

## ***Systems - Significant Knowledge***

- A system is usually connected to other systems, both internally and externally. Thus a system may be thought of as containing subsystems and as being a subsystem of a larger system.
  - ★ Examples would include human body, ecosystems, human made habitats such as a shopping mall, school and regional transportation systems, recycling, economic and governmental systems.
  
  - ★ Something may not work as well (or at all) if a part of it is missing, broken, worn out, mismatched or misconnected.
  
- A system is a collection of things and processes (and often people) that interact to perform some function. To study a system, one must define its boundaries (where it operates/functions)
  
- A change in one system may disrupt all the other interrelated systems.
  - ★ The solution to one problem may create other problems.
  
  - ★ Some parts/subsystems are more critical to proper function of the larger system than others. (bicycle example... handlebar grips vs wheel)
  
- Systems do not run by themselves; they are fueled by some form of energy such as kinetic movement, heat, electricity, burning of fossil fuels, human action, etc