

**A Correlation of the
STC PROGRAM™
with the
South Carolina Science Academic Standards
For Grades 6-8**



Prepared by

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Introduction

The STC PROGRAM™ is made up of 2 research-based, inquiry-centered curriculums:

- Science and Technology for Children® (STC®) for grades K–6
- Science and Technology Concepts for Middle Schools™ (STC/MS™) for grades 6–8.

This document gives a quick visual guide to the alignment of the STC/MS™ units with the South Carolina Science Academic Standards, grades 6–8. The recommended grade ranges are indicated in the chart below.

For more information about any of these instructional materials, visit www.carolinacurriculum.com/STC.

STC PROGRAM™ Units with Recommended Grade Ranges

	Life Science	Earth Science	Physical Science	Technology
Grades 6-8	<i>Experiments with Plants</i> (EP)	<i>Measuring Time</i> (MT)	<i>Magnets and Motors</i> (MM)	<i>The Technology of Paper</i> (TP)
	<i>Human Body Systems</i> (HBS)	<i>Catastrophic Events</i> (CE)	<i>Properties of Matter</i> (PM)	<i>Energy, Machines, and Motion</i> (EMM)
	<i>Organisms—From Macro to Micro</i> (OMM)	<i>Earth in Space</i> (ES)	<i>Light</i> (L)	<i>Electrical Energy and Circuit Design</i> (EECD)

Legend

To save paper, the curriculum location information in this document has been abbreviated as follows:

Unit abbreviations = noted in parentheses in the chart above

TG = Teacher’s Guide

SG = Student Guide (for the STC/MS™ units only. All information found in an STC® student book is included in that unit’s Teacher’s Guide, so STC® student books aren’t mentioned in this document)

S-Sec3 = Section 3 (containing a section on safety) in the STC® Teacher’s Guide

Sec4 = Section 4 (containing the unit lessons) in the STC® Teacher’s Guide

L01, L02, etc. = Lesson 1, Lesson 2, etc.

p, pp = page, pages

RB = STC BOOK™ (a science reading book included in the grades 5–7 STC® unit kits)

Exts = Extensions (found at the end of most lessons in the Teacher’s Guide)

**A Correlation of the STC PROGRAM™ (grades 6–8)
with the South Carolina Science Academic Standards**

GRADE 6	
Standards and Indicators	Curriculum Location
Scientific Inquiry Standard 6-1: The student will demonstrate an understanding of technological design and scientific inquiry, including process skills, mathematical thinking, controlled investigative design and analysis, and problem solving.	

6-1.1 Use appropriate tools and instruments (including a spring scale, beam balance, barometer, and sling psychrometer) safely and accurately when conducting a controlled scientific investigation.

CE - SG: L12 (pp134-153)
CE - SG: L14 (pp164-169)
CE - SG: L16 (pp190-193)
CE - SG: L22-23 (pp240-263)
CE - TG: L12 (pp163-176)
CE - TG: L14 (pp187-196)
CE - TG: L16 (pp219-232)
CE - TG: L22-23 (pp303-328)
EECD - SG: L01 (pp2-11)
EECD - SG: L05-7 (pp46-83)
EECD - SG: L09 (pp94-103)
EECD - SG: L11-12 (pp118-133)
EECD - SG: L14-18 (pp144-195)
EECD - SG: L22 (pp224-231)
EECD - TG: (pp xxxvii - xxxix)
EECD - TG: L01 (pp3-22)
EECD - TG: L05-7 (pp61-110)
EECD - TG: L09 (pp123-142)
EECD - TG: L11-12 (pp157-180)
EECD - TG: L14-19 (pp205-276)
EECD - TG: L22-23 (pp299-312)
EMM - SG: L01-13 (pp2-129)
EMM - SG: L16 (pp148-161)
EMM - SG: L18-21 (pp174-225)
EMM - TG: (pp xxxiii - xxxv)
EMM - TG: L01-13 (pp3-166)
EMM - TG: L16 (pp185-202)
EMM - TG: L18-21 (pp217-246)
EP - TG: L02 (pp21-30)
EP - TG: L06 (pp57-64)
ES - SG: All lessons except L01
ES - TG: (pp xxxiv - xxxvi)
ES - TG: All lessons except L01
HBS - SG: All lessons except L01, L02, L09
HBS - TG: (pp xxxii - xxxiv)
HBS - TG: All lessons except L01 and L08
L - SG: All lessons
L - TG: (pp xxxiv - xxxv)
L - TG: All lessons
MM - TG: All lessons except L01
MT - TG: L02-3 (pp21-42)
MT - TG: L07-16 (pp67-148)
OMM - SG: All lessons except L01
OMM - TG: (pp xxxiv-xxxv)
OMM - TG: All lessons except L01
PM - SG: All lessons except L10
PM - TG: All lessons except L10
TP - TG: L02-4 (pp29-74)
TP - TG: L06-11 (pp91-156)
TP - TG: L13-14 (pp165-184)
TP - TG: L16-18 (pp197-218)

