

Sunspotter:

The safe way to view the sun.

This Sunspotter gives you the chance to gather data about the sun on your own!

We can't look at the sun directly because the light is harmful to our eyes. Scientists use instruments to look at the image of the sun. The Sunspotter shows a projection of the sun's image and you get the chance to gather data about the sun on your own!

- Predict what you might see when you look at an image of the sun.
- Observe the image in the Sunspotter.

What did you notice?

Do you think those little spots are from the Sunspotter or part of the sun?

How many spots do you see? Are there groups of spots? How many in a group?

Does the image move fast? Why is it moving? How long does it take to move by?
Which direction is the image moving?

What color does the sun seem to be?

How would you describe the edge of the sun? Is it sharp or fuzzy?

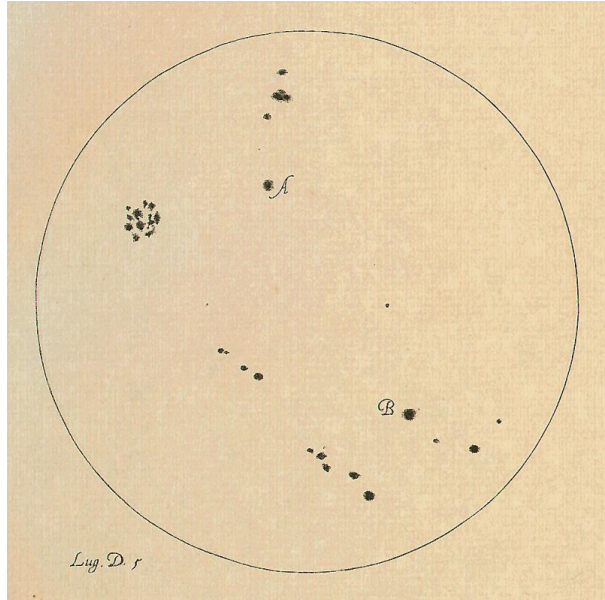
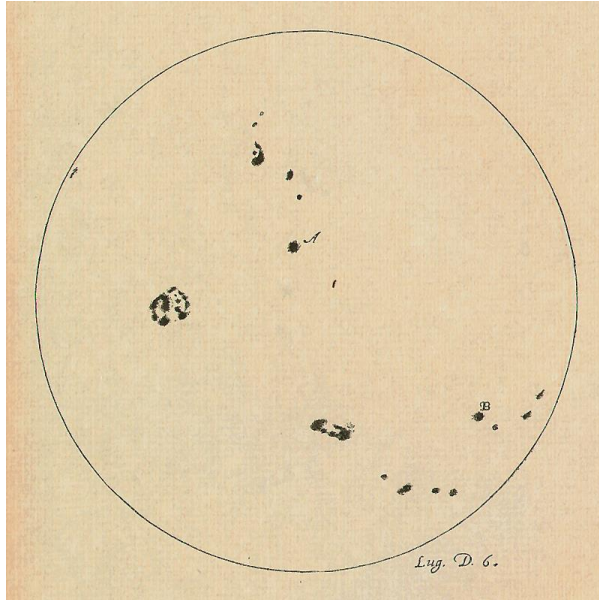
Can you see any bright or dark spots other than the sunspots?

Did you see any clouds or birds or airplanes cross the sun's image?

Do you think you would see the same thing in an hour? A day? A month? A year?

Draw the Face of the Sun

There were no cameras when sunspots were first discovered. All images of the sun had to be hand drawn. Galileo was the first person to record sunspots and their motion, and realize this meant the sun was moving on its own axis! Below are images Galileo drew in 1613 from his own observations of sunspots.



What do you notice about the two images? These observations are one day apart: July 5th and July 6, 1613. Can you compare the images to see how the sunspots change over time? What are some of your observations?

Try drawing your own freehand sketch of what you see in the Sunspotter.

- Pre-draw the circle of the sun on your paper.
- Designate one person to be responsible for repositioning the image when it moves too far.
- Look at the image and draw any spots you see.
- Try to preserve their relative positions and sizes.
- Record the time of day and date on your drawing.
- You may have to erase and redraw parts of the sun but since it doesn't change very quickly you can adjust it until you feel it is accurate.