Hydrogeology Study Guide

Define:

-eutrophication *the process by which the surrounding watershed enriches bodies of water with nutrients that stimulate excessive plant growth.*

-spring *Natural discharge of groundwater*

-Ogallala *is a major North American aquifer that is located under the Great Plains*

-zone of saturation *is the depth below Earth’s surface at which all pores in layers of soil are filled with water.*

-infiltration *when water seeps into the ground to become groundwater*

-watershed *the region of land where all the water drains into the same river or stream.*

-runoff *water that doesn’t; soak into the ground or evaporate but instead flow across the Earth’s surface.*

-erosion *when water travels down the same slope time after time, it wears a path the movement of soil and rock from one place to another is erosion.*

-wetland *any land area that is covered with water for part of the year, including bogs, marshes and swamps.*

-lake *bodies of water surrounded by land, form in different ways in surface depressions and in low areas.*

-groundwater *slowly moves through the ground, eventually returns to the surface through springs and seepage into wetlands, and streams and then flows back into the ocean.*

-permeability *the tendency of material to let water pass through it*

-rejuvenation *the process by which a stream resumes downcutting toward its base level, it become new again.*

1. List several examples of a wetland. *Marshes, bogs and swamps*

2. What is an example of a permeable and impermeable material? *Impermeable would be clay, permeable would be chalk, paper towel*

3. List several threats to our water supply. *Chemicals, radon and salt.*

4. Compare and contrast a lake to a stream. *A lake is often regarded as a still body of water surrounded by land.*

5. What is the major concern with the Ogallala aquifer? *Human impact and conservation*

6. What is the first step in implementing an emergency management plan? *Warning systems*

7. What determines the temperature of a spring? *Annual temperature of the region*

8. What materials would be best suited to line a pond and explain why. *Clay or impermeable materials.*

9. Why are wetlands valuable? *Filtering water by trapping pollutants, sediments and pathogenic bacteria.*

10. What is the driving force of a stream? *gravity*

\*Know the water cycle you may have to fill the steps into a blank water cycle diagram. (Example on the back)

\* Know what a delta and alluvial fan looks like

\*Written response: List two examples of threats to our water supply and describe in detail with specific examples one threat to our water supply.

1. evaporation

2. transpiration

3. condensation

4. precipitation

5. runoff

6.infiltration

7. subsurface groundwater runoff

8. groundwater