<p>6-1.2 Differentiate between observation and inference during the analysis and interpretation of data.</p>	<p>CE - SG: All lessons CE - TG: All lessons EECD - SG: All lessons EECD - TG: All lessons EMM - SG: G (pp237-239) EMM - SG: All lessons EMM - TG: All lessons EP - RB: (pp57-59) EP - RB: (pp62) EP - TG: All lessons ES - SG: L01 (pp2-11) ES - SG: L03-5 (pp22-73) ES - SG: L09-11 (pp122-159) ES - SG: L13 (pp174-199) ES - SG: L14 (pp200-215) ES - SG: L18-20 (pp290-333) ES - SG: L22 (pp340-343) ES - TG: L01 (pp3-10) ES - TG: L03-5 (pp21-72) ES - TG: L09-11 (pp121-180) ES - TG: L13-14 (pp197-220) ES - TG: L18-20 (pp277-308) ES - TG: L22 (pp311-326) HBS - SG: All lessons except L01 and L09 HBS - TG: All lessons L - SG: All lessons L - TG: All lessons MM - RB: (pp14-16) MM - RB: (pp33-38) MM - TG: L14 (pp89-94) MM - TG: L16 (pp99-102) MT - TG: L03 (pp31-42) MT - TG: L05 (pp49-58) MT - TG: L09 (pp87-94) MT - TG: L11 (pp109-114) MT - TG: L16 (pp145-148) OMM - SG: All lessons OMM - TG: All lessons PM - SG: All lessons PM - TG: All lessons TP - RB: (pp16-19) TP - TG: All lessons</p>
<p>6-1.3 Classify organisms, objects, and materials according to their physical characteristics by using a dichotomous key.</p>	<p>CE - SG: L23 (pp252-263) CE - TG: L23 (pp217-328) OMM - SG: L01 (pp2-11) OMM - SG: L20 (pp236-243) OMM - TG: L01 (pp3-14) OMM - TG: L20 (pp331-350) PM - SG: L11-12 (pp98-111) PM - SG: L21-22 (pp186-207) PM - TG: L11-12 (pp125-142) PM - TG: L21-22 (pp241-274) TP - RB: (pp58-61) TP - TG: L01 (pp19-28)</p>

6-1.4 Use a technological design process to plan and produce a solution to a problem or a product (including identifying a problem, designing a solution or a product, implementing the design, and evaluating the solution or the product).

