

**Correlation of the STC PROGRAM™ and GEMS®
with**

Georgia Performance Standards



**Grade 7
Course 26.0110 / Science**

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World-Class Support for Science & Math

Correlation of the **STC PROGRAM™** and **Great Explorations in Math and Science®** With **Georgia Performance Standards**

The following STC PROGRAM™ and GEMS® Units are recommended based on the Georgia Performance Standards. Provided for each grade level, are the units that most strongly align with the content objectives. Other STC PROGRAM™ and GEMS® Units may also match objectives within each grade level.

GRADE	STC PROGRAM™	GEMS®
Kindergarten	<ul style="list-style-type: none"> •Comparing and Measuring •Solids and Liquids 	<ul style="list-style-type: none"> •Eggs, Eggs, Everywhere •Sifting Through Science
1 st Grade	<ul style="list-style-type: none"> •Organisms •Weather 	<ul style="list-style-type: none"> •Ant Homes Under the Ground •Penguins and Their Young
2 nd Grade	<ul style="list-style-type: none"> •Changes •Plant Growth and Development •The Life Cycle of Butterflies 	<ul style="list-style-type: none"> •Buzzing a Hive •Involving Dissolving
3 rd Grade	<ul style="list-style-type: none"> •Animal Studies •Rocks and Minerals •Soils 	<ul style="list-style-type: none"> •On Sandy Shores •Terrarium Habitats
4 th Grade	<ul style="list-style-type: none"> •Ecosystems •Motion and Design •Sound 	<ul style="list-style-type: none"> •Aquatic Habitats •Bubble Festival •Space Science Sequence
5 th Grade	<ul style="list-style-type: none"> •Floating and Sinking •Land and Water •Magnets and Motors •Microworlds 	<ul style="list-style-type: none"> • Microscopic Explorations
6 th Grade	<ul style="list-style-type: none"> • Catastrophic Events • Earth in Space 	<ul style="list-style-type: none"> • Earth, Moon, and Stars • Ocean Currents • Plate Tectonics
7 th Grade	<ul style="list-style-type: none"> • Human Body Systems • Organisms–From Macro to Micro 	<ul style="list-style-type: none"> • Environmental Detectives
8 th Grade	<ul style="list-style-type: none"> • Energy, Machines, and Motion • Properties of Matter 	<ul style="list-style-type: none"> • Color Analyzers • Crime Lab Chemistry • Invisible Universe

S7CS2.b.	Demonstrate appropriate techniques in all laboratory situations.	<p>TG: Act01-7(pp15-202)</p> <p>STC® Human Body Systems SG: L03-L08 (pp14-65), L10-L23 (pp76-195) TG: L02-L08 (pp11-102, L10-L23 (pp113-276) Organisms-From Macro to Micro SG: L02-L20 (pp12-243) TG: L02-L20 (pp15-350)</p> <p>GEMS® Environmental Detectives TG: Act01-7(pp15-202)</p>
S7CS2.c.	Follow correct protocol for identifying and reporting safety problems and violations.	<p>STC® Human Body Systems SG: L03-L08 (pp14-65), L10-L23 (pp76-195) TG: L02-L07(pp11-80), L10-L23 (pp113-276) Organisms-From Macro to Micro SG: L02-L20 (pp12-27) TG: L02-L20 (pp15-350)</p>
S7CS3. S7CS3.a.	<p>Habits of Mind Analyze scientific data by using, interpreting, and comparing numbers in several equivalent forms, such as integers, fractions, decimals, and percents.</p>	<p>STC® Human Body Systems SG: L07 (pp50-59), L11 (pp90-97), L21 (pp174-181) TG: L07 (pp69-80), L09 (pp103-112) L11 (pp131-136) L18.Exts (pp215-216), L21 (pp245-252) Organisms-From Macro to Micro TG: L06.Exts (pp89-91)</p> <p>GEMS® Environmental Detectives TG: Act01-8 (pp15-208)</p>
S7CS3.c.	Apply the metric system to a scientific investigation that includes metric to metric conversion (i.e., centimeters to meters).	<p>STC® Human Body Systems SG: L05 (pp32-39)</p>
S7CS3.d.	Draw conclusions based on analyzed data.	<p>GEMS® Environmental Detectives TG: Act01-8 (pp15-208)</p>

