

Cycles in Nature

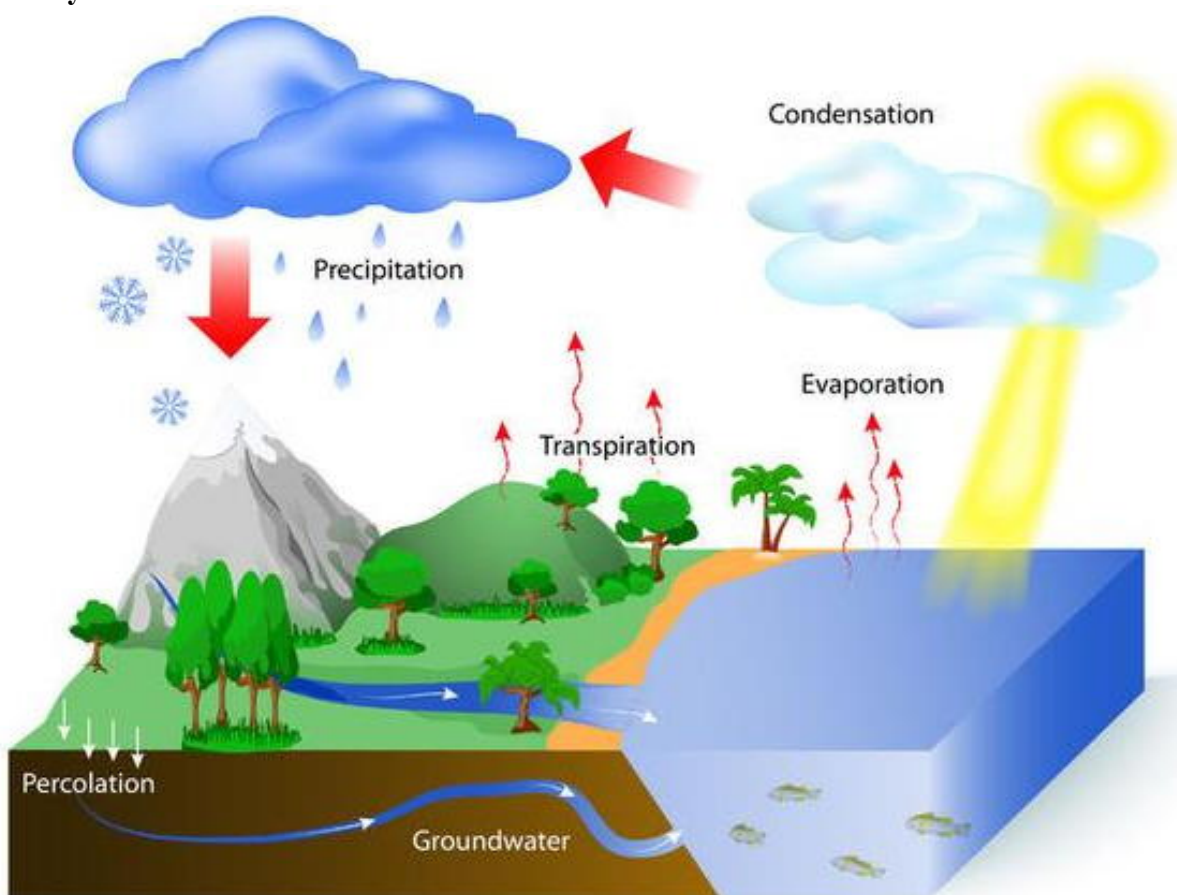
Food chains and food webs show how energy moves in only one direction through the trophic levels of an ecosystem. A pyramid of energy shows how energy is lost from one trophic level to the next (mostly in the form of heat generated by bodily processes). Since the sun is the source of all this energy, it is constantly being replenished.

Matter, in the form of essential nutrients, also moves through the organisms in an ecosystem. However, matter can't be replenished like the energy from the sun. Instead, matter is constantly being recycled. In fact, the atoms of carbon, nitrogen, and other elements that we are made of today are the same atoms that have been on Earth since life began.

Essential nutrients, such as water, carbon, and nitrogen, move through an ecosystem in a series of processes called a **biogeochemical cycle** or **nutrient cycle**.

The Water Cycle

The movement of water from the atmosphere to the Earth and back to the atmosphere is called the **water cycle**.



Water vapor in the atmosphere undergoes condensation to form clouds. When the condensed water gets heavy enough, it falls to Earth as precipitation. On land, water eventually finds its way to large bodies of surface water. This surface water evaporates to return to the atmosphere, thus completing the cycle.