CE - SG: L11 (pp120-133)
CE - TG: L06.Exts (pp77-78)
CE - TG: L11 (pp149-162)
EECD - SG: L24 (pp244-251)
EECD - TG: L02.Exts (pp35-36)
EECD - TG: L03.Exts (pp47-48)
EECD - TG: L07.Exts (pp105-106)
EECD - TG: L12.Exts (pp177-178)
EECD - TG: L13.Exts (p191)
EECD - TG: L14.Exts (p210)
EECD - TG: L21-24.Exts (p326)
EMM - SG: L16-18 (pp148-187)
EMM - SG: L21-22 (pp214-236)
EMM - TG: L06.Exts (pp68-69)
EMM - TG: L08.Exts (pp92-93)
EMM - TG: L09.Exts (p105)
EMM - TG: L16-17 (pp185-216)
EMM - TG: L18-22.Exts (p254)
ES - SG: L20-21 (pp324-339)
ES - TG: L20-21 (pp293-310)
MM - RB: (pp41-50)
MM - RB: (pp58-59)
MT - TG: L13-15 (pp123-144)
OMM - TG: L05.Exts (pp69-70)
PM - SG: L10 (pp86-97)
PM - TG: L10 (pp113-124)
TP - RB: (pp16-19)
TP - RB: (pp20-24)
TP - TG: L03.Exts (pp54-55)
TP - TG: L07.Exts (p111)
TP - TG: L08.Exts (pp122-123)
TP - TG: L15 (pp185-196)
TP - TG: L16.Exts (pp201-202)
TP - TG: L17 (pp207-214)
TP - TG: L18 (pp215-218)

6-1.5 Use appropriate safety procedures when conducting investigations.

CE - SG: L19 (pp210-223)
CE - SG: L22 (pp240-251)
CE - TG: (pp xxxiii - xxxv)
CE - TG: L19 (pp265-278)
CE - TG: L22 (pp303-316)
EECD - SG: L01 (pp2-11)
EECD - SG: L05 (pp46-57)
EECD - SG: L11-12 (pp118-133)
EECD - SG: L14-19 (pp144-2095)
EECD - SG: L22-23 (pp224-243)
EECD - TG: (pp xxxvii - xxxix)
EECD - TG: L01 (pp3-22)
EECD - TG: L05 (pp61-76)
EECD - TG: L11 (pp157-168)
EECD - TG: L12 (pp169-180)
EECD - TG: L14-19 (pp205-276)
EECD - TG: L22 (pp299-304)
EECD - TG: L23 (pp305-312)
EMM - SG: All lessons except L14, L15,L17
EMM - TG: (pp xxxiii - xxxv)
EMM - TG: All lessons except L14, L15,L17
EP - TG: All lessons
ES - SG: All lessons except L01
ES - TG: (pp xxxiv - xxxvi)
ES - TG: All lessons
HBS - SG: All lessons except L01, L02, L09
HBS - TG: (pp xxxii - xxxiv)
HBS - TG: All lessons except L01, L08, L09
L - SG: All lessons
L - TG: (pp xxxiv - xxxv)
L - TG: All lessons except L13
MM - TG: All lessons except L01
MT - TG: L03 (pp31-42)
MT - TG: L07-16 (pp67-148)
OMM - SG: All lessons except L01
OMM - TG: (pp xxxiv-xxxv)
OMM - TG: All lessons except L01
PM - SG: All lessons except L10
PM - TG: (pp xxxi - xxxiii)
PM - TG: All lessons except L10
TP - TG: L02-4 (pp29-74)
TP - TG: L06-11 (pp91-156)
TP - TG: L13 (pp165-170)
TP - TG: L14 (pp171-184)
TP - TG: L16-18 (pp197-218)

