

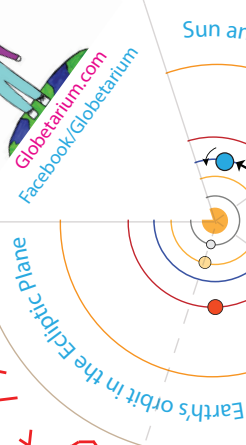
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About 300X larger diameter

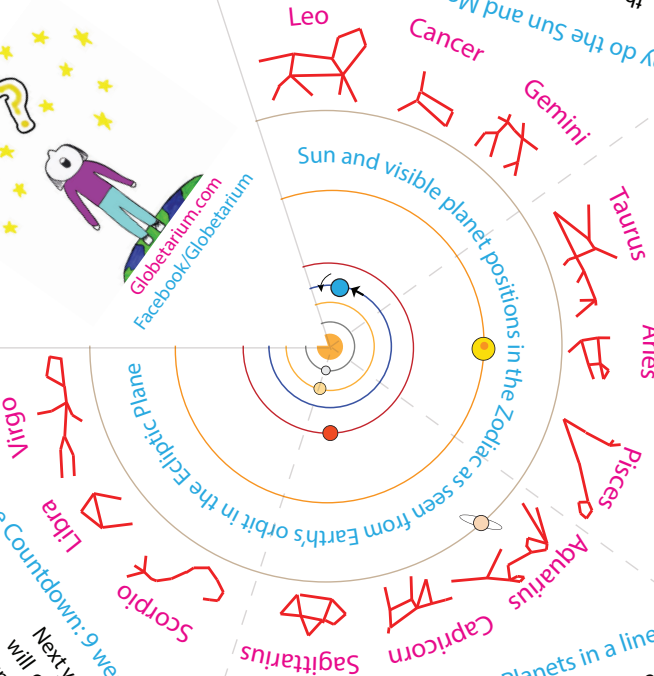
About 300X closer

Although the Sun is much larger than the Moon, they appear to be about the same size in the sky because the Sun is relatively closer to the Moon blocks the Sun entirely (total eclipse of the Sun uncovered (annular eclipse this past October), is also much more distant. During a solar eclipse if the Moon is relatively slightly closer the Moon blocks the Sun entirely (total eclipse next April) and if the Moon is relatively slightly further away it leaves a ring

Why do the Sun and Moon look the same size?



Sun and visible planet positions in the Zodiac as seen from Earth's orbit in the Ecliptic Plane



Pleiades

Evening Sky
February 2, 2024

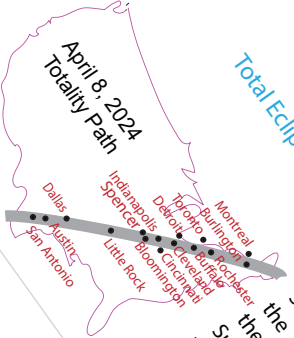
All week: Saturn visible right after Sunset along Ecliptic to the West, Jupiter visible to the South. Waning Third Quarter Moon (half of Moon's disk illuminated) rises in East after midnight, and sets around noon. Mercury, Venus and Mars rise shortly before Sunrise to the East.

Saturn

Sunset

Looking West

Looking East



April 8, 2024
Totality Path

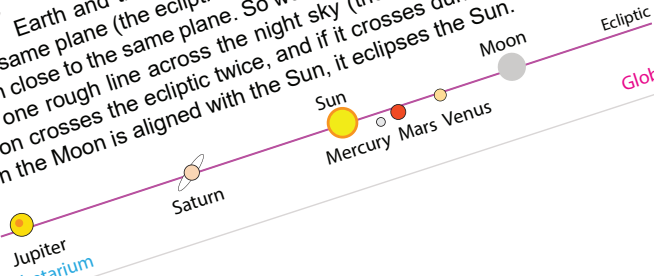
- Sun Antonio
- Dallas
- Natitas
- Little Rock
- Spencer
- Indianapolis
- Cincinnati
- Detroit
- Cleveland
- Toronto
- Pittsburgh
- Montreal

Total Eclipse Countdown: 6 weeks!

Next year's solar eclipse will completely block the Sun for over four minutes on the Totality Path. Each month the Moon passes between the Sun and Earth (New Moon), and each month it crosses the ecliptic plane twice. When it crosses during a New Moon, the Moon is exactly between the Earth and Sun so it eclipses the Sun.

