

Literature

Biology is the study of living things. It encompasses the cellular basis of living things, the energy metabolism that underlies the activities of life, and the genetic basis for inheritance in organisms. Biology also includes the study of evolutionary relationships among organisms and the diversity of life on Earth. It considers the biology of microorganisms, plants, and animals, for example, and it brings together the structural and functional relationships that underlie their day-to-day activities. Biology draws on the sciences of chemistry and physics for its foundations and applies the laws of these disciplines to living things.

Many subdisciplines and special areas of biology exist, which can be conveniently divided into practical and theoretical categories. Types of practical biology include plant breeding, wildlife management, medical science, and crop production. Theoretical biology encompasses such disciplines as physiology (the study of the function of living things), biochemistry (the study of the chemistry of organisms), taxonomy (classification), ecology (the study of populations and their interactions with each other and their environments), and microbiology (the study of microscopic organisms).

Living things have a level of complexity and organization not found in lifeless objects. At its most fundamental level, a living thing is composed of one or more cells. These units, generally too small to be seen with the naked eye, are organized into tissues. A tissue is a series of cells that accomplish a shared function. Tissues, in turn, form organs, such as the stomach and kidney. A number of organs working together compose an organ system. An organism is a complex series of various organ systems.

Living things exhibit a rapid turnover of chemical materials, which is referred to as metabolism. Metabolism involves exchanges of chemical matter with the external environment and extensive transformations of organic matter within the cells of a living organism. Metabolism generally involves the release or use of chemical energy. Nonliving things do not display metabolism.