

1. What is the largest source of freshwater by weight? Which has more freshwater groundwater or lakes and rivers combined? p 379

What is Groundwater? p 380

2. What is groundwater?
3. Is groundwater a major economic resource?
4. What is the source of groundwater?

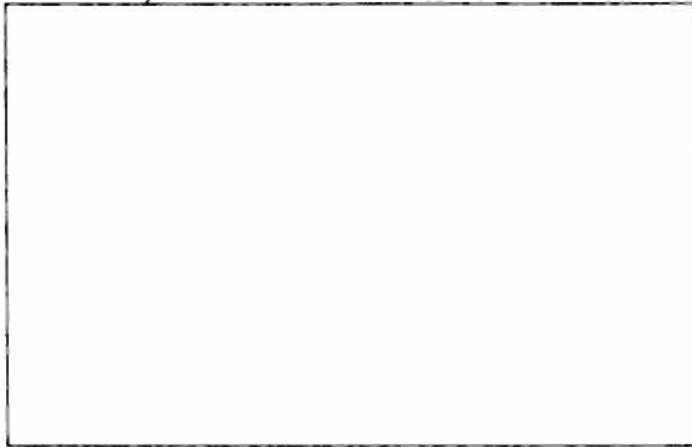
Porosity and Permeability p 380/1

5. What types of rock have high porosity?
6. How do crystalline rocks (without pores) such as granite and schist hold water?
7. What are examples of rocks that are porous and permeable?
8. What types of rock are impermeable?
9. Why does shale have high porosity but low permeability?

The Water Table p 381

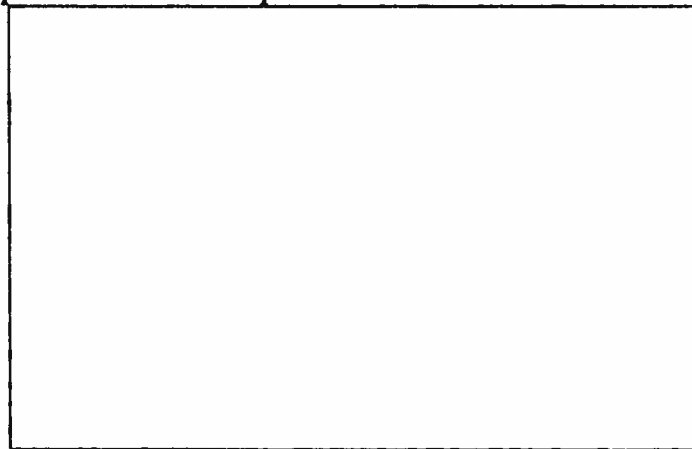
10. Why does most water percolation (to filter or ooze through) stop about 5 km below the Earth's surface?
11. What is the relationship between the saturated zone, the water table and the vadose (also known as zone of aeration) zone.

12. Draw fig 15.1 A in the space below, labeling the zone of saturation, water table and zone of aeration)



13. What is a perched water table?

14. Draw fig 15.2 p 382 (Perched water table) in the space below, labeling the water table, impermeable rock and permeable rock.



How Does Groundwater Move? p 382

15. What does groundwater move in response to? And in what direction does it tend to move?

16. What **two** factors can cause groundwater to move quickly or slowly?

17. How can the velocity of groundwater be measured?

What are Aquifers, Wells, Springs and Streams? p 382/384

18. What is an aquifer?

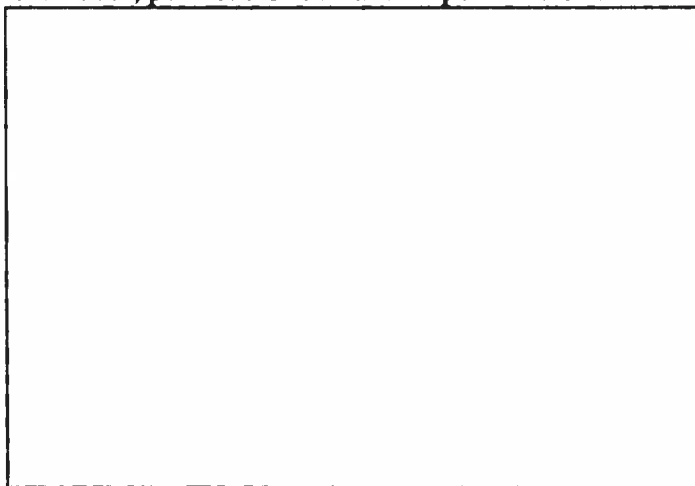
19. What types of rocks make good aquifers?

20. Why are shale and crystalline rocks sometimes called aquitards?

21. Compare and contrast unconfined aquifers and confined aquifers.

Unconfined aquifer	Confined aquifer

22. Draw fig 15.6 p 385 in the space below, labeling unconfined aquifer, confined aquifer, water table, permeable rock and impermeable rock.

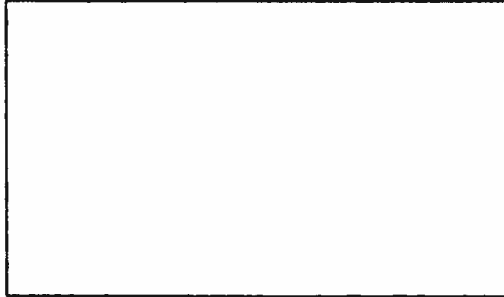


Wells p 384-386

23. What is a well?

24. What is the cone of depression?

25. Draw and label a cone of depression Fig 15.8 p 386 in the space below.



26. What is an artesian well and what is another name for them?

27. You see a new brand of bottled water on the shelf at Save-On. It costs more than your regular brand of Evian, but it advertises that it is "artesian water". Sounds pretty fancy, but is it? Would you pay extra for "artesian water"? (answer not in your textbook but in your brain)