

Environmental systems



Environmental systems have significance because they convey the knowledge of physical, chemical, hydrologic, and biochemical characteristics. Also, they are instrumental in developing and implementing environmental policies. The different types of environmental systems are the hydrosphere, geosphere, atmosphere, and biosphere. Additionally, there is the anthrosphere, which is the part of the environment that is made up by humans for use in human activities. The overall goal should be to minimize the impact of pollutants and/or toxic substances between the anthrosphere and all the other spheres. This is where human technology comes in; it is required to make sure that the anthrosphere is not polluting any of the other spheres. The hydrosphere contains the Earth's water and it is of vital importance to all parts of the environment. Water is essential part of all living systems and is the medium in which life has evolved and still exists. The earth, or geosphere, contains 97% water, while the atmosphere contains 7% of water. As water vapors in clouds, some water is contained in a solid state such as ice or snow. Surface water is found in lakes, streams, and reservoirs, while ground water is located in underground aquifers. Our water supply becomes part of the hydrological cycle. In the hydrological cycle, heat from the sun causes water to evaporate from oceans, river, lakes, and puddles (from a liquid state to a gas state) and rises by air currents into the atmosphere. When air currents reach cooler layers of the atmosphere, the water vapor condenses around and clings onto air particles, thus condensation takes place. When enough water vapor attaches to tiny pieces of dust, pollen, or pollutants, it forms a cloud. This is part of the atmosphere or air. The cloud reaches a certain capacity of holding water, and then it forms droplets, which are known as precipitation. This process repeats itself,

leaving some of the water to go into the land (biosphere) and then join the earth's ground water supply. This cycle describes the storage and movement of water between the anthrosphere, hydrosphere, geosphere, atmosphere, and biosphere. 2. No, we are not raising a nation of wimps. There is a scientific explanation for why the water temperatures are on Memorial Day weekend are significantly colder than air temperatures. The reason for this is that there are more jellyfish in the water at that time of year. Jellyfish like cool springs and warm summers. If a warm summer is predicted, then the jellyfish numbers around April are expected to increase significantly. This means that around Memorial Day weekend there will be large numbers of jellyfish in the water. 3. One positive to online learning is that a lot of trees can be saved, since assignments and handouts do not use up any paper. Additionally, gas can be saved since you won't be needed to travel everyday. This will have a significant effect on the environment since carbon emissions will be reduced. The number of books can also be reduced because books are uploaded as e-books and can be updated whenever new information comes along. On the other hand, conventional learning, though it may prove expensive, allows a group of students to study together; thus saving on power costs in the situation of every student staying at home and using power. 4. Best management practices are efficient, convenient, and structural or non-structural methods that stop or lessen the movement of sediment, nutrients, pesticides, and other impurities from the land to the surface or ground water. Also, they guard water quality from the undesirable effects of silvicultural activities. Silvicultural means caring for the trees and forests. The chief attribute of best management practices is attaining equilibrium between water quality protection and the production of wood

crops within natural and economic boundaries. The biggest limitation to implementing best management practices can be a lack of knowledge about the local environment and the affects that these practices will have on the environment. An example of best management practices is directing rooftop rain overflow to areas such as yards, rain gardens, or vegetated areas, and avoiding alleys, parking areas, and street gutters.