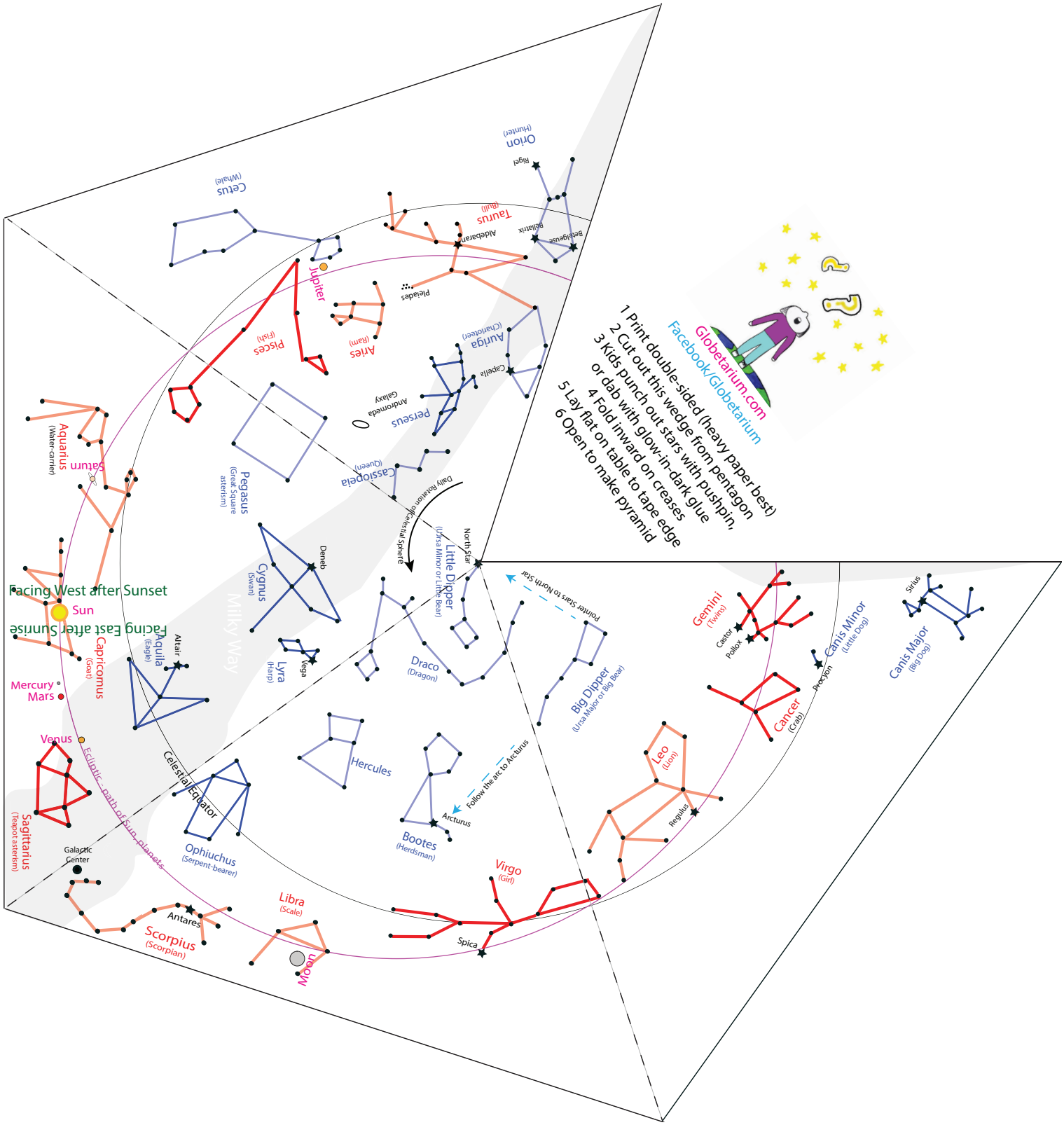
Why are the Sun, Moon, and Planets in a line?

Earth and the visible planets orbit the Sun in nearly the same plane (the ecliptic plane), and the Moon orbits the Earth in close to the same plane. So we see the Sun, Moon, and planets in one rough line across the night sky (the ecliptic). Each month the Moon crosses the ecliptic twice, and if it crosses during a New Moon just when the Moon is aligned with the Sun, it eclipses the Sun.



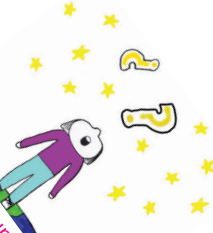
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- 1 Print double-sided (heavy paper best)
- 2 Cut out this wedge from pentagon
- 3 Kids punch out stars with pushpin, or dab with glow-in-dark glue
- 4 Fold inward on creases
- 5 Lay flat on table to tape edge
- 6 Open to make pyramid



Facing West after Sunset

Facing East after Sunrise

Mercury
 Mars

Venus

Sagittarius (Teapot asterism)

Galactic Center

Antares

Scorpius (Scorpion)

Libra (Scale)

Moon

Spica

Virgo (Giri)

Bootes (Herdsman)

Arcturus

Hercules

Big Dipper (Ursa Major or Big Bear)

Little Dipper (Ursa Minor or Little Bear)

North Star

Daily Rotation on Celestial Sphere

Follow the arc to Arcturus

Pointer Stars to North Star

Canis Major (Big Dog)

Canis Minor (Little Dog)

Skyus

Leo (Lion)

Regulus

Cancer (Crab)

Gemini (Twins)

Castor

Pollux

Orion (Hunter)

Rigel

Taurus (Bull)

Alderbaran

Pleiades

Artes (Ram)

Jupiter

Pisces (Fish)

Cetus (Whale)

Pegasus (Great Square asterism)

Cassiopeia (Queen)

Perseus

Andromeda

Capella

Auriga (Charioteer)

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