**Telescopes**

Today in Science class, Mr. Smith did a demonstration where we could see sunspots.

Sunspots

In this demonstration, Mr. Smith set up a telescope outside and had us look at the sun and see how many sunspots we could see. Afterward, we had to make a map showing where the sunspots on the sun are. I could only see a few of the sunspots, but apparently there are about 20 of them.

Things I learned:

* The satellite SoHo takes 8 different pictures of the sun every day.
* Soho has 8 different filters on its camera, so it takes one picture with each filter.
* The corona is the outer envelope of the sun’s atmosphere. It is extremely hot with temperatures up to 2 million degrees Celsius.
* The chromosphere is a transparent layer above the photosphere. It extends up to 2,000 kilometers with temperatures up to 10,000 degrees Celsius.
* The photosphere is the visible ‘surface’ of the sun. It is about 300 kilometers thick. Here most of the Sun’s activity takes place.
* The convective zone extends roughly over 30% of the sun’s diameter. Here energy is mainly transported upwards by convective streams of gas.
* The radiative zone energy is transported outwards by radiation. It covers about 70% of the sun’s diameter.
* Fusion processes through which hydrogen nuclei are fused to produce helium nuclei produce the core in the center of the sun.
* The spectrum of the sun not only shows the rainbow colors: it also displays dark lines named absorption lines or Fraunhofer lines.
* Mercury is very, very hot during the day. It is 750 degrees Fahrenheit.
* During the night, it is freezing. It is -360 degrees Fahrenheit.

