The Sun
by Cynthia Sherwood

You may have heard people use the term “solar energy.” They’re probably talking about the technology that powers a house or heats a swimming pool. But there’s only one place that you can find true “solar energy”—the sun!

Without the sun, there wouldn’t be life on earth. The sun provides us with both light and heat. It’s at the very center of our solar system, with all eight planets revolving around it. The planets, moons, thousands of asteroids, and billions of comets also revolve around the sun.

From earth, we see the sun as a bright yellow dot in the sky that’s sometimes hidden by clouds. But the sun is actually a glowing ball of fiery gas. The part of the sun that we see has a temperature of 10-thousand degrees Fahrenheit (5,600 degrees Celsius). Inside the sun, at its core, the temperature is 27-million degrees (15-million Celsius).

The core is where the sun’s incredible energy is created. The temperature is so extreme that nuclear reactions take place and energy travels to the surface of the sun. That energy is then released as light and heat. It takes a million years for energy produced in the sun’s core to reach its surface.

Besides being hotter than we can even imagine, the sun is amazingly big. You could fit more than a million Earths inside the sun! But believe it or not, the sun isn’t anywhere close to being the biggest object in the universe. The sun is actually a star, just like the others you see at night. It’s about average in size when compared to other stars. But to us here on earth, there’s nothing average about the sun!

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Earth is the “just right” planet. It’s not too close to the sun and it’s not too far away. That means Earth doesn’t get too hot or too cold, unlike the other planets. Because of its comfortable temperature, Earth is the only place in the entire universe where we know that life exists. That makes Earth very special!

Earth is unique in another way too. Living creatures must have water to survive. Since water covers about seventy percent of Earth’s surface, our planet is an ideal place to support life in many different forms. The rest of Earth’s surface is made up of seven land masses called continents.

Scientists say Earth is about four-and-a-half billion years old. Rocks show microscopic life first appeared about a billion years later. Evidence of the first human beings came much later—only about 200 thousand years ago. That’s many millions of years after the dinosaurs became extinct.

Earth is the fifth largest planet and the third planet from the sun, which is about 93 million miles away. It takes one year for Earth to travel completely around the sun. Earth also spins around like a top, going about a thousand miles an hour. You’d think we’d all need west belt! Earth spins around like this once every twenty-four hour, and that’s what gives us night and day.

Earth is divided into several layers: the top part is called the crust, the part below that is called the mantle, and the part in the center is called the core. The core is solid and is probably made up of iron. Temperatures of the center of the core may be even hotter than the surface of the sun!

Scientists who study Earth are called geologists. Astronauts can also study Earth from space, adding to what we know about our unique and beautiful blue and green planet. Don’t you feel lucky to live on the “just right” planet?