Groundwater and Aquifers

Unit 3: Gradational Processes

Name: Period:

<u>Groundwater</u> is fresh water (from rain or melting ice and snow) that soaks into the soil and is stored in the tiny spaces between rocks and particles of soil. Groundwater can stay underground for hundreds of thousands of years, or it can come to the surface and help fill rivers, streams, lakes, ponds, and wetlands. Groundwater can also come to the surface as a spring or be pumped from a well. Both of these are common ways we get groundwater to drink and ways we get water for municipal, domestic, and agriculture purposes.

Groundwater is dependent on:

- (1) Permeability and
- (2) Porosity of rock layers.

no	unconnected	connected
pore spaces	pore spaces	pore spaces
*CZ		
VIX.		
1 A X		
non-porous	porous	porous
non-permeable	non-permeable	permeable

1. Permeability:

2. Porosity:

Describe the permeability and porosity of each rock type:

Shale:

Sandstone:

Limestone:

Importance of groundwater:

- Areas with no mountain ranges rely on groundwater for their water source if rainfall is inadequate.
- In the prairies groundwater is used extensively for _____

Can you think of other reasons?

Groundwater zones:

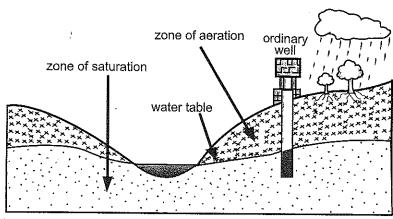


Figure 15.1 Fluctuations in water table

Aquifers:

- Rock layer that can store and yield water.
- In dry areas aquifers provide _____ by drilling a well.

Artesian Well:

Ordinary Well:

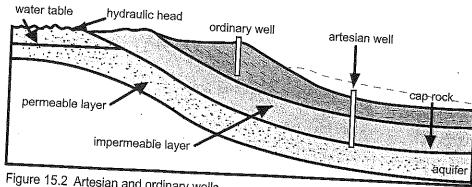


Figure 15.2 Artesian and ordinary wells

Landforms created by groundwater

Travertine Terraces	
Caves/Caverns	·
Sinkholes	
Read pages 145-149 and define the follow	ng terms
Permeability	
Porosity	
Zone of saturation	
Zone of aeration	
Water table	
ry one route to be desired to the second sec	
Ordinary well	
Orainary well	

Artesian well

Aquifer

Cave or cavern

Travertine terraces

Sinkhole