

FORMAT FOR CORRELATION TO THE GEORGIA PERFORMANCE STANDARDS

Subject Area: Science(Grade 7) **State-Funded Course:** 26.01100

Textbook Title: Middle School Inquiry Science: Project Based Life Science

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The GPSs for grades K-12 Science and 9-12 Mathematics may be accessed on-line at: <http://www.georgiastandards.org/>.

<u>Standard</u> (Cite Number)	<u>Standard</u> (Cite specific standard)	<u>Where Taught</u> (If print component, cite page number; if non-print, cite appropriate location.)
S7CS1	Students will explore the importance of curiosity, honesty, openness, and skepticism in science and will exhibit these traits in their own efforts to understand how the world works.	
S7CS1.a	Understand the importance of—and keep—honest, clear, and accurate records in science	Throughout, for example: AA: p13, 15, 26, 90-93; LT: p140-148; GF: p126-130
S7CS1.b	Understand that hypotheses can be valuable, even if they turn out not to be completely accurate.	Throughout, for example: AA: p26, 90-93; LT: p38-41, 140-148; GF: p126-130
S7CS2	Students will use standard safety practices for all classroom laboratory and field investigations.	
S7CS2.a	Follow correct procedures for use of scientific apparatus.	AA: p63-65; GF: p32

S7CS2.b	Demonstrate appropriate techniques in all laboratory situations.	GF: p13, 34-35, 81; LT: p19, 67; AL: p71, 72, 73
S7CS2.c	Follow correct protocol for identifying and reporting safety problems and violations.	GF: p13, 45; LT: p19, 67; AL: p72
S7CS3	Students will have the computation and estimation skills necessary for analyzing data and following scientific explanations.	
S7CS3.a	Analyze scientific data by using, interpreting, and comparing numbers in several equivalent forms, such as integers, fractions, decimals, and percents.	GF: p76-77, 87-89; AL: p4-6
7S7CS3.b	Use the mean, median, and mode to analyze a set of scientific data.	GF: p79, F87-89
S7CS3.c	Apply the metric system to a scientific investigation that includes metric to metric conversion. (i.e. centimeters to meters)	G: pF7; LT: p61, 70-71, 76; AL: p4-6
S7CS3.d	Draw conclusions based on analyzed data.	GF: p79 GF87-89; AL: p4-6
S7CS3.e	Decide what degree of precision is adequate, and round off appropriately.	GF: p79 GF87-89; AL: p4-6
S7CS3.f	Address the relationship between accuracy and precision and the importance of each.	

<p>S7CS4</p>	<p>Students will use tools and instruments for observing, measuring, and manipulating equipment and materials in scientific activities.</p>	
<p>S7CS4.a</p>	<p>Use appropriate technology to store and retrieve scientific information in topical, alphabetical, numerical, and keyword files, and create simple files.</p>	<p>AA: p63-65, 32-34; GF: p76-79, 87-89; LT: p115-119, 122-125</p>
<p>S7CS4.b</p>	<p>Use appropriate tools for measuring objects and/or substances.</p>	<p>A: p32-34; GF: p76-79, 87-89; LT: p115-119, 112-125</p>
<p>S7CS4.c</p>	<p>Learn and use on a regular basis standard safety practices for scientific investigations.</p>	<p>GF: p81; LT: p19, 66; AL: p71, 72, 73</p>
<p>S7CS5.</p>	<p>Students will use the ideas of system, model, change, and scale in exploring scientific and technological matters.</p>	
<p>S7CS5.a</p>	<p>Observe and explain how parts can be related to other parts in a system such as predator/prey relationships in a community/ecosystem.</p>	<p>AA: p.90-93, GF: 1.2, 4.3, 4.4, p126-130; LT: 3.7, p.140-148</p>
<p>S7CS5.b</p>	<p>Understand that different models (such as physical replicas, pictures, and analogies) can be used to represent the same thing.</p>	<p>AA: p.90-93, GF: p9, 126-130; LT: p.140-148</p>

