The water cycle

Environment, Water

The water cycle, also known as the hydrologic cycle or H2O cycle, describes the continuous movement of water on, above and below the surface of the Earth. Water can change states among liquid, vapour, and ice at various places in the water cycle. Although the balance of water on Earth remains fairly constant over time, individual water molecules can come and go.

The water moves from one reservoir to another, such as from river to ocean, or from the ocean to the atmosphere, by the physical processes of evaporation, condensation, precipitation, infiltration, runoff, and subsurface flow. In so doing, the water goes through different phases: liquid, solid, and gas. The hydrologic cycle also involves the exchange of heat energy, which leads to temperature changes. For instance, in the process of evaporation, water takes up energy from the surroundings and cools theenvironment. Conversely, in the process of condensation, water releases energy to its surroundings, warming the environment. The water cycle figures significantly in the maintenance of life and ecosystems on Earth. Even as water in each reservoir plays an important role, the water cycle brings added significance to the presence of water on our planet.

By transferring water from one reservoir to another, the water cycle purifies water, replenishes the land with freshwater, and transports minerals to different parts of the globe. It is also involved in reshaping the geological features of the Earth, through such processes as erosion and sedimentation. In addition, as the water cycle involves heat exchange, it exerts an influence on climate as well. EVAPORATION-The transformation of water from liquid to gas phases as it moves from the ground or bodies of water into the overlying atmosphere. [4] The source of energy for evaporation is primarily solar

radiation. Evaporation often implicitly includes transpiration from plants, though together they are specifically referred to as evapotranspiration. Total annual evapotranspiration amounts to approximately 505, 000 km3 (121, 000 cu mi) of water, 434, 000 km3 (104, 000 cu mi) of which evaporates from the oceans CONDENSATION-The transformation of water vapor to liquid water droplets in the air, creating clouds and fog.

7] TRANSPIRATION-The release of water vapor from plants and soil into the air. Water vapor is a gas that cannot be seen. Human activities that alter the water cycle include: * agriculture * industry * alteration of the chemical composition of the atmosphere * construction of dams *deforestationand afforestation * removal of groundwater from wells * water abstraction from rivers * urbanization