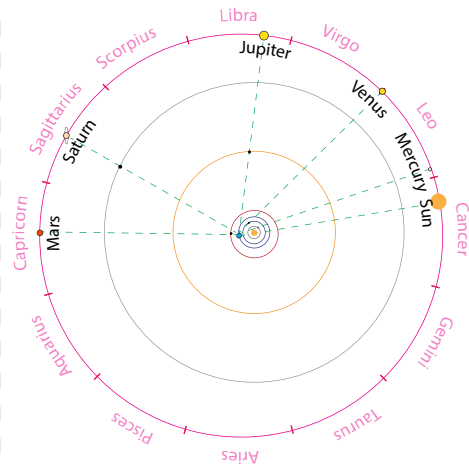


Construction Instructions

- 1) Cut out shape along solid lines
- 2) If want to use for pinhole planetarium, poke out holes for stars using a push-pin.
- 3) Fold up along dashed lines.
- 4) Tape together edges with clear tape.

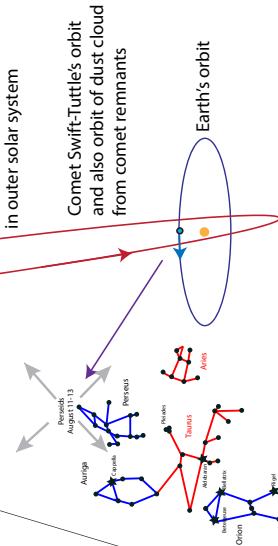
The best way to understand the night sky is through the classical idea of the ecliptic. Earth and the visible planets orbit the Sun in nearly the same plane (the ecliptic plane), and the Moon orbits the Earth in close to the same plane. So we see the Sun, Moon, and planets in nearly one line across the sky (the ecliptic). As the Earth rotates daily, the celestial sphere appears to rotate, and the Sun, Moon, and planets rise and set in sequence along the ecliptic. The Sun and the visible planets appear to move slowly along the ecliptic through the Zodiac constellations that divide it, with the planets' sequence and apparent motion changing based on where they are in their orbits.

The Ecliptic



Perseids Meteor Shower

Each August, Earth moves through the dust cloud left by comet Swift-Tuttle during its orbits around the sun. Particles of dust enter Earth's atmosphere at extremely high speeds and burn up, creating a meteor shower. When the comet is near the Sun each orbit, its ice and dust core breaks off small pieces, creating a tail pushed back by the solar wind. The dust cloud remnants of this tail then follow roughly the same orbit as the comet. During August, Earth is moving in its orbit in the direction of the constellations Aries and Taurus. Since the comet's orbit is at a sharp angle to Earth's orbit, the comet's dust is coming down from above the ecliptic plane, so dust particles enter the atmosphere to the North above Aries and Taurus in the Perseus constellation. Viewed from Earth's surface, meteors appear to start in Perseus and radiate out from it. Swift-Tuttle last approached the Sun in 1992 during its 133-year orbit, and there is a chance it will strike and devastate Earth in the very distant future.



Perseids peak on nights of August 11-12 and especially August 12-13.

As Earth moves through its orbit and dust cloud follows Swift-Tuttle's orbit, dust particles enter atmosphere from direction of Perseus.

Viewing Instructions

- 1) Look in from below to see constellations.
- 2) In small darkened room, shine cellphone light or flashlight in from below to see stars on ceilings and walls.

More information and files at Globetarium.com and [Facebook.com/Globetarium](https://www.facebook.com/Globetarium).

Globetarium.com

Know the sky. Know the ecliptic. Know the sky.