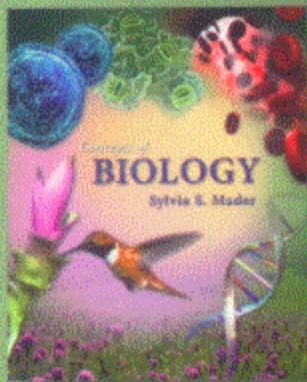




The beautiful imagery of this cover has been designed to visually portray that biological concepts relate to each other which is the foundation of

Sylvia S. Mader's
Concepts of **BIOLOGY**

The *Concepts of Biology* cover was inspired by the organization of the book around five major biological concepts: All organisms are composed of cells, contain genes, evolve, are homeostatic, and live in ecosystems.

The color-enhanced image of white blood cells was chosen to represent the cell theory which states that organisms are composed of cells. The gene theory tells us that coded information within the DNA double helix dictates the final form of cells and organisms. The interplay between genetic differences and the environment accounts for the coevolution of the hummingbird and the flower. Evolution is the unifying concept of biology that applies to all aspects of biology and explains the unity and diversity of life. Despite diversity, all organisms regulate their internal environment so that homeostasis is maintained. Plants are homeostatic as well demonstrated by the stomata of a leaf which close when the plant is water-stressed. Homeostasis in animals, such as a hummingbird, involves the function of red blood cells. Finally, plants, represented by the purple *Liatris* in a meadow, dominate most ecosystems. Organisms live in ecosystems where they interact with each other and the physical environment.



The ARIS website that accompanies this textbook includes a multitude of resources and helpful study tools. Instructors will find a complete electronic homework and course management system where they can create, edit, and share course materials and assignments with colleagues or students in just a few clicks of the mouse. ARIS also offers automatic grading and reporting of homework, quizzing, and testing. Students will appreciate the animations, practice quizzes, case studies, downloadable content, helpful Internet links, and more—a whole semester's worth of study help!

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