Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date of test: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_ Review hydrology vocabulary two times.

Answer the following completely.

1. What is the hydrosphere?
2. What are these properties of water? Describe and give a real life example of each property.

**Cohesion**

**Adhesion**

**Capillarity**

**Surface tension**

**Specific heat**

**Density**

**Universal solvent**

**Polarity**

1. Describe the following wetlands:

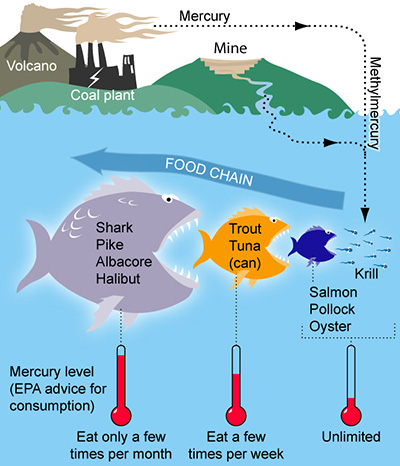
**Bog-**

**Sound-**

**Salt marsh-**

**Estuary**

1. Draw a river basin that consists of two watersheds and a delta describe how water moves through the river basin.
2. If you wanted to **decrease** your amount of mercury exposure which fish should you try not to eat very much of? Describe how mercury is passed in a food chain.



1. How do wetlands clean the water?
2. Compare the following types of water.

**Salt water**

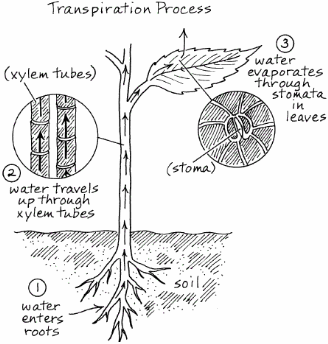
**Rain water**

**Ground water**

**Runoff**

1. In the drawing use a blue colored pencil to follow the path of water moving through the plant. Then label where the following processes are occurring.

***osmosis capillary evaporation***



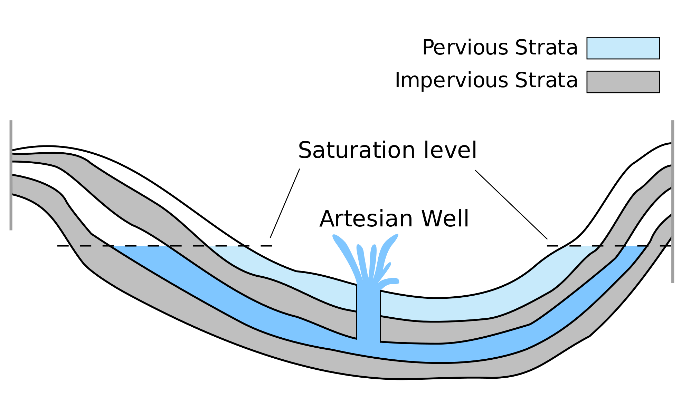
1. Compare permeable and impermeable, saturated and unsaturated.
2. Classify the following as either permeable or impermeable

**Sand**

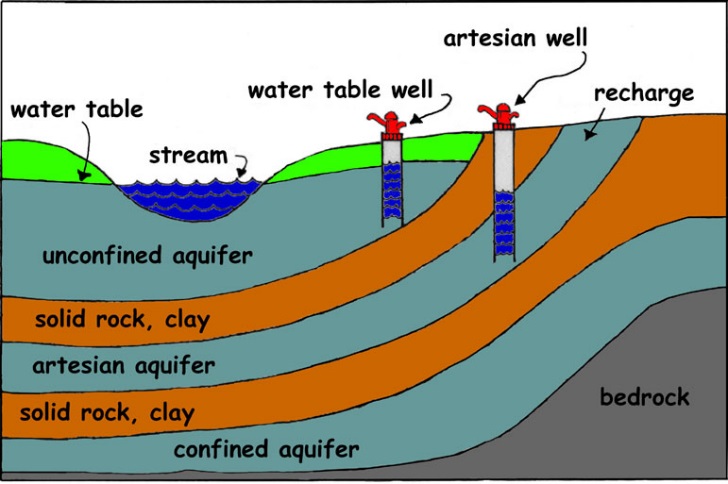
**Gravel**

**Granite**

**Hard clay**



1. Describe what causes an artesian well using the diagram above.



1. Using the diagram above, compare the three types of aquifers, unconfined, artesian and confined.
2. Describe the following water legislation:

