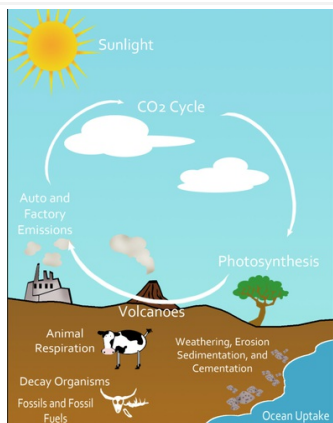


- atmosphere** The envelope of gases that surrounds Earth
- biogeochemical cycles** A pathway by which a chemical element or molecule moves through both biotic (biosphere) and abiotic (lithosphere, atmosphere, and hydrosphere) components of Earth.
- biosphere** All living things, whether in the air, in the oceans, or on and beneath the land surface.
- carbon cycle** The series of processes by which carbon compounds are interconverted in the environment, mainly involving the incorporation of carbon dioxide into living tissue by photosynthesis and its return to the atmosphere through respiration, the decay of dead organisms, and the burning of fossil fuels.

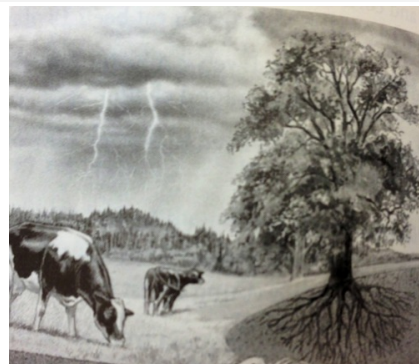
5. **carbon cycle diagram**



- continental plates** A portion of one block of Tectonic plates, which is not submerged in water; the solid outer shell of the earth, with an average thickness of 30–35 km in continental regions forming the upper part of the lithosphere and lying immediately above the mantle
- core** The central portion of the earth below the mantle, beginning at a depth of about 2,900 kilometers (1,800 miles) and probably consisting of iron and nickel. It is made up of a liquid outer core and a solid inner core.
- crust** The layer of rock that forms Earth's outer surface
- earthquakes** the shaking that results from the movement of rock beneath Earth's surface
- Earth Systems Science** The study of the group of spheres; the lithosphere, hydrosphere, atmosphere, and biosphere, that work together to make up the Earth system.
- geosphere** another name for the lithosphere; a rigid layer made up of the uppermost part of the mantle and the crust; the solid portion of the earth

- hydrosphere** the water on or surrounding the surface of the globe, including the water of the oceans and the water in the atmosphere.

13. **lightning and decaying organisms**



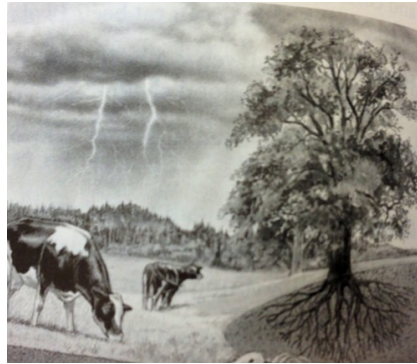
These contribute to the nitrogen cycle by ONLY releasing nitrogen.

- lithosphere** A rigid layer made up of the uppermost part of the mantle and the crust; the solid portion of the earth
- mantle** The layer of hot, solid material between Earth's crust and core
- mantle convection** A cycle of heating, rising, cooling, and sinking of plasticlike rock transferring heat from the core and the mantle
- mid-ocean ridges** Undersea mountain chains where new ocean floor is produced
- mountain belts** These consist of several mountain ranges that run roughly parallel to each other. They typically are thousands of kilometers long and hundreds of kilometers across and parallel continental coastlines.
- nitrogen cycle** The cycle in which nitrogen moves from the air to the soil, into living things, and back into the air.
- oceanic plates** A section of the lithosphere that slowly moves over the asthenosphere, carrying pieces of oceanic crust
- plate boundaries** When plates move, they can interact in several ways. There are three types; plate can move toward each other or collide (convergent), pull apart (divergent) or slide alongside one another (transform).
- plate movements** By diverging at some boundaries and converging at other, Earth's plates are continually reshaping the landscape; seafloor spreading, rift valley, subduction, continental collision
- plate tectonics theory** The theory that pieces of Earth's lithosphere are in constant motion, driven by convection currents in the mantle
- subduction zones** The process by which oceanic crust sinks beneath a deep-ocean trench and back into the mantle at a convergent plate boundary

25. **tectonic plates**

A section of the lithosphere that slowly moves over the asthenosphere, carrying pieces of continental and oceanic crust

26. **trees and grazing cattle**



These contribute to the nitrogen cycle by releasing AND absorbing nitrogen.

27. **upper mantle**

the upper part of the mantle; also known as the asthenosphere, the soft layer of the mantle on which the lithosphere floats

28. **volcanoes**

Cone-shaped hills or mountains formed when hot magma, solids, and gas erupt onto Earth's surface through a vent.
