



Sun-Earth Day

Celebrate the Connection!

www.sunearthday.nasa.gov

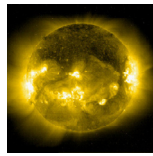
Public Outreach: Make and Take Activities

What You'll Need

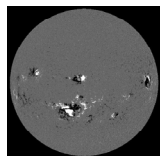
- copies of Matching Suns handout (see next page)
- pens, markers, or crayons

Matching Suns

About this Activity



This activity explores magnetic activity and active regions on the Sun. Participants match up pairs of images of the Sun taken about the same time on any given day, but the pairs were taken from five different days over the past few years. You will find that the magnetic images match up very closely with the ultraviolet images.



Left: Image of the Sun taken in extreme ultraviolet light above the surface of the Sun. The areas of more intense activity appear lighter than less active regions, which appear dark.

Right: Image of the Sun's surface which shows magnetic activity, in which the black indicates one pole of magnetic attraction and white the other.

Preparation

Make copies of the following handout for your participants. Print out the solution key and have it face down on the table, or have the volunteer keep it out of sight.

Optional: Print out the higher resolution images so that one image is on each page and you have ten sheets total. Laminate them if you would like them to be sturdier. Have the participants move the images around until they match up.

To Do and Notice

- 1) Show the participants the five magnetic images of the Sun, and the five ultraviolet images of the Sun. Ask them to notice the differences in the yellow ultraviolet images, and the differences in the black and white magnetic images.
- 2) Have the participants match the yellow ultraviolet image with its corresponding black and white magnetic image taken from the same day by drawing lines on the handouts from the yellow ultraviolet image to its corresponding black and white magnetic image.

