Chapter 11, Section 1: Water Resources

DAY ONE

Water Resources

- Water is _____ to life on Earth. Humans can live for more than month without food, but we can live for only a few days without water.
- Two kinds of water found on Earth:
  - _____, the water that people can drink, contains little salt.
  - _____, the water in oceans, contains a higher concentration of dissolved salts.

The Water Cycle

- Water is a _____ because it is circulated in the water cycle.
- In the water cycle, water molecules travel between the Earth's _____.
  - Water _____ at the Earth's surface.
- Water vapor rises into the air.
  - As the vapor rises, it _____ to form clouds. Eventually the water in clouds falls back to the Earth.
- The oceans are important because _____ all of the Earth's water is in the ocean.

Global Water Distribution

- Although _____ percent of the Earth's surface is covered with water, nearly _____ percent of Earth's water is _____ in oceans and seas.
- Of the fresh water on Earth, about _____ percent is _____ in glaciers and polar icecaps.

Global Water Distribution

- The fresh water we use comes mainly from _____ and from a relatively narrow zone beneath the Earth's surface.

Surface Water

- _____ is all the bodies of fresh water, salt water, ice, and snow that are found above the ground.
- The distribution of surface water has played a vital role in the _____ of human societies.

River Systems

- As streams flow downhill, they combine with other streams and form _____.
- A _____ is a flowing network of rivers and streams draining a river basin.
- The _____ system is the largest river system in the world as it drains an area of land that is nearly the size of Europe.

Watersheds

- A _____ is the area of land that is drained by a water system.
- Rapidly melting snow as well as spring and summer rains can dramatically _____ the amount of water in a watershed.

Groundwater

- Most of the fresh water that is available for human use _____ be seen, as it exists underground.
- _____ is the water that is beneath the Earth's surface.

Groundwater

- As water travels beneath the Earth's surface, it eventually reaches a level where the rocks and soil are saturated with water.
    - This level is known as the _____.
- The water table has _____ that match the shape of the land above. Groundwater tends to flow slowly from the peaks to the valleys.

Aquifers

- An _____ is a body or rock or sediment that stores groundwater and allows the flow of groundwater.
- They are an _____ water source for many cities.
- The water table forms the _____ of an aquifer, and most aquifers consist of materials such as _____ that have a lot of spaces where water can accumulate.
- Groundwater can also _____ rock formations, filling vast caves with water, creating underground lakes.

Porosity

- _____ is the percentage of the total volume of a rock or sediment that consists of open spaces.
- The more porous a rock is, the more water it can hold.

Permeability

- _____ is the ability of a rock or sediment to let fluids pass through its open spaces or pores.
- Materials such as _____ that allow the flow of water are permeable. Materials such as clay or granite that stop the flow of water are impermeable.
- The most productive aquifers usually form in permeable materials, such as _____.

The Recharge Zone

- The _____ is an area in which water travels downward to become part of an aquifer.

- Recharge zones are environmentally sensitive areas because any pollution in the recharge zone can also enter the aquifer.

The Recharge Zone

- The size of an aquifer's recharge zone is affected by the _____ of the surface above the aquifer.
- Structures such as _____ can act as impermeable layers and reduce the amount of water entering an aquifer.

Wells

- A hole that is _____ to reach groundwater is called a well.

Wells

- The height of the water table changes seasonally, so wells are drilled to _____ below the water table.