

Biology Competencies

- 1. Thinking like a Scientist** --Students will demonstrate the use of both the scientific process and the tools available to scientists, particularly biologists.
- 2. Human Systems**--Students will demonstrate an understanding of the organs and systems of the human body and how they interact with one another.
- 3. Cells**--Students will demonstrate an understanding of the structure and function of cells, the essential roles that cells play in the life of an organism (single-celled or multi-cellular), and the cellular origins of viruses.
- 4. Genetics**--Students will demonstrate an understanding of genetics and its role in determining the traits of organisms.
- 5. Chemistry**--Students will demonstrate an understanding of the basic principles of chemistry and the ways in which atoms, elements, molecules, and compounds are involved in chemical changes.
- 6. Evolution**--Students will demonstrate an understanding of the concepts and principles of evolution.
- 7. Plant Life**--Students will demonstrate an understanding of the origins and anatomy of plants, and adaptations of plants to life on land.
- 8. Classification**--Students will demonstrate an understanding of taxonomy and explain how and why organisms are classified.
- 9. Ecology**--Students will demonstrate an understanding of the relationships and interactions that exist among organisms and their environments.
- 10. Vertebrates and Invertebrates** --Students will demonstrate an understanding of the structure, adaptations, ecology and phylogeny of both vertebrates and invertebrates.