

Revised May 2010

Pacing Guide 2010-2011
Subject: Science
Grade Level: 7th

Grading Period: First through Fourth Quarters

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
				Mat'ls	District
<p>Chapter 1- Cell Structure and Function</p> <p>2 ½ weeks including the introduction 8/6-8/23</p>	<p>1.a Students know cells function similarly in all living organisms.</p> <p>1.b Students know the characteristics that distinguish plant cells from animal cells, including chloroplasts and cell walls.</p> <p>1.c Students know the nucleus is the repository for genetic information in plant and animal cells.</p> <p>1.d Students know that mitochondria liberate energy for the work that cells do and that chloroplasts capture sunlight energy for photosynthesis.</p> <p>2.e Students know DNA (deoxyribonucleic acid) is the genetic material of living organisms and is located in the chromosomes of each cell.</p> <p>7.a, 7.c, 7.d</p>	<p>Glencoe Focus on Life Science Textbook (pages 42-83)</p>	<p>Glencoe Science Notebook (pages 1-12)</p> <p>Glencoe Lab Manual Lab activity 1/lab activity 2 (pages 1-8)</p> <p>Glencoe Chapter Resources</p> <ul style="list-style-type: none"> • Chapter review • Reinforcement 	<p>Cell Model Project</p>	

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<p>Two weeks 8/24-9/8</p> <p>Chapter 2- From a cell to an organism</p>	<p>1.c students know the nucleus is the repository for genetic information in plant and animal cells.</p> <p>1.e Students know cells divide to increase their numbers through a process of mitosis, which results in two daughter cells with identical sets of chromosomes.</p> <p>1.f Students know that as multicellular organisms develop, their cells differentiate.</p> <p>5.a Students know plants and animals have levels of organization for structure and function, including cells, tissues, organs, organ systems, and the whole organism.</p> <p>7.a, 7.d, 7.e</p>	<p>Glencoe Focus on Life Science Textbook (pages 84-117)</p>	<p>Glencoe Science Notebook (pages 13-20)</p> <p>Glencoe Lab Generator How Cells Function</p> <p>Glencoe Chapter Resources</p> <ul style="list-style-type: none"> • Chapter review • Reinforcement 	<p>Unit 1 Test</p>	

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<p>Two ½ weeks 10/12-10/27</p> <p>Chapter 4- Genetics</p>	<p>2.b Students know sexual reproduction produces offspring that inherit half their genes from each parent.</p> <p>2.c Students know an inherited trait can be determined by one or more genes.</p> <p>2.d Students know plant and animal cells contain many thousands of different genes and typically have two copies of every gene. The two copies (or alleles) of the gene may or may not be identical, and one may be dominant in determining the phenotype while the other is recessive.</p> <p>7.a, 7.b, 7.c, 7.e</p>	<p>Glencoe Focus on Life Science Textbook (pages 171-201)</p>	<p>Glencoe Science Notebook (pages 35-44)</p> <p>Glencoe Lab Generator Patterns of Heredity Fingerprint Patterns</p> <p>Glencoe Lab Manual Lab activity 1/lab activity 2 (pages 19-22)</p>	<p>Chapter 4 Test</p> <p>Genetic Disorders project</p>	

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<p>Two weeks 10/28-11/12</p> <p>Chapter 5- The Process of Evolution</p>	<p>3.a Students know both genetic variation and environmental factors are causes of evolution and diversity of organisms.</p> <p>3.b Students know the reasoning used by Charles Darwin in reaching his conclusion that natural selection is the mechanism of evolution.</p> <p>3.e Students know that extinction of a species occurs when the environment changes and the adaptive characteristics of a species are insufficient for its survival.</p> <p>7.a, 7.b, 7.c</p>	<p>Glencoe Focus on Life Science Textbook (pages 204-239)</p>	<p>Glencoe Science Notebook (pages 45-52)</p> <p>Glencoe Lab Manual Lab activity 2 (pages 25-28)</p> <p>Glencoe Chapter Resources</p> <ul style="list-style-type: none"> • Chapter Review • Reinforcement 	<p>Chapter 5 Test</p> <p>Evolution Brochure Project</p>	

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<p>Two Weeks 11/15-11/30</p> <p>Chapter 6- Evidence of Change</p>	<p>3.a Students know both genetic variation and environmental factors are causes of evolution and diversity of organisms.</p> <p>3.c Students know how independent lines of evidence from geology, fossils, and comparative anatomy provide the bases for the theory of evolution.</p> <p>3.d Students know how to construct a simple branching diagram to classify living groups of organisms by shared derived characteristics and how to expand the diagram to include fossil organisms.</p> <p>4.c Students know that the rock cycle includes the formation of new sediment and rocks and that rocks are often found in layers, with the oldest generally on the bottom.</p> <p>4.e Students know fossils provide evidence of how life and environmental conditions have changed.</p> <p>4.f Students know how movements of Earth's continental and oceanic plates through time, with associated changes in climate and geographic connections, have affected the past and present distribution of organisms.</p>	<p>Glencoe Focus on Life Science Textbook (pages 240-275)</p>	<p>Glencoe Science Notebook (pages 53-66)</p> <p>Glencoe Lab Manual Lab activity 1/lab activity 2 (pages 29-36)</p> <p>Glencoe Lab Generator How can you model evolution?</p>	<p>Chapter 6 Test</p>	

