

Kentucky Class Notes

Earn an A+ with Class Notes
<http://KyClassNotes.com>
859.252.NOTE

BIO 150 Beattie
Fall 2010
Test 1

Friday, August 27, 2010

- Biology involves learning about life.
 - There are many properties that define what life is. It is important to be aware of them in order for something to be alive or have life, it must possess ALL of the following characteristics:
 - It must be highly ordered such as having a complex level of chemistry.
 - They must have traits that were inherited such as ability for camouflage.
 - Response to Environment such as the Venus fly trap's response when it obtains nourishments.
 - Regulation of the blood flow through capillaries and vessels for the body's temperature.
 - Energy usage to obtain food such as birds working for food during flight.
 - Growth and development
 - In this case growth means physical growth and development means complexity and evolution of the organism.
 - Viruses are not considered living organisms because they can only reproduce when they have a host. They are not active on their own and are harmless in Petri dishes.
 - They have few characteristics of life such as DNA and RNA, protein coat and have the ability to reproduce but they lack other things such as regulation and are not highly ordered.
 - Hierarchy of biological order is:
 - Biosphere
 - Ecosystems
 - Communities
 - Populations
 - Organisms

Kentucky Class Notes

Earn an A+ with Class Notes
<http://KyClassNotes.com>
859.252.NOTE

BIO 150 Beattie
Fall 2010
Test 1

- Organ Systems
- Organs
- Tissue
- Cellular
- Molecular
- Biology 150 focuses on the cellular and molecular levels, the others explained in Biology 152.
- How are living organisms classified?
 - Classification:
 - Cell Type:
 - Prokaryotes: NO nucleus (they lack the genetic makeup), and have a very simplistic make up with no organelles.
 - Eukaryotes: HAVE nucleus, organelles, and are larger.
 - The main difference between prokaryotes and eukaryotes is the presence of a nucleus.
 - Differences in the DNA of organisms:
 - Single-celled or multi-celled
 - Energy Source and Carbon Source
 - For the carbon source, some organisms use organic carbon (sugar) and others use inorganic carbon (CO₂).
Autotrophs use inorganic carbon, and **heterotrophs** use organic carbon.
 - For the energy source, organisms that use light as their energy source are called **Phototrophs**.
 - Organisms that use chemical energy are called **Chemotrophs**.
 - Examples:
 - Plants are photoautotroph because they use light through photosynthesis and inorganic carbon.