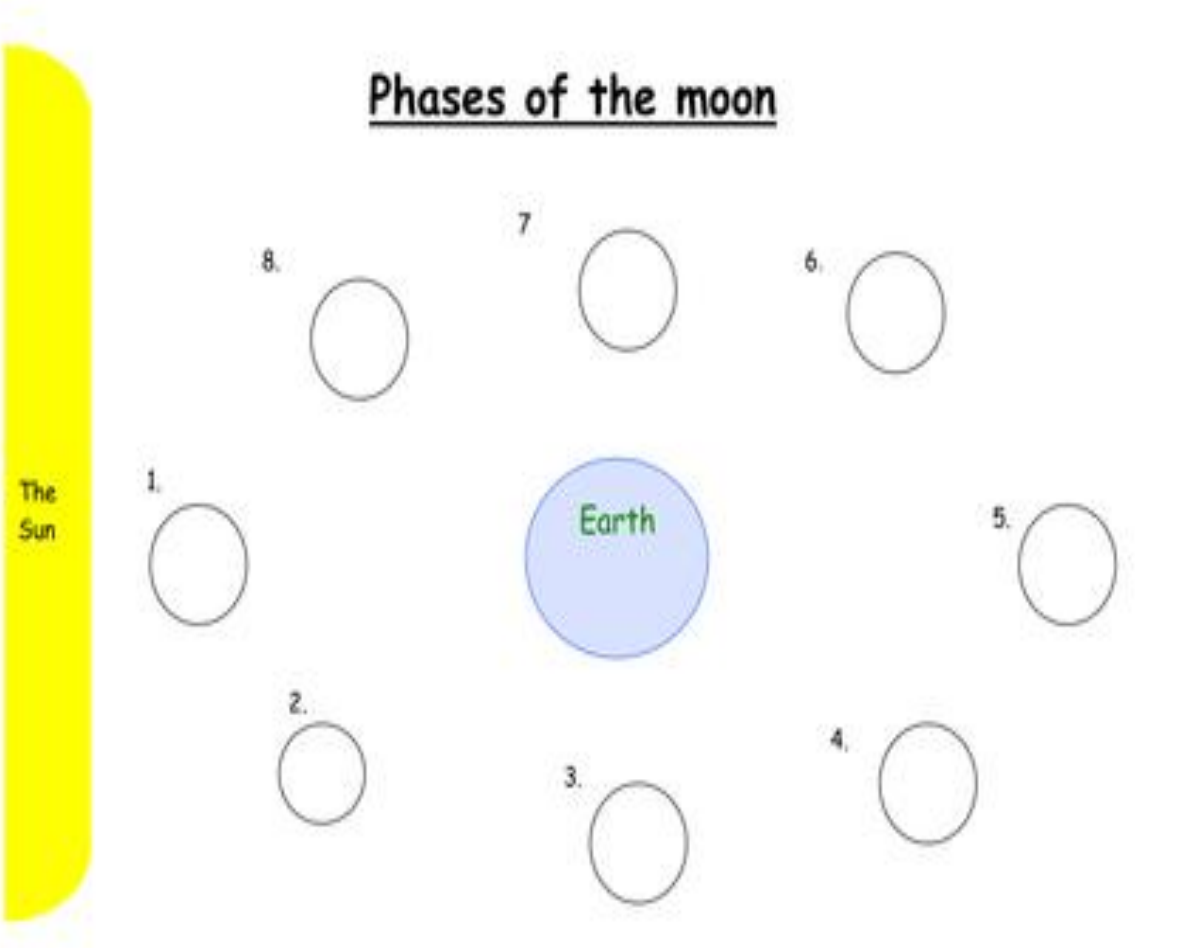

New moon; Waxing crescent; half moon (first quarter); Waxing Gibbous; Full moon; Waning Gibbous; Last half moon (last quarter); Waning crescent