<p>Structures, Processes, and Responses of Plants Standard 6-2: The student will demonstrate an understanding of structures, processes, and responses of plants that allow them to survive and reproduce. (Life Science)</p>	
<p>6-2.1 Summarize the characteristics that all organisms share (including the obtainment and use of resources for energy, the response to stimuli, the ability to reproduce, and process of physical growth and development).</p>	<p>HBS - SG: L23 (pp190-195) HBS - TG: L23 (pp261-276) OMM - SG: L09 (pp106-119) OMM - SG: L14 (pp172-179) OMM - SG: L17 (pp194-203) OMM - TG: L04.Exts (pp53-54) OMM - TG: L05.Exts (pp69-70) OMM - TG: L09 (pp151-166) OMM - TG: L14 (pp237-252) OMM - TG: L17 (pp281-292) PM - SG: L04 (pp30-37)</p>
<p>6-2.2 Recognize the hierarchical structure of the classification (taxonomy) of organisms (including the seven major levels or categories of living things—namely, kingdom, phylum, class, order, family, genus, and species).</p>	<p>OMM - SG: L01 (pp2-11) OMM - SG: L06 (pp64-81) OMM - SG: L11 (pp132-145) OMM - TG: L01 (pp3-14) OMM - TG: L06 (pp73-104) OMM - TG: L11 (pp185-200)</p>
<p>6-2.3 Compare the characteristic structures of various groups of plants (including vascular or nonvascular, seed or spore-producing, flowering or cone-bearing, and monocot or dicot).</p>	<p>EP - RB: (pp07-13) EP - RB: (pp30-33) EP - TG: L01 (pp9-20) EP - TG: L02 (pp21-30) EP - TG: L05-9 (pp51-80) EP - TG: L12 (pp91-114) EP - TG: L15.Exts (p117) EP - TG: L16 (pp123-128) ES - TG: L07.Exts (pp92-93) MT - RB: (pp59-61) OMM - SG: L05 (pp46-63) OMM - SG: L09 (pp106-119) OMM - SG: L10 (pp120-131) OMM - SG: L18 (pp204-215) OMM - TG: L05 (pp57-72) OMM - TG: L09 (pp151-166) OMM - TG: L10 (pp167-184) OMM - TG: L18 (pp293-302)</p>
<p>6-2.4 Summarize the basic functions of the structures of a flowering plant for defense, survival, and reproduction.</p>	<p>EP - RB: (pp07-19) EP - RB: (pp30-33) EP - RB: (pp41-43) EP - RB: (pp62) EP - TG: L01 (pp9-20) EP - TG: L02 (pp21-30) EP - TG: L04-9 (pp39-80) EP - TG: L12-16 (pp91-128) ES - TG: L07.Exts (pp92-93) MT - RB: (pp59-61) OMM - SG: L05 (pp46-63) OMM - SG: L09 (pp106-119) OMM - SG: L10 (pp120-131) OMM - SG: L18 (pp204-215) OMM - TG: L05 (pp57-72) OMM - TG: L09 (pp151-166) OMM - TG: L10 (pp167-184) OMM - TG: L12.Exts (p207) OMM - TG: L14.Exts (p247) OMM - TG: L18 (pp293-302)</p>

<p>6-2.5 Summarize each process in the life cycle of flowering plants (including germination, plant development, fertilization, and seed production).</p>	<p>EP - RB: (pp07-21) EP - RB: (pp54-56) EP - RB: (pp62) EP - TG: L02 (pp21-30) EP - TG: L05-9 (pp51-80) EP - TG: L12 (pp91-100) EP - TG: L13 (pp101-104) EP - TG: L14.Exts (pp109-110) EP - TG: L15 (pp115-122) MT - RB: (pp59-61) OMM - SG: L05 (pp46-63) OMM - SG: L09 (pp106-119) OMM - SG: L18 (pp204-215) OMM - TG: L05 (pp57-72) OMM - TG: L09 (pp151-166) OMM - TG: L12.Exts (p207) OMM - TG: L14.Exts (p247) OMM - TG: L18 (pp293-302) TP - RB: (pp27-29)</p>
<p>6-2.6 Differentiate between the processes of sexual and asexual reproduction of flowering plants.</p>	<p>EP - RB: (pp07-10) EP - RB: (pp11-13) EP - RB: (pp62) EP - TG: L05-9 (pp51-80) EP - TG: L13 (pp101-104) OMM - SG: L05 (pp46-63) OMM - SG: L09 (pp106-119) OMM - SG: L18 (pp204-215) OMM - TG: L05 (pp57-72) OMM - TG: L09 (pp151-166) OMM - TG: L12.Exts (p207) OMM - TG: L14.Exts (p247) OMM - TG: L18 (pp293-302)</p>
<p>6-2.7 Summarize the processes required for plant survival (including photosynthesis, respiration, and transpiration).</p>	<p>EP - RB: (pp07-10) EP - RB: (pp14-21) EP - RB: (pp54-56) EP - TG: L05 (pp51-56) EP - TG: L08 (pp71-74) EP - TG: L12 (pp91-100) EP - TG: L14.Exts (pp109-110) EP - TG: L15 (pp115-122) L - SG: L11 (pp116-131) L - TG: L11.Exts (p131) OMM - SG: L07 (pp82-93) OMM - SG: L10 (pp120-131) OMM - TG: L07 (pp105-130) OMM - TG: L10 (pp167-184) TP - RB: (pp27-29)</p>
<p>6-2.8 Explain how plants respond to external stimuli (including dormancy and the forms of tropism known as phototropism, gravitropism, hydrotropism, and thigmotropism).</p>	<p>EP - TG: L14-15 (pp105-122)</p>
<p>6-2.9 Explain how disease-causing fungi can affect plants.</p>	<p>EP - RB: (pp54-56)</p>

