## Is that a planet or a star?

Three tell tale visual characteristics of a planet:

1. A planet shines with a steady light, unless it is very close to the horizon. It doesn't "twinkle," while a star does.
2. A planet is always located near the ecliptic.
3. A planet slowly shifts its position nightly with respect to the background stars.


## Mercury

- Either low above the western horizon just after sunset, or low above the eastern horizon just before sunrise.
- Oftentimes, a challenge to spot.


## Venus

- Either above the western horizon in the evening, or rising above the eastern horizon in the morning.
- Dazzling with object.
- Very easy to see.


## Mars

When it is close to Earth, Mars is a bright red-orange object in the east after sunset, high in the south near midnight, and in the west before sunrise.

## Jupiter

When it is not positioned near the sun, Jupiter is always seen as a very bright pale yellow object.

## Saturn

When it does not appear close to the sun, Saturn is seen as a bright creamy starlike object.


The Inner Planets: Mercury and Venus

## The Outer Planets: Mars, Jupiter, and Saturn



1 When the planet is opposite the sun, it rises near sunset and is visible all night. It is closest to Earth and shines at its brightest.
2 When the planet lies ahead of Earth in their orbits, it is seen high in the east before sunrise. is often said to be a "Morning Star."
3 When the planet moves on the far side of the sun, it appears in the day sky near the sun and can't be seen.
4 When Earth lies ahead of the planet in their orbits, it is seen high in the west after sunset and sets around midnight. It is often said to be an "Evening Star."