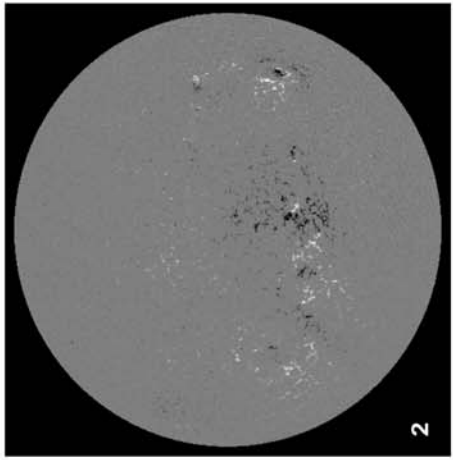
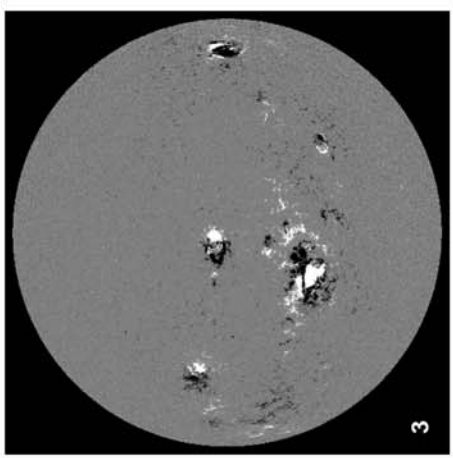
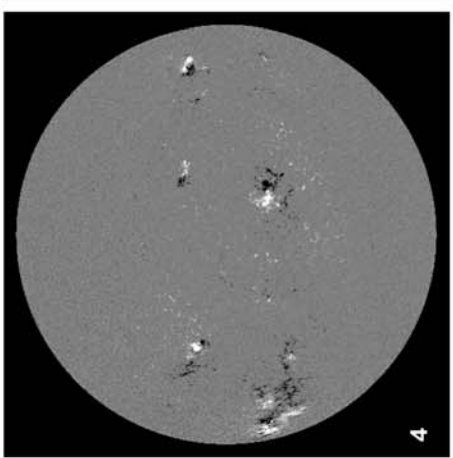
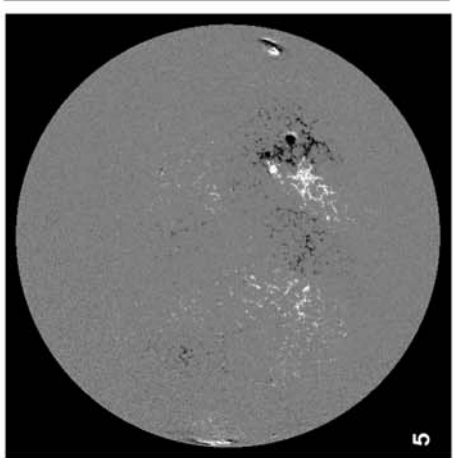
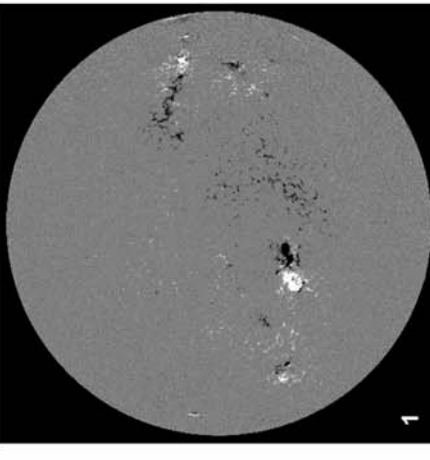
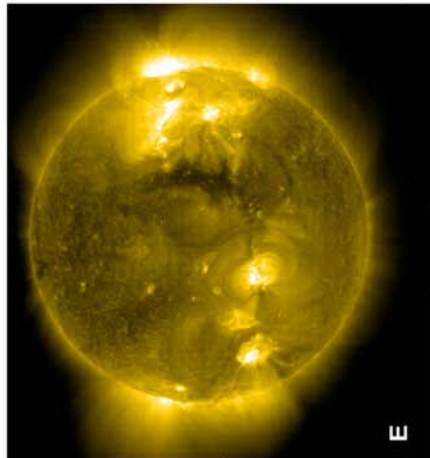
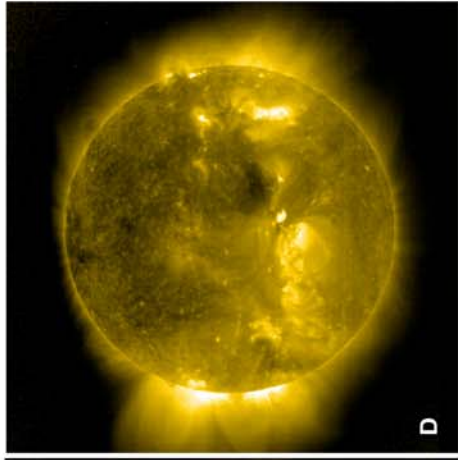
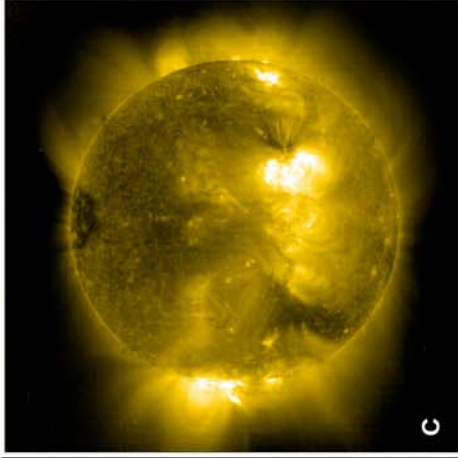
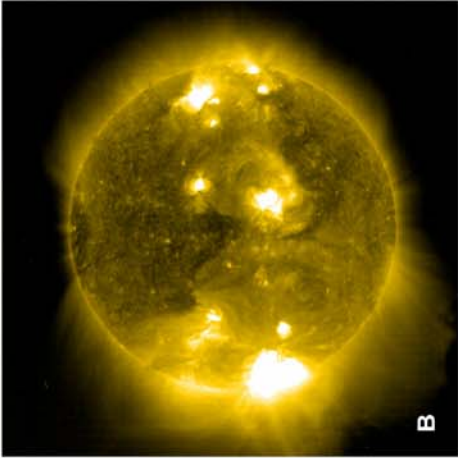
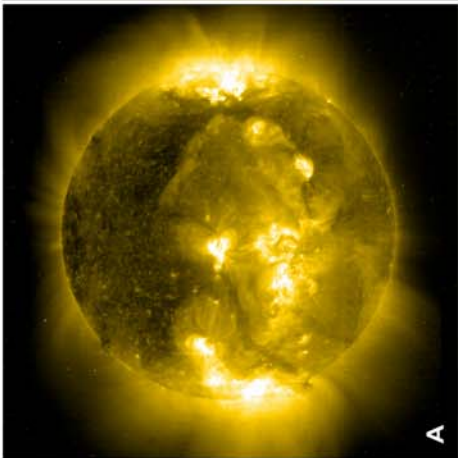
Activity Notes

The yellow images in ultraviolet show regions of intense activity above the surface of the Sun, where magnetic forces are connecting, breaking apart, and reconnecting, and are often the sources of solar storms. Many of these areas would appear as sunspots in "white light" or simple filtered images of the Sun.

This activity is adapted from Solar and Heliospheric Observatory (SOHO) Classroom Activity "Matching Magnetic Activity and Active Regions". See link below for the classroom activity.

Related Websites

Higher-resolution Images, Related Movie, and Solution Key to Activity:
http://soho.nascom.nasa.gov/classroom/matching_activity.html



Match the Ultraviolet and Magnetic Solar Images

