The Geosphere
This part of the Earth System is made of the crust, mantle, and inner and outer core.

The Atmosphere
This part of the Earth System is made of the mixture of gases that surround the planet.

The Biosphere
This part of the Earth’s System is made of all living things, including plants, animals, and other organisms.

The Hydrosphere
This part of the Earth System is the planet’s water, including oceans, lakes, rivers, ground water, ice, and water vapor.
Earth Systems

Earth has many parts that work together in important ways. Scientists call these parts systems. Earth has four main systems: the atmosphere, the biosphere, the hydrosphere, and the geosphere. Understanding these systems helps scientists study Earth, Earth processes, and the systems of other planets.

Atmosphere
When you look at the sky from Earth’s surface, you are looking into Earth’s atmosphere. The atmosphere is made up of gases that surround Earth. Organisms use the gases in the atmosphere for their survival. For example, many organisms need oxygen to break down food to provide them with energy. Plants need oxygen and they also need carbon dioxide from the atmosphere to make food. Another gas in the atmosphere is ozone. Ozone protects life on Earth from harmful energy given off by the Sun. The atmosphere also contains water vapor that plays a role in Earth’s weather systems.

Biosphere
Earth’s biosphere made of all living things on Earth. It is made up of millions of different kinds of living organisms. These organisms live all across Earth, on land and in water, and in hot and cold climates. Some organisms have not survived changing conditions on Earth. Fossils are evidence that these organisms once existed on Earth. The biosphere includes parts of the lithosphere, hydrosphere, and atmosphere.

Hydrosphere
The hydrosphere includes all of the water on Earth. About 70 percent of Earth’s surface is covered with water. Most of this water is in its salty oceans. A small percentage of it is fresh water, contained in rivers, streams, lakes, and ponds, and in the form of ice. There is also water underground in soil and rocks, in Earth’s atmosphere, and in the cells of living organisms.

Geosphere
The geosphere is the solid Earth that includes continental and oceanic crust, and the layers of Earth’s interior.