<p>Structures, Processes, and Responses of Animals Standard 6-3: The student will demonstrate an understanding of structures, processes, and responses of animals that allow them to survive and reproduce. (Life Science)</p>	
<p>6-3.1 Compare the characteristic structures of invertebrate animals (including sponges, segmented worms, echinoderms, mollusks, and arthropods) and vertebrate animals (fish, amphibians, reptiles, birds, and mammals).</p>	<p>HBS - TG: L18.Exts (pp215-216) OMM - SG: L01 (pp2-11) OMM - SG: L03 (pp28-37) OMM - SG: L13 (pp158-171) OMM - SG: L16 (pp188-193) OMM - SG: L17 (pp194-203) OMM - TG: L01 (pp3-14) OMM - TG: L03 (pp33-48) OMM - TG: L13 (pp219-236) OMM - TG: L16 (pp267-280) OMM - TG: L17 (pp281-292)</p>
<p>6-3.2 Summarize the basic functions of the structures of animals that allow them to defend themselves, to move, and to obtain resources.</p>	<p>EP - RB: (pp26-29) EP - TG: L06 (pp57-64) EP - TG: L07 (pp65-70) HBS - TG: L04.Exts (p35) HBS - TG: L18 (pp209-218) OMM - SG: L03 (pp28-37) OMM - SG: L06 (pp64-81) OMM - SG: L13 (pp158-171) OMM - SG: L16 (pp188-193) OMM - SG: L17 (pp194-203) OMM - TG: L03 (pp33-48) OMM - TG: L06 (pp73-104) OMM - TG: L13 (pp219-236) OMM - TG: L16 (pp267-280) OMM - TG: L17 (pp281-292)</p>
<p>6-3.3 Compare the response that a warm-blooded (endothermic) animal makes to a fluctuation in environmental temperature with the response that a cold-blooded (ectothermic) animal makes to such a fluctuation.</p>	
<p>6-3.4 Explain how environmental stimuli cause physical responses in animals (including shedding, blinking, shivering, sweating, panting, and food gathering).</p>	<p>HBS - SG: L23 (pp190-195) HBS - TG: L23 (pp261-276) OMM - SG: L17 (pp194-203) OMM - TG: L17 (pp281-292)</p>
<p>6-3.5 Illustrate animal behavioral responses (including hibernation, migration, defense, and courtship) to environmental stimuli.</p>	<p>HBS - SG: L23 (pp190-195) HBS - TG: L23 (pp261-276) MM - RB: (pp23-25) MM - TG: L06 (pp37-42) OMM - SG: L17 (pp194-203) OMM - TG: L17 (pp281-292)</p>
<p>6-3.6 Summarize how the internal stimuli (including hunger, thirst, and sleep) of animals ensure their survival.</p>	<p>EP - RB: (pp11-13) ES - TG: L10.Exts (p152) HBS - SG: L23 (pp190-195) HBS - TG: L23 (pp261-276) OMM - SG: L08 (pp96-105) OMM - SG: L13 (pp158-171) OMM - SG: L17 (pp194-203) OMM - TG: L13 (pp219-236) OMM - TG: L17 (pp281-292)</p>

