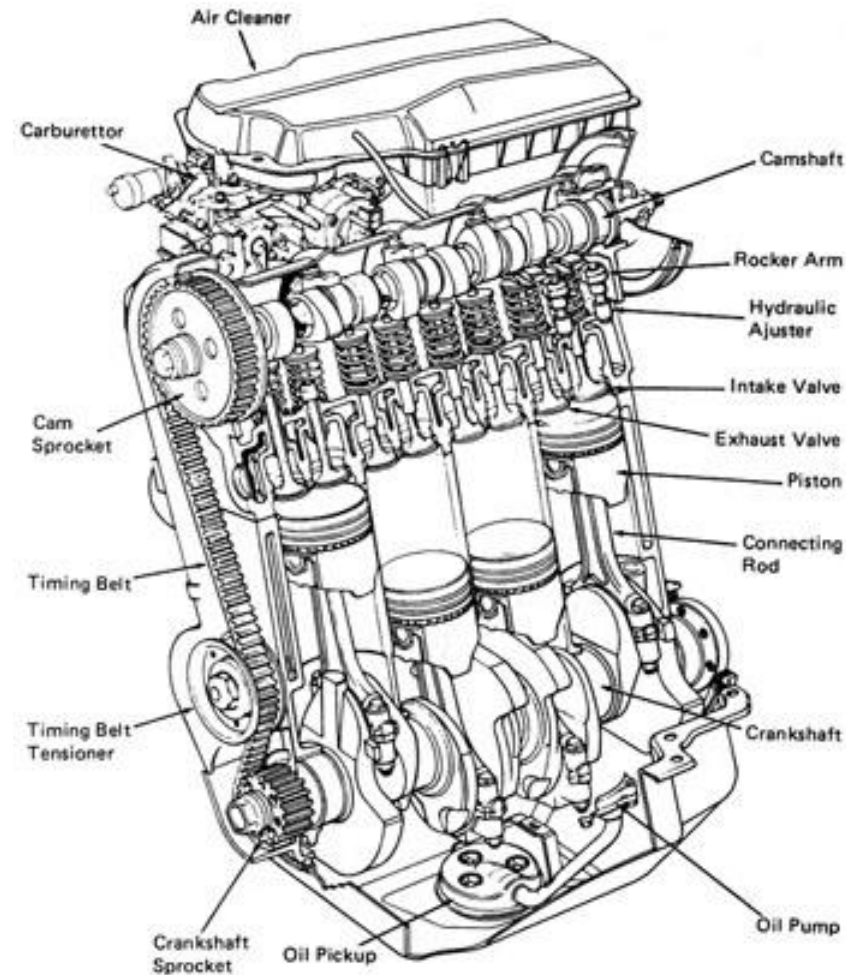


# Earth-System Science

# Systems

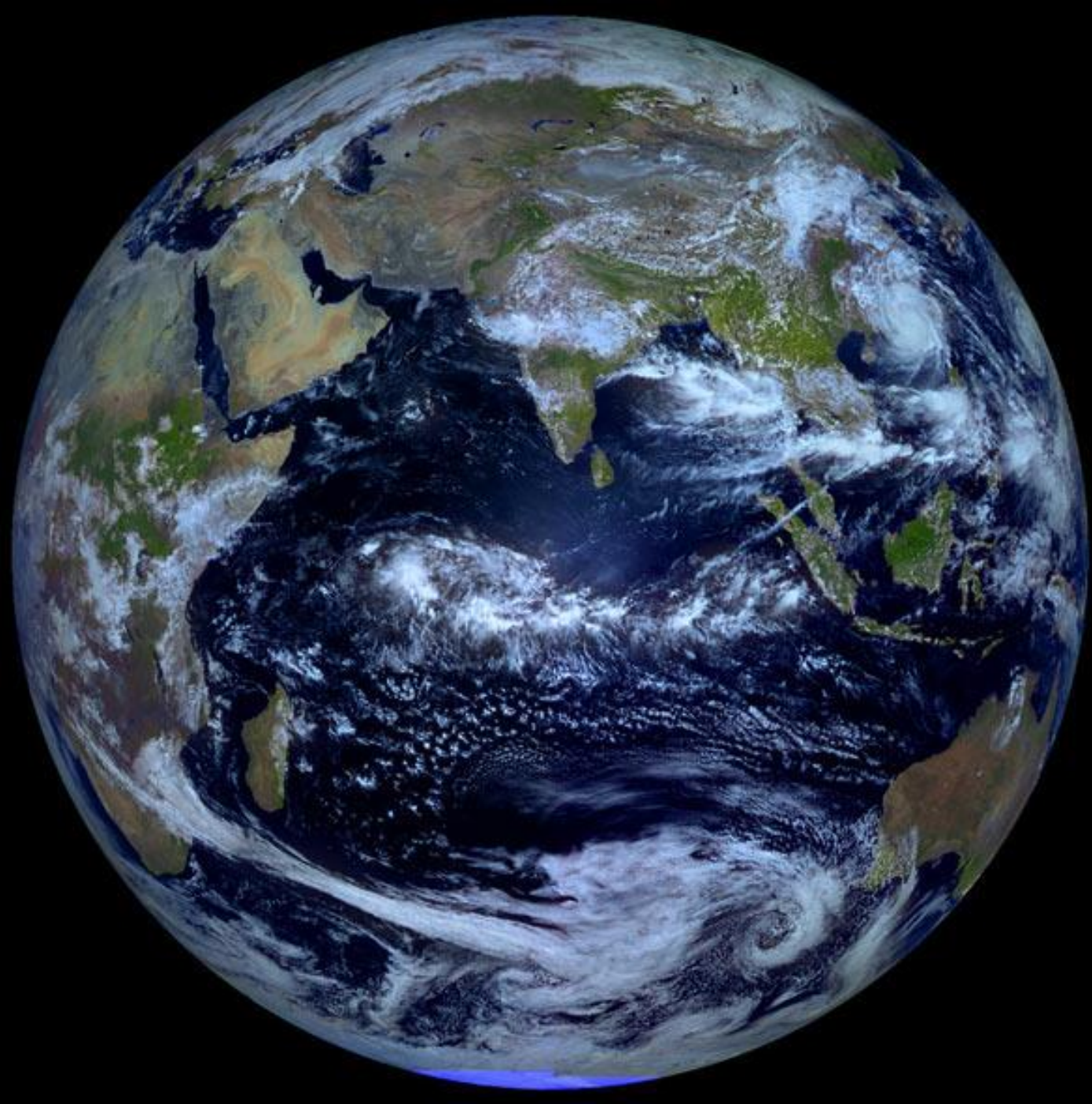
- System: an organized group of related objects or components that interact to create a whole



