

Lesson Outline for Teaching

Lesson 1: Spherical Earth

A. Describing Earth

1. Scientists see the shape of Earth in pictures taken by satellites.
2. These pictures show that Earth is not quite a perfect sphere, which has all points on the surface at an equal distance from the center.
3. Instead, Earth looks like a slightly flattened ball, with a(n) bulge at the equator.

B. Earth Systems

1. Earth has four systems that interact with each another.
2. Earth's outermost system is the atmosphere, which is made up of the layer of gases surrounding the planet.
3. Earth's hydrosphere includes all the water found on Earth's surface, below ground, and as a liquid in the atmosphere.
4. As water moves between the air and Earth's surface forming raindrops or evaporating from puddles, the atmosphere and the hydrosphere interact.
5. Earth's entire solid body is called the geosphere.
6. All the living things on Earth form the biosphere.

C. How did Earth form?

1. Earth and the rest of our solar system formed from a large cloud of gas and dust. (*nebula*)
2. Gravity made the material in the cloud come together to form the Sun and the rest of the solar system.
3. Gravity is the force that every object exerts on every other object.
 - a. The strength of gravity depends on the amount of mass in objects. It also depends on the distance between objects.
 - b. The more mass two objects have, the stronger the force of gravity is between them.
 - c. The closer two objects are to one another, the stronger the force of gravity is between them.
4. Objects near Earth's surface fall to the ground because Earth's gravity pulls objects toward the center of the planet.

D. The Solar Nebula

1. The solar system formed from a cloud of material called a nebula.
2. Because of the force of gravity, the cloud shrank, flattened into a disk, and began to rotate.