Clean water act of 1972-

Marine act of 1972-

Safe drinking water act 1974-

Oil pollution act of 1990-

1. Nitrates and phosphates can pollute water. Identify the sources of these pollutants.

Nitrates-

Phosphates-

1. Compare point and non-point pollution in a t-chart

|  |  |
| --- | --- |
| Point | Non-Point |
|  |  |

1. Define the following terms:

**pH**

**acidic**

**basic**

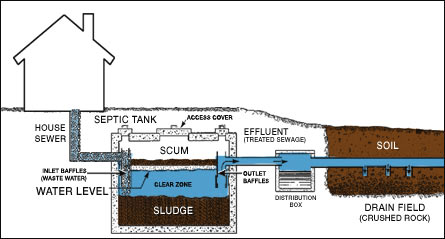
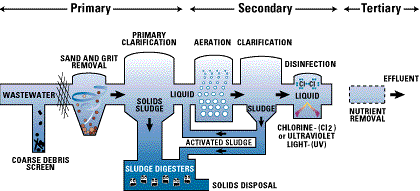
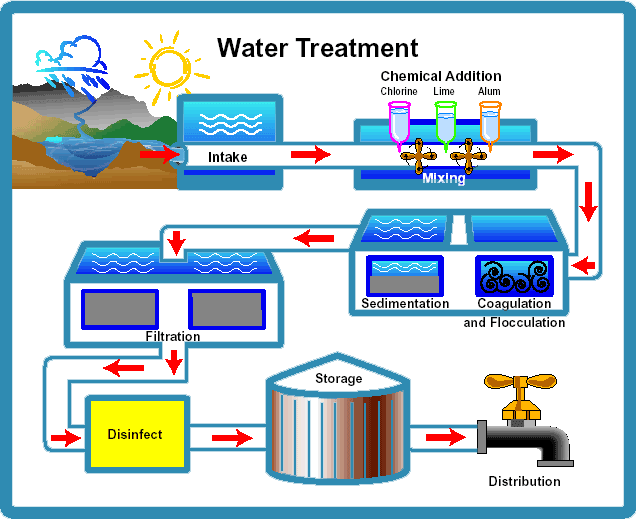
**neutral**

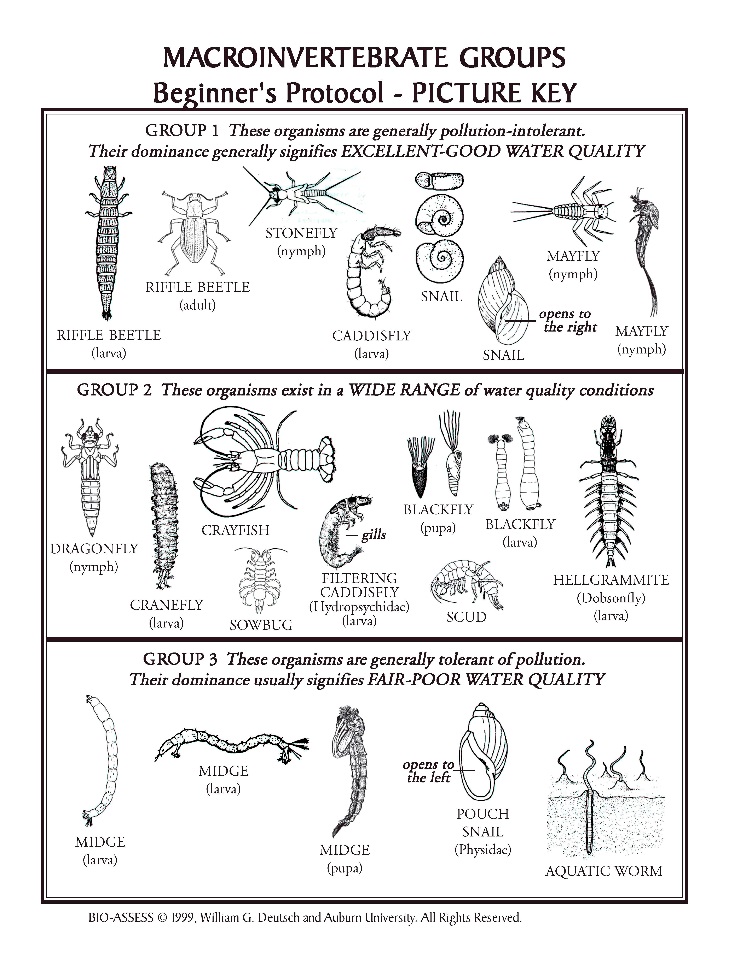
1. What pollutant is often found in road or parking lot runoff?
2. What are these tests of water quality? How do their values effect an ecosystem?

**Turbidity**

**Salinity**

**pH**

1. Illustrate the two types of lake turnover. Describe when they occur and the process that causes lakes to turnover. What benefit to the ecosystem is lake turnover?
2. As the temperature in a lake increases the dissolved oxygen(DO)\_\_\_\_\_\_\_\_\_\_\_\_\_. As the temperature in a lake decreases the dissolved oxygen(DO)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Due to this fact summer is a period of \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ levels.
3. Illustrate and compare a vegetative riparian buffer and a non-vegetative buffer.
4. What causes eutrophication and what is a result of eutrophication?
5. Describe the wastewater treatment process. Explain each of the three main steps.
6. What is sewage?
7. What is the difference between a septic system and waste water treatment facility?
8. Describe the treatment given to water from a lake or river before you can drink it?
9. What is the density of water? What is the formula we used to calculate density?
10. What density does an object need to float in water? \_\_\_\_\_\_\_\_\_\_\_\_\_
11. What density does it need to sink in water? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Why do ice cubes float?
12. Why does the concrete surrounding a pool feel hotter than the water in the pool?
13. Where is most of the water on Earth? How much is fresh water? How much is available for our use?
14. A hog farmer wants to start a new farm next to the reservoir in your town. What concerns would you have about the development of this new farm?
15. Look at the macroinvertebrates below? Which species indicate good water quality?



1. You see **Trout** in a stream. What does this bioindicator tell you about this stream?
2. What effect do wind and waves have on water quality?