# Systems of

- Systems can
- Systems can

## Study of Body Systems







Air



Water



Land



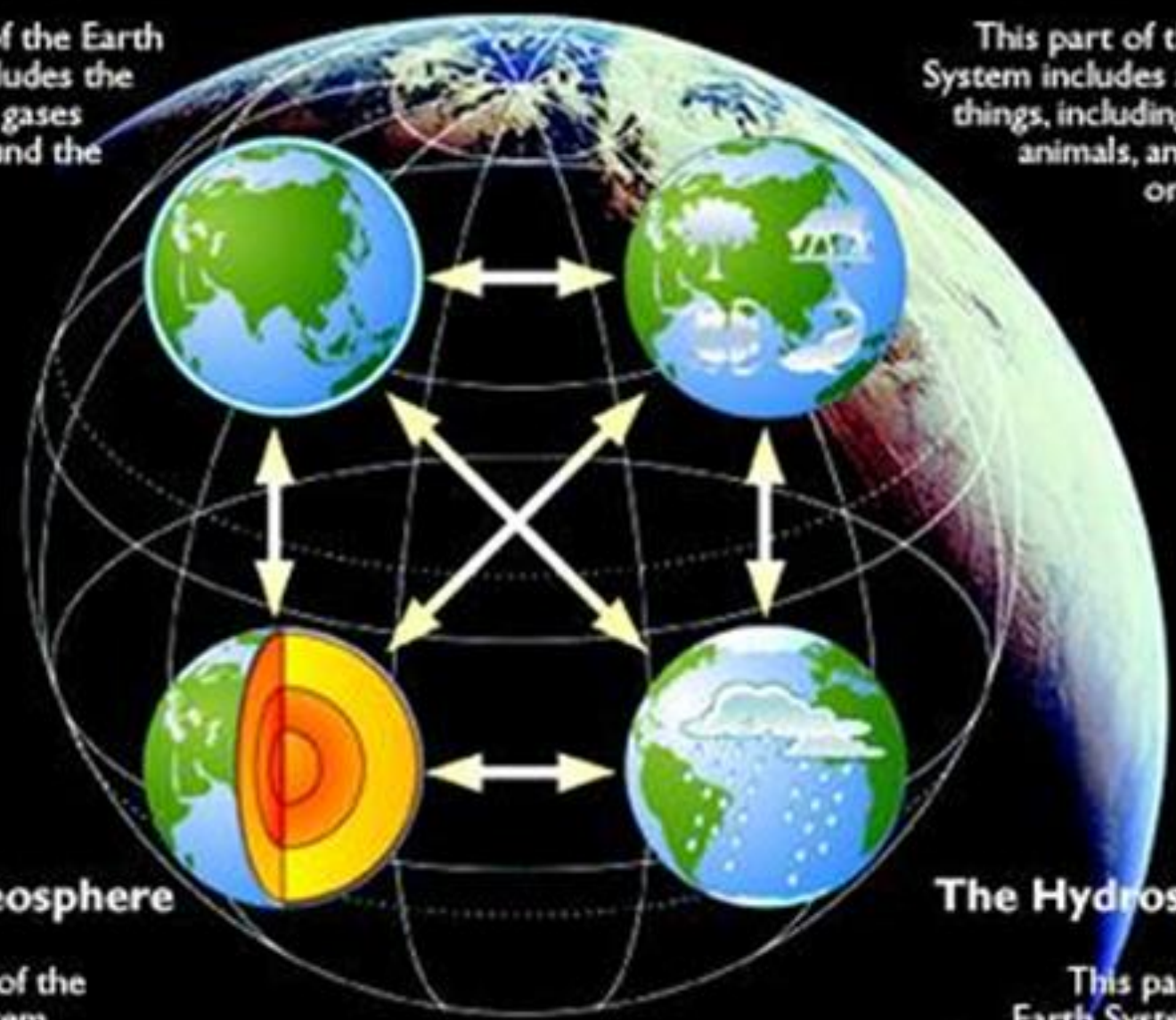
Life

## The Atmosphere

This part of the Earth System includes the mixture of gases that surround the planet.

## The Biosphere

This part of the Earth System includes