

The Mighty Sky's: Zodiacal Zydeco



Find a Planet!



"The planets are called **wanderers** because **they move among the stars**.

The **ecliptic** is where they are found if you wonder where they are.

Our **solar system is a disc**, that's just how it was formed.

The **planets have gone around** in it from the time that they were born."

Excerpted from the song "Zodiacal Zydeco"

I'll bet you've seen planets in the sky, either Jupiter, Saturn, Mars, Venus, Mercury, but you just didn't know what you were looking at.

So, how does one know they are seeing a planet and not a star?

Follow this activity and before too long, you'll be able to point out the planets!

Clues

All of the planets and the Moon are found somewhere along the ecliptic. What's the ecliptic? Think of it as the path of the Sun as it travels across the sky. Remember that stars twinkle, (astronomers call it *scintillating*) planets do not.

Activity Instructions

For the observation part of the activity, you will need a clear day and night.

1. With a discarded CD, DVD, or old vinyl record, and various colors of modeling clay or "Playdo", create a model of the current position of the planets with the Sun in the center hole. You might use yellow for the Sun and blue for Earth. *See photo A.* Use one of the online orreries to find their positions. Create small balls of clay by rolling them between your fingers and stick them in the positions of the planets shown on the link. <http://fourmilab.ch/cgi-bin/Solar/action?sys=-Sf> This exercise will help with understanding the shape of the Solar System and why the planets are found along the ecliptic path.

2. WITHOUT STARING DIRECTLY AT THE SUN, (Unless it is rising or setting, it is dangerous to look at the Sun, even with sunglasses) during the day, at various times, try to note the approximate path of the Sun across the sky. Take your solar system model (which was created in step 1) and hold it up in the sky so that the edge of the disc is angled toward the Sun's path in the sky (*See photo B*). By noting the Sun's path across the sky, you will be on the right track for knowing where the planets are.

3. It's no secret. The planets are visible to the naked eye. The key to finding them is knowing where they are by using a reliable resource, and then learning enough about the sky to know where to look. If you look for them, you will surely find one or more. Planets are often very bright, often the brightest things in the night sky other than the Moon. After you've done your homework and know what planets are visible and about where they should be in the sky, go out immediately after sunset and watch for the stars to appear. It will take a little time, usually about 30 minutes after sunset. Scan the ecliptic and look for brighter objects. If Venus is visible, it will be so bright you can't miss it. When you think you've spotted one, ask if it twinkles. If not, you are probably seeing a planet. If you have binoculars, steady them against something, (lean against the house or a pole) and look at it. You will be able to see details of the planet. If Jupiter, you may be able to see the Galileon moons. If Saturn, you might see the rings. Mars will look a little reddish, almost slightly rusty. Don't forget, sometimes the planets are visible in the early morning before sunrise.

Resources

Free Planetarium Software

<http://www.stellarium.org/>

NASA's Night Sky Network

http://nightsky.jpl.nasa.gov/download-view.cfm?Doc_ID=335

Links for finding what's currently in the sky

<http://nineplanets.org/see.html>

<http://www.skymaps.com/downloads.html>

<http://www.skyandtelescope.com/observing/ataglance/>

