



2007 Science Olympiad Awesome Aquifers Station #2

Name:	Score:
School Name:	Team Name:

1. In *Figure 1*, what is the proper name for area A?
 - A. saturated zone
 - B. unsaturated zone
 - C. free fall zone
 - D. polyunsaturated zone

2. What would you expect to find in the voids (spaces between the soil particles) throughout most of area B in *Figure 1*?
 - A. worms
 - B. roots and other living plant materials
 - C. air and a little water
 - D. water

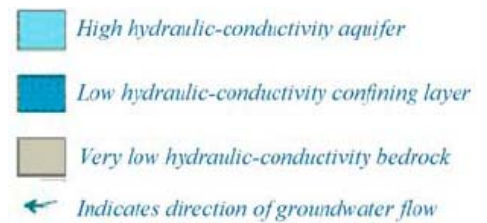
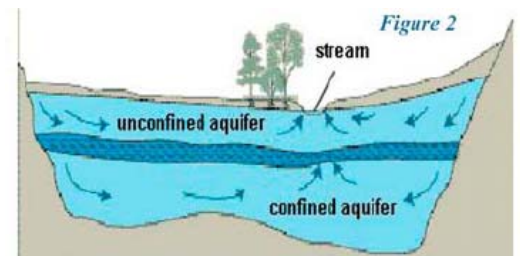
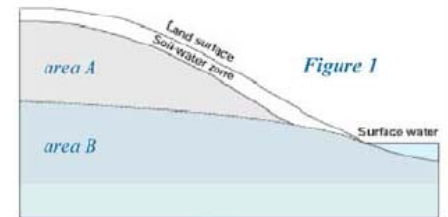
3. The zone around a well in an unconfined aquifer that becomes unsaturated when pumped is called:
 - A. infiltration zone
 - B. capillary fringe
 - C. aeration zone
 - D. none of the above

4. The openings between geological material found underground are called
 - A. pore spaces
 - B. Karsts layers
 - C. crevasses
 - D. aquifers

5. Which of the following would be the most likely type of material in the confining layer in *Figure 2*?
 - A. sandstone
 - B. gravel
 - C. granite
 - D. topsoil

6. What is the relationship between the stream and the unconfined aquifer in *Figure 2*?
 - A. water is moving from the stream into the aquifer
 - B. water is moving from the aquifer into the stream
 - C. there is no relationship between the stream and the unconfined aquifer
 - D. none of these answers are possible based on the information provided

7. In *Figure 2*, which body of water would probably have the highest rate of flow?
 - A. groundwater in the unconfined aquifer
 - B. surface water in the stream
 - C. confining layer
 - D. none of the above; they have equal flow rates



8. The loss of water from the surface water reservoirs or groundwater aquifers at a rate greater than that of recharge is:
- A. diffusion
 - B. depletion
 - C. discharge
 - D. drawdown
9. What is meant by an artesian well?
- A. a well with water that is under enough pressure to come to the surface by itself
 - B. a well that contains only 100% pure water
 - C. a well that is only found within 200 miles of the Canadian mountain of Artesius
 - D. a well that is constantly being recharged by water from other places
10. In the hydraulic cycle, what is the process by which water leaves plants and enters the atmosphere?
- A. precipitation
 - B. evaporation
 - C. transpiration
 - D. condensation
11. The hydrologic cycle is the name for the continual movement of water from one place to another. Where does most of the groundwater directly come from?
- A. precipitation
 - B. evaporation
 - C. transpiration
 - D. Antarctica