S7CS6.	Students will communicate scientific ideas and activities clearly.	
S7CS6.a	Write clear, step-by-step instructions for conducting scientific investigations, operating a piece of equipment, or following a procedure.	Throughout, for example: AA: p10, 33, 88, 90-93; GF: p7, 21, 32-34, 69, 73, 87-89 126-130; LT: p12-13, 16, 38, 71, 140-148
S7CS6.b	Write for scientific purposes incorporating data from circle, bar and line graphs, two-way data tables, diagrams, and symbols.	Throughout, for example: AA: p10, 33, 88, 90-93; GF: p7, 21, 32-34, 69, 73, 87-89, 126-130; LT: p12-13, 16, 38, 71, 140-148
S6CS6.c	Organize scientific information in appropriate tables, charts, and graphs, and identify relationships they reveal.	Throughout, for example: AA: p10, 33, 88, 90-93; GF: p7, 21, 32-34, 69, 73, 87-89, 126-130; LT: p12-13, 16, 38, 71, 140-148
S7CS7.	Students will question scientific claims and arguments effectively.	
S7CS7.a	Question claims based on vague attributions (such as “Leading doctors say...”) or on statements made by people outside the area of their particular expertise.	
S7CS7.b	Identify the flaws of reasoning that are based on poorly designed research (i.e., facts intermingled with opinion, conclusions based on insufficient evidence).	Throughout, for example: AA: p90-93; GF: p126-130; LT: p140-148
S7CS7.c	Question the value of arguments based on small samples of data, biased samples, or samples for which there was no control.	Throughout, for example: AA: p90-93; GF: p126-130; LT: p140-148

S7CS7.d	Recognize that there may be more than one way to interpret a given set of findings.	Throughout, for example: AA: p90-93; GF: p126-130; LT: p140-148, 105
S7CS8.	Students will be familiar with the characteristics of scientific knowledge and how it is achieved.	
S7CS8.a	When similar investigations give different results, the scientific challenge is to judge whether the differences are trivial or significant, which often requires further study. Even with similar results, scientists may wait until an investigation has been repeated many times before accepting the results as meaningful.	Throughout, for example: AA: p90-93; GF: p15, 126-130; LT: p140-148
S7CS8.b	When new experimental results are inconsistent with an existing, well-established theory, scientists may pursue further experimentation to determine whether the results are flawed or the theory requires modification.	Throughout, for example: AA: p90-93; GF: p126-130; LT: p140-148
S7CS8.c	As prevailing theories are challenged by new information, scientific knowledge may change.	Throughout, for example: AA: p8, 90-93; GF: p126-130; LT: p140-148
S7CS9	Students will understand the features of the process of scientific inquiry.	

S7CS9.a	Investigations are conducted for different reasons, which include exploring new phenomena, confirming previous results, testing how well a theory predicts, and comparing competing theories.	Throughout, for example: AA: p90-93; GF: p126-130; LT: p140-148
S7CS9.b	Scientific investigations usually involve collecting evidence, reasoning, devising hypotheses, and formulating explanations to make sense of collected evidence.	Throughout, for example: AA: p8, 90-93; GF: p34-35, 126-130; LT: p38-39, 140-148
S7CS9.c	Scientific experiments investigate the effect of one variable on another. All other variables are kept constant.	Throughout, for example: AA: p90-93; GF: p126-130; LT: p57, 140-148
S7CS9.d	Scientists often collaborate to design research. To prevent this bias, scientists conduct independent studies of the same questions.	Throughout, for example: AA: p8, 90-93; GF: p34-35, 126-130; LT: p140-148
S7CS9.e	Accurate record keeping, data sharing, and replication of results are essential for maintaining an investigator's credibility with other scientists and society.	Throughout, for example: AA: p8, GF: p76-77
S7CS9.f	Scientists use technology and mathematics to enhance the process of scientific inquiry.	Throughout, for example: GF: p34-35, 76-77

S7CS9.g	The ethics of science require that special care must be taken and used for human subjects and animals in scientific research. Scientists must adhere to the appropriate rules and guidelines when conducting research.	Throughout, for example: AA: p90-93; GF: p126-130; LT: p57, 140-148
S7CS10	Students will enhance reading in all curriculum areas by:	
S7CS10.a	<p>Reading in All Curriculum Areas</p> <ul style="list-style-type: none"> ∞ Read a minimum of 25 grade-level appropriate books per year from a variety of subject disciplines and participate in discussions related to curricular learning in all areas ∞ Read both informational and fictional texts in a variety of genres and modes of discourse ∞ Read technical texts related to various subject areas. 	Throughout
S7CS10.b	<p>Discussing books</p> <ul style="list-style-type: none"> ∞ Discuss messages and themes from books in all subject areas. ∞ Respond to a variety of texts in multiple modes of discourse. ∞ Relate messages and themes from one subject area to messages and themes in another area. ∞ Evaluate the merit of texts in every subject discipline. ∞ Examine author’s purpose in writing. ∞ Recognize the features of disciplinary texts. 	