S7CS3.e.	Decide what degree of precision is adequate, and round off appropriately.	<p>STC® Human Body Systems SG: L15 (pp130-137), L20 (pp168-173) L21 (pp174-181) TG: L15 (pp173-182), L20 (p 235-244) L21 (pp245-252) Organisms-From Macro to Micro SG: L03 (pp28-37), L17 (pp194-203) TG: L03 (pp33-48), L06 (pp73-104), L17 (pp281-292)</p>
<p>S7CS4. S7CS4.a.</p>	<p>Habits of Mind Use appropriate technology to store and retrieve scientific information in topical, alphabetical, numerical, and keyword files, and create simple files.</p>	<p>STC® Human Body Systems SG: L11-L23 (pp90-195) TG: L01-L23 (pp3-276) Organisms-From Macro to Micro SG: L02-L20 (pp12-243) TG: L02-L20 (pp15-350)</p> <p>GEMS® Environmental Detectives TG: Act01-7(pp15-202)</p>
S7CS4.b.	Use appropriate tools for measuring objects and/or substances.	<p>STC® Human Body Systems SG: L11-L23 (pp90-195) TG: L01-L23 (pp3-276) Organisms-From Macro to Micro SG: L02-L20 (pp12-243) TG: L02-L20 (pp15-350)</p> <p>GEMS® Environmental Detectives TG: Act01-7(pp15-202)</p>
S7CS4.c.	Learn and use on a regular basis standard safety practices for scientific investigations.	<p>STC® Human Body Systems SG: L03-L08 (pp14-65), L10-L23 (pp76-195) TG: L02-L07 (pp11-80), L07 (pp69-80) L10-L23 (pp113-276) Organisms-From Macro to Micro SG: L02-L20 (pp12-243) TG: L02-L20 (pp15-350)</p>

S7CS6.b.	Write for scientific purposes incorporating data from circle, bar, and line graphs, two-way data tables, diagrams, and symbols.	STC® Human Body Systems SG: L21 (pp174-181) TG: L15.Exts (p178), L20.Exts (p239) L21 (pp245-252) Organisms-From Macro to Micro SG: L03 (pp28-37) TG: L03 (pp33-48), L06.Exts (pp89-91) L10 (pp167-184) , L12.Exts (p207), L15.Exts (p260) GEMS® Environmental Detectives TG: Act01-8 (pp15-208)
S7CS6.c.	Organize scientific information using appropriate simple tables, charts, and graphs, and identify relationships they reveal.	STC® Human Body Systems SG: L21 (pp174-181) TG: L09 (pp103-112), L15.Exts (p178) L20.Exts (p239), L21 (pp245-252) Organisms-From Macro to Micro SG: L03 (pp28-37) TG: L03 (pp33-48), L06.Exts (pp89-91) L10 (pp167-184), L12.Exts (p207), L15.Exts (p260) GEMS® Environmental Detectives TG: Act01-8 (pp15-208)
S7CS7.	Habits of Mind	
S7CS7.d.	Recognize that there may be more than one way to interpret a given set of findings.	STC® Human Body Systems SG: L21 (pp174-181) TG: L09 (pp103-112), L21 (pp245-252) GEMS® Environmental Detectives TG: Act01-8 (pp15-208)
S7CS8.	The Nature of Science	
S7CS8.c.	As prevailing theories are challenged by new information, scientific knowledge may change.	STC® Human Body Systems TG: L01.Exts (p7), L10.Exts (p122), L18.Exts (pp215-216), L19.Exts (p225) Organisms-From Macro to Micro SG: L19 (pp216-235)

S7CS9.f.	Scientists use technology and mathematics to enhance the process of scientific inquiry.	STC® Human Body Systems SG: L07 (pp50-59), L11 (pp90-97) TG: L01.Exts (p7), L07 (pp69-80), L11 (pp131-136) L18.Exts (pp215-216), L19.Exts (p225) Organisms-From Macro to Micro TG: L06.Exts (pp89-91)
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.	STC® Human Body Systems TG: L09.Exts (p107) Organisms-From Macro to Micro TG: L19.Exts (pp317-318)
S7CS10. S7CS10.a	The Nature of Science Reading in All Curriculum Areas: 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.	STC® Human Body Systems SG: L09 (pp68-75) TG: L09 (pp103-112) Organisms-From Macro to Micro TG: L02 (pp15-32)
S7CS10.b.	Discussing books: 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.	STC® Human Body Systems SG: L09 (pp68-75) TG: L09 (pp103-112) Organisms-From Macro to Micro TG: L02 (pp15-32)
S7CS10.c.	Building vocabulary knowledge: 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.	STC® Human Body Systems SG: G - (pp197-200) Organisms-From Macro to Micro SG: G - (pp245-249) TG: L17.Exts (pp287-288) GEMS® Environmental Detectives TG: Act01-8 (pp15-208)

