Daisy Space Science Explorer Badge

The Sun

This sheet provides basic facts about the Sun to help you and your girls embark on the Space Science Explorer badge.

Words to Know-

Here is some vocabulary to get you started . . .

Orbit: The path one object takes around another

Solar System: The Sun, our star, and all the objects that travel in orbit around it

Galaxy: A system of dust, gas, and stars. Our Solar System is just one of billions of planetary systems that make up our Galaxy, which is called the Milky Way.

Asteroid: A small body of rock that orbits the Sun

Comet: A small ball of frozen water, gas, rock, and dust. When they come near the Sun, they melt and form tails made of gas and dust that are millions of miles long. That's when we see comets from Earth.

KEY FACTS-

- The Sun is a 5-billion-year-old medium-size star at the center of our Solar System.
- All of the planets, their moons, asteroids, comets and dust in our solar system orbit the Sun.
- The temperature on the Sun's surface is 10,000 degrees Fahrenheit (5,538 degrees Celsius), hotter than the hottest fire on Earth.
- The Sun provides all the energy and heat that make plants grow and keep us warm.
- While the Sun is very special to us, there are billions of stars like our Sun throughout the Milky Way Galaxy.

FUN FACTS TO SHARE WITH GIRLS-

- The Sun is a star made of hot, glowing gases. Because of this, there are no hard surfaces on the Sun.
- If the Sun were as tall as a typical front door, the Earth would be the size of a U.S. nickel!
- Without the Sun's energy and heat, there would be no life on Earth.
- The temperature at the Sun's core is about 27 million degrees Fahrenheit.
- The Sun is not on fire. The Sun's energy is produced by subatomic particles smashing together at its core, which converts mass into energy. Einstein's famous equation describes this: $E=mc^2$.

DIGGING DEEPER-

If you'd like to know more about the Sun, check out these helpful links—

NASA's Sun website: http://www.nasa.gov/sun

Songs about the Sun: http://www.astrocappella.com/sun.shtml

Sun and Earth interactions: http://science.gsfc.nasa.gov/670/abouttheliophysics.html