



Uses and Sources Of Water

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Objectives



1. The importance of Water

2. The main sources of Water



Introduction

- Water covers 71% of the earth's surface and fills our lakes, seas and rivers. Water is a ubiquitous liquid that is essential in order to sustain life. In this way, water is necessary for the proper functioning of not only the internal systems of living things but also their habitats. Water is also used as a source of green energy to facilitate the needs of the modern world.



The importance of Water

Importance of water in land plants



Some ways in which plants use water are:

- in the recycling of Air
- in the production of food
- in the transportations of nutrients

Recycling of Air



- During the process of photosynthesis plants removes the hydrogen from water molecules and discards oxygen into the air so that it can be used by other organisms for life.

Production of food



- Water is one of the main raw material of the process of photosynthesis.

The hydrogen removed from water molecules is used in the production of glucose (a simple sugar). This glucose in turn is used by plants and other living organisms as a source of food.

Dissolve and Transport Nutrients



- Water is a universal solvent. This means it will dissolve majority of known solutes. In order for plants to ensure proper growth and development they need to acquire certain nutrients. Substances like carbohydrates, organic and amino acids and minerals are dissolved in water, which is absorbed and used by plants to carry out their functions.

Dissolve and Transport Nutrients



- Water also aids in the transport of nutrients around the plant. Through the process of transpiration water with dissolved nutrients is evaporated from the leaves through the stomata causing a continual pull or travelling of water from root to stem to leaves.

Importance of Water to animals



- Animals need water to survive in many different ways. Water is required in the animal body to keep us hydrated and keep our cells and systems running properly. Animals, like humans, use water for hygiene purpose like bathing, washing, cleaning. Water is also needed for humans to get proper nutrition as it is utilized in agriculture and cooking,

Importance of Water to animals



- Humans also use water to generate hydroelectricity. This electricity is renewable and reduces pollution by reduces the need for the burning of fossil fuels and cracking and use petroleum. Recreational activities like swimming, surfing and sailing all require water in order to occur.

Importance of water for Marine life



Solvent properties of water

- Dissolved gases in water needed for life
- Nutrients in water
- Habitat

Importance of water - Marine life



- Marine plants and animals have water bodies as their habitat. These animals and plants are specially adapted to living and surviving in water. The solvent properties of water allows it to dissolve nutrients and gases for animals and plants to survive.
- Scientists surmise that 50-80 percent of the oxygen in world comes from the ocean. Marine plants, plankton, algae and bacteria are major producers of oxygen for our world.



Main sources of Water

Main sources of Water



- Though 71% of the earth is water, 96.5% is found in oceans and only 3.5% is drinkable fresh water.
- Rain is the main distributor of water, as it fills into oceans, rivers, lakes, ponds et.c. If there was no rain drought would ensue which would result in the death of living organisms

Oceans and Seas



- Oceans are vast water bodies which cover most of the earth. Sea and Ocean water are salty water. The ocean serves as the largest habitat for a variety of water animals and plants. There are five oceans and 57 seas on our planet.

Fresh Water



- The main sources of fresh water are rivers, lakes, ponds, glaciers, excavated dams and groundwater.
- A river is a large quantity of fast flowing water. Rivers are supplemented by smaller bodies of water called streams.
- Lakes are calm, still water bodies. Lakes are surrounded by lands and are natural or artificial,.

Fresh Water



- Ponds are small area filled with water and can also be natural or artificial,
- Glaciers are slow moving river ice made from snow on mountains or near the poles
- Excavated dams and reservoirs are structures built across rivers to retain and store water.
- Groundwater is found underground in aquifers, soil and any other water found beneath the earth . Wells are usually used to bring these water to the surface.



References

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