Winter solstice 2026: the longest night, explained for kids

Peabody blog · Science · updated 2026-10-30

The winter solstice is Monday 21 December 2026. Why the days are short, why the earliest sunset comes two weeks before, and things to do on the longest night.

The winter solstice is Monday 21 December 2026, at 1:50 pm Mountain Time (3:50 pm Eastern). It is the shortest day and the longest night of the year in the Northern Hemisphere. In Denver the Sun is up for about 9 hours 20 minutes, and it's dark enough for stars by about 5 pm. Peabody's solstice page has the countdown and the explanation at three reading levels.

Why the days are short

Earth is tilted, about 23.4 degrees. In December the northern half leans away from the Sun, so the Sun stays low in the sky and crosses it quickly. The solstice is the moment of most lean. After it, the days grow again, slowly at first: about a minute or two a day by early January.

It is not about distance. Earth is actually closest to the Sun in early January.

A puzzle for older kids

The earliest sunset isn't on the solstice. It comes around 7 or 8 December, and the latest sunrise around 4 or 5 January. That's because Earth moves a little faster in its orbit near January, which shifts solar noon later each day. The shortest day is still the 21st.

The sunset clock, from our table

Rounded to the minute, sunset sits still for a week or two in early December, then starts getting later before the solstice even arrives. For the middle of three of our 5° squares:

- Near: Chicago · Earliest sunset: 4:17 pm, 3–14 Dec · 21 December: 4:20 pm · 21 January: 4:49 pm
- Near: Fort Worth · Earliest sunset: 5:24 pm, 29 Nov–8 Dec · 21 December: 5:29 pm · 21 January: 5:53 pm
- Near: San Diego · Earliest sunset: 4:44 pm, 29 Nov–8 Dec · 21 December: 4:49 pm · 21 January: 5:13 pm

By 21 January, sunset is about 25 to 30 minutes later than on the solstice.

Things to do on the longest night

- Mark where the Sun sets from a window with a piece of tape. Look again in a month: the spot has moved north.
- Go out after dark: a long night is a long time for stars. Saturn is in the south after dark, and Orion is up in the east by about 8 pm.
- Look north for the Ursids, a small meteor shower that peaks the same night. This year a nearly full Moon washes most of them out.

The longest night, at 7 pm

On the evening of the solstice, from our table:

- The Moon is about 94% lit, high in the east, about five fists up. It is full two nights later.
- Saturn is in the south, a little to the west, about five fists up, steady and cream-coloured.

The bright Moon hides the faint stars this year, but the Moon, Saturn and the brightest stars are easy from a back yard.

A shadow at lunchtime

The solstice Sun is at its lowest midday height of the year, so midday shadows are the longest of the year. Stand your child in the same spot around midday, mark the end of their shadow with chalk or a stick, and measure it in footsteps. Do it again in March and June: the shadow shrinks as the Sun climbs. Nobody needs to look at the Sun to do it.

What to say when a child asks why it's cold if Earth is closest to the Sun

"Distance isn't what makes winter. Our half of Earth is tipped away from the Sun, so the sunlight comes in low and spread out, and there are fewer hours of it." Then show it: shine a flashlight straight down on a table, and tip it. The same light spreads over a bigger, dimmer patch. That's winter sunlight.

Three questions grown-ups ask

Is it the same date every year? It's 20, 21 or 22 December, depending on the year and time zone.

What about Australia? It's their summer solstice: their longest day.

Is there a sunrise or sunset to watch? Any, with a safe view: never look straight at the Sun.

Peabody (peabody.kids) is free through the end of 2026, with no ads and no sign-up, and nothing your child taps on the space pages is sent anywhere. A long night is a good night for a story too: the library has them at your child's reading level.

Sources

- The solstice instant and Denver's day length from astronomy-engine (MIT license).
- Sunset times, and the Moon and Saturn on the solstice evening, from Peabody's sky table, worked out with the same library for the middle of each 5° square.

Free at peabody.kids/blog/winter-solstice-2026-for-kids