

Planet Search

Your Challenge:

The planets orbit the Sun in their own orbits. Each night the planets will be in a slightly different location. Your challenge is to discover where the planets are tonight.

Discovering:

1. Open Sky Tonight. Start with the 8PM view. Search North, South, East, West, and Zenith (Overhead). Record any planets you can see at 8PM on the chart below. Describe when to look, which direction to face and the name of the constellation in which you found the planet.
2. Next choose 5AM in Sky Tonight in all directions. Record any additional planets you find.
3. Any planets that are NOT visible at either time are too close to the Sun in our sky - either in front of the Sun or behind it. Put "too close to the Sun" in the blanks.

Planet	How It Looks	Time	Where it is tonight	
			Direction	Constellation
Mercury	bright but always in twilight	_____	_____	_____
Venus	brightest in Earth sky, looks white	_____	_____	_____
Mars	red planet, bright as a bright star	_____	_____	_____
Jupiter	second brightest, brighter than stars	_____	_____	_____
Saturn	bright as a bright star, yellowish-white	_____	_____	_____
Uranus	faint, requires binoculars, greenish	_____	_____	_____
Neptune	faint, requires small telescope	_____	_____	_____
Pluto	very faint, requires large telescope	_____	_____	_____

4. Take this information outside tonight or tomorrow morning and record any planets you see. Remember that planets shine with a steady light and do not twinkle as the stars do.
5. There is a faint green line on the Sky Tonight charts. (Its official name is the **ecliptic**.) The planets, moon, and Sun always lie near this line. Record the names of the constellations along this line.

This is the famous Zodiac band and these are the only constellations where planets can be found. Push the PLAY button and watch the planets. Notice how they always stay near the green line.

Making Science Sense:

The orbits of the planets lie in almost the same plane (or disk). The Zodiac constellations are also in this plane. Use this information to explain why the planets are never in the Big Dipper.