

Glencoe Life Science ©2005
correlated to
Alabama Course of Study: Science
Grade 7

Standards and Objectives	Page References
Students will:	
1. Describe characteristics common to living things, including growth and development, reproduction, cellular organization, use of energy, exchange of gases, and response to the environment.	14, 15, 16, 17, 18, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 81, 82, 83, 84, 85
<ul style="list-style-type: none"> • Identifying homeostasis as the process by which an organism responds to its internal or external environment 	15, 18, 520, 595, 601, 611
<ul style="list-style-type: none"> • Predicting how an organism's behavior impacts the environment 	462-440, 696-700
<ul style="list-style-type: none"> • Identifying unicellular organisms, including bacteria and protists, by their methods of locomotion, reproduction, ingestion, excretion, and effects on other organisms 	186, 187, 188, 189, 190, 191, 193-199, 210-219, 228-229
<ul style="list-style-type: none"> • Identifying the structure of a virus 	52-55
2. Identify functions of organelles found in eukaryotic cells, including the nucleus, cell membrane, cell wall, mitochondria, chloroplasts, and vacuoles Example: mitochondria releasing energy for use in cellular respiration.	38, 39, 40, 41, 42, 43, 44, 45
<ul style="list-style-type: none"> • Identifying components of the cell theory 	51
<ul style="list-style-type: none"> • Identifying cells as prokaryotic or eukaryotic 	39, 97, 187, 210
<ul style="list-style-type: none"> • Listing the sequence of the mitotic cell cycle 	98, 99, 100, 101, 103
3. Relate major tissues and organs of the skeletal, circulatory, reproductive, muscular, respiratory, nervous, and digestive systems to their functions	45, 104, 105, 484-489, 490-495, 523-529, 540-545, 568-576, 594-603, 627-631
<ul style="list-style-type: none"> • Arrange in order the organizational levels of the human body from the cell through organ systems. 	66, 67, 68, 484, 485, 486, 487, 505, 512, 523, 540, 550, 556, 561, 563, 568, 577, 594, 604, 615, 622, 623, 624, 627, 633, 634, 635, 652, 653
4. Describe organisms in the six-kingdom classification system by their characteristics.	22-27, 848-851
<ul style="list-style-type: none"> • Recognizing genus and species as components of a scientific name 	24, 245
<ul style="list-style-type: none"> • Identifying the contributions of Aristotle and Linnaeus to the early history of taxonomy 	22-23
5. Identify major differences between plants and animals, including internal structures, external structures, methods of locomotion, methods of reproduction, and stages of development.	38, 39, 40, 41, 42, 43, 46, 74, 75, 76, 77, 78, 81, 82, 83, 84, 85, 86, 87, 89, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 270-291, 307, 309, 311, 330, 481

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<ul style="list-style-type: none"> Describing the processes of photosynthesis and cellular respiration 	81-85, 302-309
<p>6. Describe evidence of species variation due to climate, changing landforms, interspecies interaction, and genetic mutation. Examples: fossil record, rapid bacterial mutations due to environmental pressures</p>	114-115, 116-117, 157, 159, 160, 163, 167, 241, 242, 740, 741, 743
<p>7. Differentiate between biotic and abiotic components of an environment. Examples: biotic—plants, animals; abiotic—climate, water, soil</p>	411, 712, 713, 714, 715, 716, 717, 718, 719
<ul style="list-style-type: none"> Classifying organisms as autotrophs and heterotrophs 	82, 83, 188, 190, 191, 696, 697, 710, 713, 726, 727,
<ul style="list-style-type: none"> Arranging the sequence of energy flow in an ecosystem through food webs, food chains, and energy pyramids 	697, 698, 699, 700, 727, 728, 729
<p>8. Describe the function of chromosomes.</p>	98, 100, 104, 105, 106, 107, 109, 126, 127, 132, 169
<ul style="list-style-type: none"> Identifying genes as parts of chromosomes that carry genetic traits. 	126, 127, 128, 129, 132, 136, 137
<p>9. Identify the process of chromosome reduction in the production of sperm and egg cells during meiosis.</p>	104, 105, 106, 126
<p>10. Identify differences between deoxyribonucleic acid (DNA) and ribonucleic acid (RNA). Examples: DNA—double helix, contains thymine; RNA—single stranded, contains uracil</p>	71, 112, 113, 114
<ul style="list-style-type: none"> identifying Watson and Crick as the scientists who discovered the shape of the DNA molecule 	111
<p>11. Differentiating among Mendel's laws of genetics</p>	127, 128, 130, 132, 134, 135
<ul style="list-style-type: none"> Recognizing Down's syndrome and sickle cell anemia as inherited genetic disorders 	137, 555
<ul style="list-style-type: none"> Using a monohybrid Punnett square to predict the probability of traits passed from parents to offspring 	130-131