S7CS10.c	<p>Building vocabulary knowledge</p> <ul style="list-style-type: none"> ∞ Demonstrate an understanding of contextual vocabulary in various subjects. ∞ Use content vocabulary in writing and speaking. ∞ Explore understanding of new words found in subject area texts. 	Throughout, for example: AA: p13, 47, 49, 67, 81, 85; GF: p9, 13, 16, 17, 35; LT: p17, 23, 57, 125; AL: 7, 13, 15, 30, 55, 66
S7CS10.d	<p>Establishing context</p> <ul style="list-style-type: none"> ∞ Explore life experiences related to subject area content. ∞ Discuss in both writing and speaking how certain words are subject area related ∞ Determine strategies for finding content and contextual meaning for unknown words. 	Throughout
S7L1.	Students will investigate the diversity of living organisms and how they can be compared scientifically.	
S7L1.a	Demonstrate the process for the development of a dichotomous key.	LT: p86-91
S7L2.	Students will describe the structure and function of cells, tissues, organs, and organ systems.	

S7L2.a	Explain that cells take in nutrients in order to grow and divide and to make needed materials.	GF: p24-27, 35-38; LT: p56-62, 99-106; AL: 4.1
S7L2.b	Relate cell structures (cell membrane, nucleus, cytoplasm, chloroplasts, mitochondria) to basic cell functions.	GF: p28-34; LT: p86-91
S7L2.c	Explain that cells are organized into tissues, tissues into organs, organs into systems, and systems into organisms.	GF: p74-75; AL4.2
S7L2.d	Explain that tissues, organs, and organ systems serve the needs cells have for oxygen, food, and waste removal.	GF: p74-75, 80-86, 87-90, 91-98, 99-107
S7L2.c	Explain the purpose of the major organ systems in the human body.	GF: p74-75, 80-86, 87-90, 91-98, 99-107, 108-114
S7L3.	Students will recognize how biological traits are passed on to successive generations.	
S7L3.a	Explain the role of genes and chromosomes in the process of inheriting a specific trait.	AL: p10-16, 32-37, 52-58

S7L3.b	Compare and contrast that organisms reproduce asexually and sexually (bacteria, protists, fungi, plants & animals).	AA: 80-89; GF: p35-38, 51-53; AL:17-26, 27-31
S7L3.c	Recognize that selective breeding can produce plants or animals with desired traits.	AL: p32-37
S7L4.	Students will examine the dependence of organisms on one another and their environments.	
S7L4.a	Demonstrate in a food web that matter is transferred from one organism to another and can recycle between organisms and their environments.	LT: p107-112, 127-139
S7L4.b	Explain in a food web that sunlight is the source of energy and that this energy moves from organism to organism.	LT: p107-112
S7L4.c.	Recognize that changes in environmental conditions can affect the survival of both individuals and entire species.	AA: p80-89; LT: p42-45, 46-50 75-78, 84-85, 113-126
S7L4.d	Categorize relationships between organisms that are competitive or mutually beneficial.	AA: p80-89

S7L4.e	Describe the characteristics of Earth’s major terrestrial biomes (i.e. tropical rain forest, savannah, temperate, desert, taiga, tundra, and mountain) and aquatic communities (i.e. freshwater, estuaries, and marine).	LT: p127-139
S7L5.	Students will examine the evolution of living organisms through inherited characteristics that promote survival of organisms and the survival of successive generations of their offspring.	
S7L5.a	Explain how physical characteristics of organisms have changed over successive generations (e.g. Darwin’s finches and peppered moths of Manchester).	LT: p21-22; 23-27
S7L5.b	Describe ways in which species on earth have evolved due to natural selection.	AA: p80-89; AL: p60-69
S7L5.c	Trace evidence that the fossil record found in sedimentary rock provides evidence for the long history of changing life forms.	AL: p70-76