all living things, including plants, animals, and other organisms.



## The Geosphere

This part of the Earth System includes the crust, mantle, and inner and outer core.

## The Hydrosphere

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

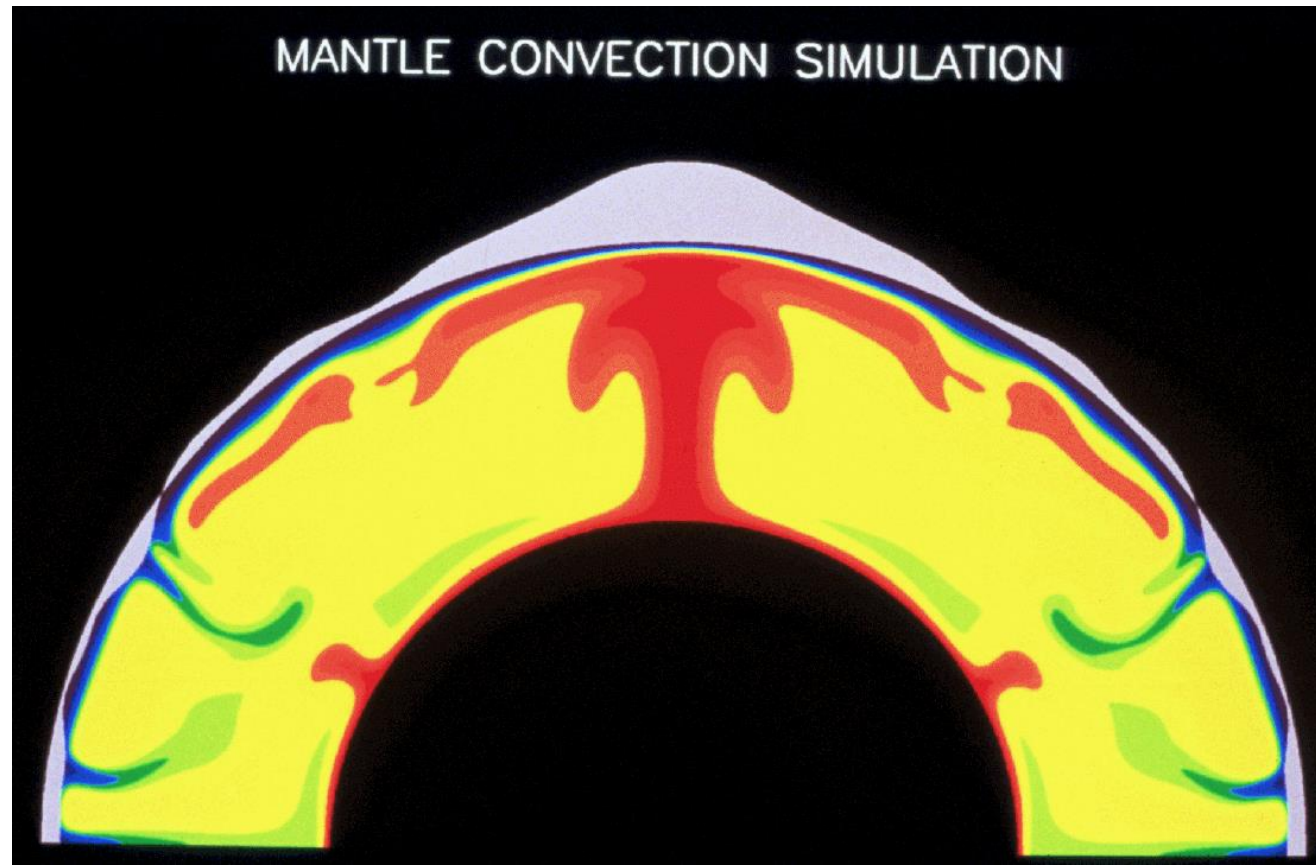
# Systems cont.

