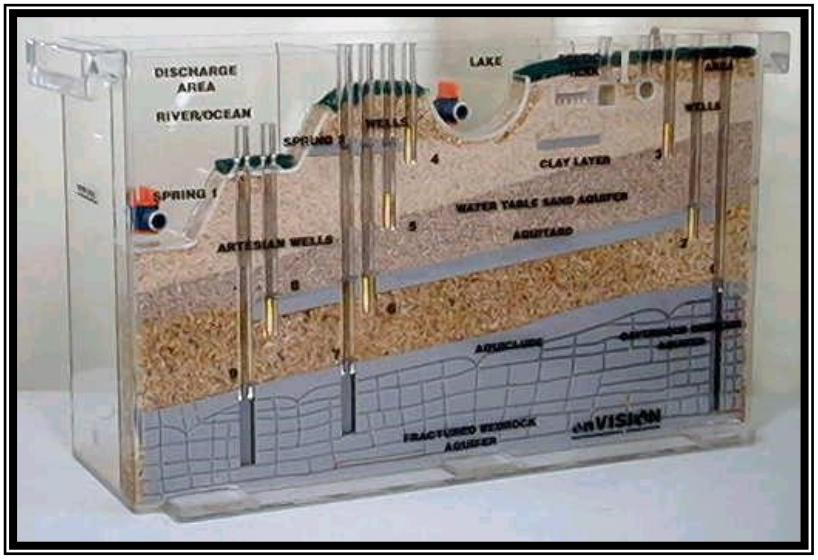
7th an 8th Grade Lessons…

During 7th an 8th grade, students will work with order and organization. Using scientific inquiry, they will discover patterns, trends, structure and relationships in simple principals related to the properties or interactions within and between systems.

- **Groundwater: 'The Water Beneath Our Feet'**

  Using the *enVISION* 3100 Groundwater Simulator, students will explore the movement of water in the soil where the flow is dependent on the porosity and permeability of each soil and rock formation. Lesson includes a discussion of ground water pollution and prevention. 7th Grade Content; ESS The hydrologic cycle illustrates the changing states of water through the lithosphere, biosphere, hydrosphere and atmosphere. 8th grade Content; ESS Factors that affect the patterns and features associated with steams and floodplains (e.g. discharge rates and pollution deposition as it pertains to underground contamination...more specifically in this region: acid mine drainage.



Envision 3100 Groundwater Simulator

- **Diversity Matters: 'Maintaining Environmental Stability in a Changing World'**

  As a naturally evolving entity, the Earth and its biomes are constantly making adjustments to meet these changes. However, some man-made changes do not allow for natural adjustment and threaten individual biomes. (e.g. the introduction of invasive species; plant and animal, nutrient fertilizer/pesticide management for water quality and soil health, habitat destruction vs establishment and maintenance) This activity will address a few of these changes and what practices we can adopt to maintain native plant and animal diversity and stability in a changing world. 7th Grade Content; In any particular biome, the number, growth and survival of organisms and populations depends on the biotic and abiotic factors. 8th Grade Content; Diversity of species occurs through gradual processes over many generations. Changes in environmental conditions can affect the survival and reproduction success of an organism.

*** Please note that most of these activities can include a field exploration.