Water Quality/Stewardship

Review the relationship between Temperature and Dissolved Oxygen (DO)

Review the relationship between Algae Growth and DO

Review Point Source and NonPoint Source

Nitrates (Fertilizers) in the water → Most Immediate effect: algal blooms, then lower DO, and then dead living things.

Chlorine kills bacteria and other microorganisms in the water to help make water potable (drinkable) (#7 on Water Treatment Diagram linked on my website)

Floculation = a step in the water treatment process in which contaminants stick together to form clumps or "flocs" (#4 on Water Treatment Diagram)

Conserve = save so there's more available for later. Opposite: use all at once, be wasteful of it (let water run when you're not using it, for example)

Remember that you have to go one step further with many test questions. For example, let's say a question tells you that a type of worm hates high DO, and that there's a place with high DO. If the question is "what can be concluded from this information", the answer is not "these worms don't live here", but "lots of diversity of life is found here" (because high DO is good for lots of other living things, like fish and clams and plants, etc.)

Bioindicators - the more the merrier!

High DO = good (but not too high)

First step of water treatment is....actually getting the water that needs to be treated (can't treat what you don't have!)

Satellites provide the clearest images of the surface of the water in the oceans and on land of all technology that we use to monitor the hydrosphere as a whole.

Freshwater

River Basin Diagram and Parts vocabulary

The further down you dig into the ground, the less space there is for air and water (worms make many of these spaces, and they live near the surface)

Water table = top of water underground. Floods happen when water table rises above ground (when the ground is "saturated")

Living things need water that has water quality tests within a certain range. If it's too high or to low in even one test, they will start getting sick, not reproduce as well, or die.

When algae increases quickly, lots of algae dies at once and is decomposed – producing more heat than normal in the water.

Phosphates comes mostly from farms, specifically animal waste.

Well Diagram – Aquifers are found between non-porous rock layers. Wells must be drilled into aquifers. Water cannot move from one aquifer to another in a different layer because of non-porous rock between them.

Pollutants enter groundwater when there is space for water and pollutants underground. Water only flows over the surface when there is no room in the ground for the water.