- The operation of the Earth system is a result of the interaction between matter and energy
- Earth is a nearly closed system: it exchanges energy but very little matter

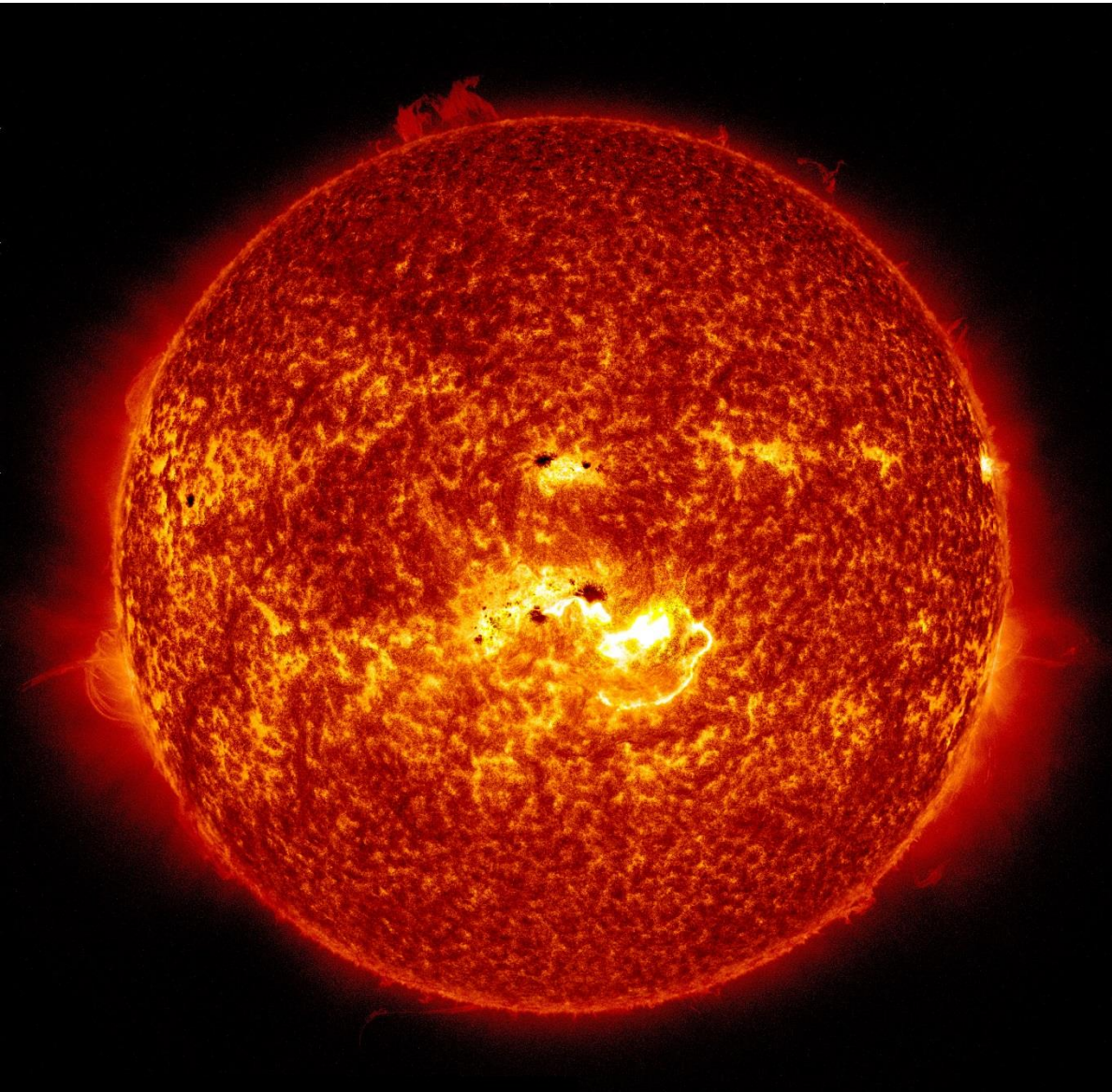


# Internal Sources of Energy

- Radioactive decay
- Energy still left from Earth's formation



# External Sources of Energy





# Cycles in the Earth System

- Reservoir: a place where matter or energy is stored
- Cycle: a group of processes in which matter and energy repeatedly move through a series of reservoirs

# The Water Cycle

