

Praxis “Making Science Fun”

Where is the Sun?

At 6 pm in July it's sunny outside; in December it's dark. You can verify that the Sun appears in a different location each day (one exception).

Materials:

- Large piece of cardboard
- Short wooden stick (6-8 cm)
- Glue
- Pencil

Procedure: (Remember to be sure to have your parent's permission and they have the time to watch and help you.)

- Glue the stick to the cardboard standing upright in the middle of one of the long sides.
- Once dried, place the cardboard on a flat surface in the sunlight of a window that faces the sun.
- Mark the point on the board where the tip of shadow is located and write the date.
- The board must be in the same location each day you record your results.
- Repeat this daily or weekly at the exact same time each day.
- Discuss your observations with your family.

What's happening?

The change in the shadow's location is caused by an apparent shift in the location of the Sun due to the tilt of the Earth.

For us only two days will the Sun's location (the shadow) match, (the Vernal (Spring) and Autumnal (Fall) Equinox (about March and September 21 respectively), because the Sun appears in the same place in the sky. However at the equator the Sun's location matches every day. Why?

If you did this experiment every day and connected the dots on your cardboard the result would look like a figure 8. This is called the analemma. What is the date in the middle?

Extension:

For this experiment and many others like it see:

<http://cse.ssl.berkeley.edu/AtHomeAstronomy/index.html>

This experiment is based on our “Astronomy and Sky Science” Learning Kit. Our teaching kits are loaned out FREE to provide classroom teachers and parents of home schooled children an opportunity to explore Science in interesting ways. Please consider volunteering to speak to a class about any one of our Science learning kits described on our website. We would be most appreciative to hear from you.



On January 30th, Praxis will be hosting Operation Minerva, a conference for grade 9 girls, that promotes Science, Technology, Engineering and Mathematical (STEM) based careers where students get a chance to job shadow and attend workshops. Please see our website for more details. If you are a woman currently employed in a STEM related field and are interested in volunteering 2 hours of your time so that girls attending the conference may job shadow you, please contact us.

Lorne Cooper, Regional Executive Director

PRAXIS, “Making Science Fun”. Contact Praxis at praxis@praxismh.ca, www.praxismh.ca, Tweet or follow us @PraxisMedHat, or friend us on Facebook. Address: c/o 200 7th Street S.W., Medicine Hat, AB, T1A 4K1 Phone: 403-527-5365, Fax: 403-527-6570.