6-3.7 Compare learned to inherited behaviors in animals.	EP - RB: (pp26-29) EP - RB: (pp30-33) EP - TG: L06.Exts (p62) MM - RB: (pp23-25) OMM - SG: L02 (pp12-27) OMM - SG: L06 (pp64-81) OMM - TG: L02 (pp15-32) OMM - TG: L06 (pp73-104) OMM - TG: L16.Exts (p273) OMM - TG: L17.Exts (pp287-288)
<p>Earth's Atmosphere and Weather</p> <p>Standard 6-4: The student will demonstrate an understanding of the relationship between Earth's atmospheric properties and processes and its weather and climate. (Earth Science)</p>	
6-4.1 Compare the composition and structure of Earth's atmospheric layers (including the gases and differences in temperature and pressure within the layers).	CE - SG: L01-5 (pp2-67) CE - TG: L01-5 (pp3-68) CE - TG: L06.Exts (pp77-78) ES - SG: L17 (pp268-289) ES - TG: L17 (pp269-276) PM - TG: L05.Exts (p56)
6-4.2 Summarize the interrelationships among the dynamic processes of the water cycle (including precipitation, evaporation, transpiration, condensation, surface-water flow, and groundwater flow).	CE - SG: L06 (pp68-79) CE - TG: L06 (pp69-82) PM - SG: L01 (pp2-13)
6-4.3 Classify shapes and types of clouds according to elevation and their associated weather conditions and patterns.	CE - SG: L01 (pp2-11) CE - SG: L02 (pp12-25) CE - SG: L04 (pp42-53) CE - SG: L06 (pp68-79) CE - TG: L01 (pp3-16) CE - TG: L02 (pp17-26) CE - TG: L04 (pp45-56) CE - TG: L06 (pp69-82)
6-4.4 Summarize the relationship of the movement of air masses, high and low pressure systems, and frontal boundaries to storms (including thunderstorms, hurricanes, and tornadoes) and other weather conditions.	CE - SG: L028 (pp12-101) CE - SG: L24 (pp264-273) CE - TG: L02-8 (pp17-126) CE - TG: L24 (pp329-346) PM - TG: L05.Exts (p56)
6-4.5 Use appropriate instruments and tools to collect weather data (including wind speed and direction, air temperature, humidity, and air pressure).	CE - SG: L01 (pp2-11) CE - SG: L02 (pp12-25) CE - SG: L06 (pp68-79) CE - TG: L01 (pp3-16) CE - TG: L02 (pp17-26) CE - TG: L06 (pp69-82) CE - TG: L08.Exts (p108) CE - TG: L24.Exts (pp337-338)

6-4.7 Explain how solar energy affects Earth’s atmosphere and surface (land and water).	CE - SG: L02-4 (pp12-53) CE - SG: L07 (pp80-95) CE - TG: L02-4 (pp17-56) CE - TG: L07 (pp83-102) ES - SG: L09 (pp122-127) ES - TG: L07 (pp83-96) ES - TG: L09 (pp121-146) ES - TG: L16.Exts (p256) L - SG: L02 (pp20-31) L - SG: L03 (pp32-39) L - SG: L08 (pp82-91) L - SG: L09 (pp92-107) PM - SG: L05 (pp38-55) PM - TG: L05 (pp49-64)
6-4.8 Explain how convection affects weather patterns and climate.	CE - SG: L03 (pp26-41) CE - SG: L05 (pp54-67) CE - TG: L03 (pp27-44) CE - TG: L05 (pp57-68) ES - SG: L07 (pp88-101) ES - SG: L08 (pp102-121) ES - SG: L09 (pp122-127) ES - TG: L07 (pp83-96) ES - TG: L08 (pp97-120) ES - TG: L09 (pp121-146)
6-4.9 Explain the influence of global winds and the jet stream on weather and climatic conditions.	CE - SG: L04 (pp42-53)
<p>Conservation of Energy Standard 6-5: The student will demonstrate an understanding of the law of conservation of energy and the properties of energy and work. (Physical Science)</p>	
6-5.1 Identify the sources and properties of heat, solar, chemical, mechanical, and electrical energy.	CE - SG: L03 (pp26-41) CE - SG: L04 (pp42-53) CE - SG: L06-7 (pp68-95) CE - TG: L03-4 (pp27-56) CE - TG: L06-7 (pp69-102) EECD - SG: L01 (pp2-11) EECD - SG: L07 (pp70-83) EECD - SG: L09-10 (pp94-117) EECD - SG: L19 (pp196-209) EECD - TG: L01 (pp3-22) EECD - TG: L07 (pp93-110) EECD - TG: L09-10 (pp123-156) EECD - TG: L19 (pp263-276) EMM - SG: L01-3 (pp2-25) EMM - SG: L09-10 (pp82-97) EMM - SG: L20 (pp200-213) EMM - SG: L22 (pp226-236) EMM - TG: L01-3 (pp3-36) EMM - TG: L04.Exts (pp41-42) EMM - TG: L09-10 (pp99-130) EMM - TG: L20-22 (pp235-254) ES - SG: L07-9 (pp86-146) L - SG: L02 (pp20-31)

