Distribution and Movement of Water Underground

* much of the water in soil seeps downward until it reaches the zone of saturation
* the zone of saturation is the area where water fills all of the open spaces in sediment and rock
	+ groundwater is the water within this zone
	+ the water table is the upper level of the saturation zone of groundwater
* Movement
	+ groundwater moves by twisting and turning through interconnected small openings
	+ the groundwater moves more slowly when the pore spaces are smaller
	+ Aquifers are permeable rock layers or sediments that transmit groundwater freely

- Springs

* a spring forms whenever the water table intersects the ground surface
* hot springs
	+ water is 6-9 degrees celsius warmer than the mean air temp of the lacality
	+ water is heated by coojing of igneous rock
* geysers
	+ intermittent hot springs
	+ water turns to steam and erupts

- Wells

* a well is a hole bored into the zone of saturation
	+ an artesian well is any formation in which groundwater rises on its own under pressure
	+ pumping can cause a drawdown (lowering) of the water table
	+ pumping can form a cone of depression in the water table
* Environmental problems
	+ overuse and contamination threatens groundwater supplies in some areas

- Caverns

* a cavern is a naturally formed underground chamber
* erosion forms most caverns at or below the water table in the zone of saturation
* travertine is a form of limestone that is deposited by hot springs or as a cave deposit
* characteristics of features found within caverns
	+ formed in the zone of aeration
	+ composed of dripstone
	+ formed from calcite deposited as dripping water evaporates
	+ common features include stalactites and stalagmites
* Karst Topography
	+ formed by dissolving rock at, or near, Earth's surface
	+ common features
		- sinkholes- surface depressions
		- caves and caverns
	+ are lacks good surface drainage