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<p>Two ½ weeks</p> <p>01/6-1/24</p> <p>Chapter 8-The History of Life on Earth</p>	<p>4.b Students know the history of life on Earth has been disrupted by major catastrophic events, such as major volcanic eruptions or the impacts of asteroids.</p> <p>4.e Students know fossils provide evidence of how life and environmental conditions have changed.</p> <p>4.g Students know how to explain significant developments and extinctions of plant and animal life on the geologic time scale.</p> <p>7.a, 7.c, 7.d</p>	<p>Glencoe Focus on Life Science Textbook (pages 312-351)</p>	<p>Glencoe Science Notebook (pages 75-86)</p> <p>Glencoe Lab Manual Lab activity 1/lab activity 2 (pages 45-50)</p> <p>Glencoe Chapter Resources</p> <ul style="list-style-type: none"> • Chapter review • Reinforcement 	<p>Chapter 8 Test</p>	

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2 weeks 1/25-2/9 Chapter 9- The musculoskeletal System and Levers	5.a Students know plants and animals have levels of organization for structure and function, including cells, tissues, organs, organ systems, and the whole organism. 5.c Students know how bones and muscles work together to provide a structural framework for movement. 6. h Students know how to compare joints in the body (wrist, shoulder, thigh) with structures used in machines and simple devices (hinge, ball-and-socket, and sliding joints). 6.i Students know how levers confer mechanical advantage and how the application of this principle applies to the musculoskeletal system. 7.a, 7.c, 7.d	Glencoe Focus on Life Science Textbook (pages 354-387)	Glencoe Science Notebook (pages 87-94) Glencoe Lab Manual Lab activity 2 (pages 55-58) Glencoe Lab Generator Movable Joints Muscle Movement Changing Force Glencoe Chapter Resource <ul style="list-style-type: none"> • Chapter Review • Reinforcement 	Chapter 9 Test	

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<p>Three Weeks</p> <p>2/10-3/7</p> <p>Chapter 10- The Cardiopulmonary System and Pressure</p> <p>3/8</p> <p>3/9-3/11</p>	<p>5.b Students know organ systems function because of the contributions of individual organs, tissues, and cells. The failure of any part can affect the entire system.</p> <p>6.j Students know that contractions of the heart generate blood pressure and that heart valves prevent back flow of blood in the circulatory system.</p> <p>7.a, 7.c, 7.e</p> <p>BENCHMARK TEST</p> <p>BENCHMARK REINFORCEMENT/ENRICHMENT ACTIVITIES</p>	<p>Glencoe Focus on Life Science Textbook (pages 388-423)</p>	<p>Glencoe Science Notebook (pages 95-102)</p> <p>Glencoe Lab Manual Lab activity 2 (pages 63-66)</p> <p>Glencoe Lab Generator Effects of Exercise Heart Rate and Body Position Body Temperature</p>	<p>Chapter 10 Test</p>	<p>Quarter 3 Test</p>

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<p>2 ½ weeks</p> <p>5/3-5/20</p> <p>Chapter 13- The Human Reproductive System</p> <p>5/23</p> <p>5/24-5/25</p>	<p>5.d Students know how the reproductive organs of the human female and male generate eggs and sperm and how sexual activity may lead to fertilization and pregnancy.</p> <p>5.e Students know the function of the umbilicus and placenta during pregnancy.</p> <p>7.a, 7.b, 7.c, 7.d</p> <p>BENCHMARK TEST</p> <p>BENCHMARK REINFORCEMENT/ENRICHMENT ACTIVITIES</p>	<p>Glencoe Focus on Life Science Textbook (pages 500-531)</p>	<p>Glencoe Science Notebook (pages 125-132)</p> <p>Glencoe Lab Manual Lab activity 1/lab activity 2 (pages 81-84)</p> <p>Glencoe Lab Generator</p> <p>Glencoe Chapter Resource</p> <ul style="list-style-type: none"> • Chapter Review • Reinforcement 	<p>Chapter 13 Test/Project</p>	

Approximate Time for Teaching Standards	Standard	Core Instructional Materials	Strategic Supplementary Materials	Assessment	
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<p>Three weeks 3/21-4/8</p> <p>Chapter 11- The eye and light</p>	<p>5.g Students know how to relate the structures of the eye and ear to their functions.</p> <p>6.a Students know visible light is a small band within a very broad electromagnetic spectrum.</p> <p>6.b Students know that for an object to be seen, light emitted by or scattered from it must be detected by the eye.</p> <p>6.c Students know light travels in straight lines if the medium it travels through does not change.</p> <p>6.d Students know how simple lenses are used in a magnifying glass, the eye, a camera, a telescope, and a microscope.</p> <p>6.e Students know that white light is a mixture of many wavelengths (colors) and that retinal cells react differently to different wavelengths.</p> <p>6.f Students know light can be reflected, refracted, transmitted, and absorbed by matter.</p> <p>6.g Students know the angle of reflection of a light beam is equal to the angle of incidence.</p>	<p>Glencoe Focus on Life Science Textbook (pages 424-467)</p>	<p>Glencoe Science Notebook (pages 103-116)</p> <p>Glencoe Lab Manual Lab activity 1/lab activity 2 (pages 67-74)</p> <p>Glencoe Chapter Resource</p> <ul style="list-style-type: none"> • Chapter Review • Reinforcement 	<p>Human Body Project</p>	<p>Year End Assessment</p>

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2 ½ WEEKS Chapter 12 4/11-5/2					
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