BIOLOGY IN A BOX

http://eeb.bio.utk.edu/biologyinbox/default.htm

What is Biology in a Box?

A fun and challenging way for entire schools to enhance their life sciences curriculum at all grade levels, and to encourage student interest in STEM (science, technology, engineering, and mathematics) disciplines. The program employs a hands-on, inquiry-based approach to teach the wonders of the living world, as well as introducing the scientific methods and math skills we use to understand that world

Each thematic unit has exercises that are designed to enrich science curriculum content for students from the elementary grades through high school, with exercises often having separate versions for both lower and higher grades, though most exercises are easily tailored to fit any grade level. The goal of each unit is to pique the interest of even low-ability students on a particular biological theme. The more advanced activities in a thematic unit, furthermore, have been designed as curriculum enrichment for very bright students who need a challenge.

The program is especially valuable to teachers in schools that have limited resources for extra materials. The materials needed for completion of the exercises, presented in each thematic trunk, are totally reusable and are generally not commercially available. It is also an excellent program for schools with a limited science faculty, since no prior knowledge of the subject matter is needed for a teacher to explore a box theme with his or her students.

The Vols Teach Instructional Materials Library Inventory Includes the Following Units:

Unit 1: Fossils	The fossil record, identification of fossils, fossil dating methods, change in organisms over time
Unit 2: Of Skulls & Teeth	Functional anatomy, the skeletal system, diet types, adaption
Unit 3: Fur, Feathers, Scales: Insulation	Insulating mechanisms of various organisms (mammals, birds, and reptiles), thermodynamics
Unit 4: Simple Measures	Physical properties of objects (mass, volume, density, etc), Newtonian physics
Unit 5: It's in Your Genes	DNA, Mendelian genetics, mechanisms of inheritance, probability, interaction between genes
Unit 6: Animal Kingdom	Biodiversity, taxonomy (classification) of organisms, relationships between groups of organisms
Unit 7: Backyard Naturalist	A closer look at organisms of Tennessee, learning to identify animal signs such as scats, tracts, bird songs, etc.
Unit 8: Everything Varies	Variability in the natural world, basic statistics (such as the mean, median, mode, standard deviation, and variance), comparing populations
Unit 9: Forestry	The trees of Tennessee, and their wildlife and economic importance
Unit 10: Behavior	Animal Behavior, sensory capabilities, the scientific method, mimicry and protective coloration, animal communication, analyzing behavior, learning and memory, environmental stimuli and behavioral responses