S7CS10.d.	Establishing context: 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.	STC® Organisms-From Macro to Micro SG: G - (pp245-249) TG: L17.Exts (pp287-288)
S7L1.	Life Science	GEMS® Environmental Detectives TG: Act01-2 (pp15-51), Act04 (pp91-111) Act06 (pp143-183), Act08 (pp203-208)
S7L1.a.	Demonstrate the process for the development of a dichotomous key.	STC® Organisms-From Macro to Micro SG: L01 (pp2-11), L06 (pp64-81), L11 (pp132-145) L20 (pp236-243) TG: L01 (pp3-14), L06 (pp73-104), L11 (pp185-200) L20 (pp331-350)
S7L1.b.	Classify organisms based on physical characteristics using a dichotomous key of the six kingdom system (archaebacteria, eubacteria, protists, fungi, plants, and animals).	STC® Organisms-From Macro to Micro SG: L01 (pp2-11), L06 (pp64-81), L11 (pp132-145) TG: L01 (pp3-14), L06 (pp73-104), L11 (pp185-200)
S7L2.	Life Science	STC® Human Body Systems
S7L2.a.	Explain that cells take in nutrients in order to grow and divide and to make needed materials.	SG: L06 (pp40-49), L07 (pp82-93), L08 (pp96-105) TG: L07 (pp105-130), L08 (pp131-150) L15.Exts (p260)
S7L2.b.	Relate cell structures (cell membrane, nucleus, cytoplasm, chloroplasts, mitochondria) to basic cell functions.	STC® Human Body Systems SG: L06 (pp40-49), L07 (pp82-93), L08 (pp96-105) TG: L07 (pp105-130), L08 (pp131-150)
S7L2.c.	Explain that cells are organized into tissues, tissues into organs, organs into systems, and systems into organisms.	STC® Human Body Systems SG: L01 (pp2-7), L18 (pp150-159) TG: L01 (pp3-10), L07.Exts (pp74-75) L18 (pp209-218)

S7L2.d.	Explain that tissues, organs, and organ systems serve the needs cells have for oxygen, food, and waste removal.	STC® Human Body Systems SG: L01 (pp2-7), L06 (pp40-49), L18 (pp150-159) TG: L01 (pp3-10), L07.Exts (pp74-75), L18 (pp209-218) Organisms-From Macro to Micro SG: L07 (pp82-93), L08 (pp96-105) TG: L07 (pp105-130), L08 (pp131-150)
S7L2.e.	Explain the purpose of the major organ systems in the human body (i.e., digestion, respiration, reproduction, circulation, excretion, movement, control, and coordination, and for protection from disease).	STC® Human Body Systems SG: L01 (pp2-7), L17 (pp144-147), L20 (pp168-173) L21 (pp174-181), L22 (pp182-189), L23 (pp190-195) TG: L01-L23 (pp3-276)
S7L3. S7L3.a.	Life Science Explain the role of genes and chromosomes in the process of inheriting a specific trait.	STC® Human Body Systems TG: L04.Exts (p35) Organisms-From Macro to Micro SG: L01 (pp2-11), L08 (pp96-105), L18 (pp204-215) L19 (pp216-235) TG: L01 (pp3-14), L02.Exts (p25), L08 (pp131-150) L18 (pp293-302), L19 (pp303-330)
S7L3.b.	Compare and contrast sexual and asexual reproduction in organisms (bacteria, protists, fungi, plants & animals).	STC® Organisms-From Macro to Micro SG: L03 (pp28-37), L09 (pp106-119) L12 (pp146-155) , L14 (pp172-179) L17 (pp194-203), L18 (pp204-215) TG: L03 (pp33-48), L09 (pp151-166) L12 (pp201-218) L14 (pp237-252), L17 (pp281-292)
S7L3.c.	Recognize that selective breeding can produce plants or animals with desired traits.	STC® Organisms-From Macro to Micro SG: L05 (pp46-63) TG: L19.Exts (pp317-318)

<p>S7L4. S7L4.c.</p> <p>S7L4.d.</p>	<p>Life Science Recognize that changes in environmental conditions can affect the survival of both individuals and entire species.</p> <p>Categorize relationships between organisms that are competitive or mutually beneficial.</p>	<p>STC® Organisms-From Macro to Micro SG: L08 (pp96-105), L12 (pp146-155) L13 (pp158-171) TG: L12 (pp201-218), L13 (pp219-236)</p> <p>GEMS® Environmental Detectives TG: Act01-7 (pp15-202)</p>
<p>S7L5. S7L5.a.</p> <p>S7L5.b.</p> <p>S7L5.c.</p>	<p>Life Science Explain that physical characteristics of organisms have changed over successive generations (e.g. Darwin's finches and peppered moths of Manchester).</p> <p>Describe ways in which species on earth have evolved due to natural selection.</p> <p>Explain how the fossil record found in sedimentary rock provides evidence for the long history of changing life forms.</p>	<p>STC® Organisms-From Macro to Micro SG: L09 (pp106-119) TG: L09 (pp151-166), L18.Exts (pp299)</p> <p>GEMS® Environmental Detectives TG: Act05 (pp113-141)</p> <p>STC® Human Body Systems TG: L22.Exts (p258)</p> <p>Organisms-From Macro to Micro SG: L06 (pp64-81), L13 (pp158-171) TG: L06 (pp73-104), L10.Exts (pp175-176) L13 (pp219-236), L18.Exts (pp299-300) L19.Exts (pp317-318)</p> <p>STC® Organisms-From Macro to Micro SG: L13 (pp158-171) TG: L13 (pp219-236)</p> <p>STC® Organisms-From Macro to Micro SG: L13 (pp158-171) TG: L13 (pp219-236), L19.Exts (pp317-318)</p>