Why is the Moon out in the daytime? Three kids' questions answered

Peabody blog · Science · updated 2026-10-30

The Moon is up for about half of every day, and often that half is in daylight. Why it shows through the blue, and the afternoons to look for it this winter.

The Moon is out in the daytime because it keeps its own hours. It is up for about half of every day, and on most days part of that half is in daylight. It's bright enough to show through the blue sky because its sunlit surface is far brighter than the sky behind it. The easiest times to see it are afternoons in the week before full Moon, and mornings in the week after. Peabody's guide Why can you see the Moon in the daytime? has the short version, and the Moon calendar shows which week you're in.

Children usually ask this in three ways. Here are the three, with answers you can say on the walk home.

"Isn't the Moon for night-time?"

No: the Moon doesn't follow the Sun's timetable. It rises about 50 minutes later each day, so over a month its time in the sky slides all the way around the clock.

- Around new Moon, it's up with the Sun, lost in the glare. You can't see it.
- Around first quarter, the half-lit Moon rises around noon and is high in the south-east in the late afternoon. That's the after-school Moon.
- Around full Moon, it rises at sunset and sets at sunrise. That's the one everyone thinks of as the night-time Moon.
- Around last quarter, it rises around midnight and is still up in the south-west after sunrise. That's the before-school Moon.

So the Moon is a night-only thing for just a few days around full Moon.

A way to say it to a five-year-old: "The Moon has its own clock. Some days it gets up in the morning, some days at lunchtime, and some days at bedtime."

"Why can I see it when it's light?"

The blue of the daytime sky is sunlight bounced around by the air. It's bright enough to hide the stars, which are very faint by comparison. The Moon's surface, lit straight on by the Sun, is far brighter than any star, so it shows through, pale and chalky.

It looks washed out because the blue is laid over it, the way a picture looks faded through a misty window. At night there's no blue in front of it, so it looks bright white.

"When can I see it next?"

Use the quarter dates. These are from Peabody's sky table, as Mountain Time days:

- First quarter (afternoon Moon): 17 November 2026 · Last quarter (morning Moon): 30 November 2026
- First quarter (afternoon Moon): 16 December 2026 · Last quarter (morning Moon): 30 December 2026
- First quarter (afternoon Moon): 15 January 2027 · Last quarter (morning Moon): 29 January 2027
- First quarter (afternoon Moon): 14 February 2027 · Last quarter (morning Moon): 27 February 2027

For a few days either side of each first quarter, look south-east to south between about 3 pm and sunset. For a few days either side of each last quarter, look south-west to west in the morning on the way to school. Every month from November 2026 to December 2027 has its own page with the dates.

Try it this week

1. Check the calendar for the next first quarter.
2. Look after school in the south-east. A half Moon, flat side facing left, high up.
3. Cover it with a thumbnail at arm's length. It's smaller than most people expect.
4. Look at the shadows. Along the straight edge of a half Moon, binoculars show craters, even in daylight. Never point them anywhere near the Sun.

Three questions grown-ups ask

Why is the daytime Moon so often a half? It isn't always, but the half Moons are the easy ones to catch: first quarter is high in the late afternoon and last quarter high in the morning, just when children are outside. A full Moon is opposite the Sun, and a new Moon is lost beside it.

Can you see the Moon in the day in every month? Yes. Every month has a first and a last quarter, and the Moon is up in daylight around both.

Is it safe to look at the Moon in the day? Yes, the Moon is safe to look at. The one rule is to never look at the Sun, and in the daytime the Sun is in the same sky, so point binoculars only at the Moon and keep the Sun behind you.

Peabody (peabody.kids) is free through the end of 2026, with no ads and no sign-up. The library has stories at your child's reading level, and the Moon shapes quiz is ten drawn Moons to name.

Sources

- Peabody's guide, Why can you see the Moon in the daytime?: the rising times and where to look.
- The quarter dates come from Peabody's own sky table, worked out with astronomy-engine (MIT license).
- NASA, Moon phases.

Free at peabody.kids/blog/why-is-the-moon-out-in-the-daytime