All About Our Sun!

- Our Sun is our nearest star. Its energy makes life on Earth possible!
- Scientists calculate our Sun and solar system formed at the same time — 4.56 billion years ago! This is based on the ages of the oldest objects that we have sampled from our solar system — meteorites.
- Our Sun will shine as it is for about another 3 to 5 billion years! It will then evolve into a red giant.
- Our Sun's average distance from Earth is 150 million kilometers (93 million miles).
- Our Sun's diameter is 1,391,020 kilometers, or about 109 times the diameter of Earth.
- About a million Earths could fit in the Sun!
- Like Earth, our Sun has many different layers. Unlike Earth, our Sun is made of gas!
- The Sun is over 15 million degrees Celsius or about 27 million degrees Fahrenheit! That's HOT!
- The surface of our Sun often has continuously changing dark regions — sunspots. The spots are dark because they are cooler than the surrounding gas (about 3230 degrees Celsius or 5850 degrees Fahrenheit). Sunspots can persist for an hour to several months. The number of sunspots increases and decreases in an 11-year cycle — the solar cycle.
- The photosphere and sunspots can be viewed safely with special solar telescopes — but not directly with the human eye!
- The chromosphere (“sphere of color”) is a 2000-kilometer-thick layer of gas that reaches temperatures between 6000 and 50,000 degrees Celsius (that's about 10,825 to 90,000 Fahrenheit).
- The corona is a thin outer layer of our Sun that is seen during a solar eclipse. Loops and arches of matter are often seen extending out from the corona along lines of the Sun's magnetic field.
- While approximately 60 different elements make up our Sun, hydrogen accounts for about 92% of the atoms (almost three-fourths of the mass) and helium makes up most of the rest. Scientists can identify the elements by observing the solar spectrum.
- While it feels like we get a lot of energy from our Sun, the amount we actually receive is very small. Because of Earth's distance from our Sun, and because the Sun sends energy in all directions, we only get about one two-billionth of the amount emitted by our Sun.