<p>6-5.2 Explain how energy can be transformed from one form to another (including the two types of mechanical energy, potential and kinetic, as well as chemical and electrical energy) in accordance with the law of conservation of energy.</p>	<p>EECD - SG: L01-2 (pp2-25) EECD - SG: L08-10 (pp84-117) EECD - SG: L12 (pp122-133) EECD - SG: L15-19 (pp156-209) EECD - TG: L01-2 (pp3-36) EECD - TG: L08-10 (pp111-156) EECD - TG: L12 (pp169-180) EECD - TG: L15-19 (pp213-276) EMM - SG: L02-4 (pp12-35) EMM - SG: L10 (pp92-97) EMM - SG: L17 (pp164-173) EMM - SG: L19 (pp188-199) EMM - SG: L20 (pp200-213) EMM - SG: L22 (pp226-236) EMM - TG: L02-4 (pp23-46) EMM - TG: L09-10 (pp99-130) EMM - TG: L17 (pp203-216) EMM - TG: L19-22 (pp229-254) L - SG: L02 (pp20-31) L - SG: L07 (pp68-81) L - SG: L26 (pp294-297) L - TG: L02 (pp21-36) L - TG: L26 (pp349-367) MM - RB: (pp45-46) MM - TG: L16 (pp99-102)</p>
<p>6-5.3 Explain how magnetism and electricity are interrelated by using descriptions, models, and diagrams of electromagnets, generators, and simple electrical motors.</p>	<p>MM - RB: (pp28-38) MM - RB: (pp53-54) MM - RB: (pp60-61) MM - TG: L08 (pp49-76)</p>

<p>6-5.4 Illustrate energy transformations (including the production of light, sound, heat, and mechanical motion) in electrical circuits.</p>	<p>EECD - SG: L01-2 (pp2-25) EECD - SG: L05-12 (pp46-133) EECD - SG: L14-19 (pp144-209) EECD - SG: L20 (pp210-213) EECD - SG: L22 (pp224-231) EECD - SG: L24 (pp244-251) EECD - TG: L01-2 (pp3-36) EECD - TG: L05-12 (pp61-180) EECD - TG: L14-20 (pp205-290) EECD - TG: L22 (pp299-304) EECD - TG: L24 (pp313-326) EMM - SG: L02-4 (pp12-35) EMM - SG: L10 (pp92-97) EMM - SG: L17 (pp164-173) EMM - SG: L19 (pp188-199) EMM - SG: L20 (pp200-213) EMM - SG: L22 (pp226-236) EMM - TG: L02-4 (pp23-46) EMM - TG: L09 (pp99-106) EMM - TG: L10 (pp107-130) EMM - TG: L17 (pp203-216) EMM - TG: L19 (pp229-234) EMM - TG: L20-22 (pp235-254) L - SG: L02 (pp20-31) L - SG: L07 (pp68-81) L - SG: L26 (pp294-297) L - TG: L02 (pp21-36) L - TG: L26 (pp349-367) MM - RB: (pp33-38) MM - RB: (pp45-46) MM - RB: (pp58-59) MM - TG: L07 (pp43-48) MM - TG: L16 (pp99-102) MM - TG: L17 (pp103-108) PM - SG: L20 (pp170-185) PM - SG: L24 (pp218-223) PM - TG: L24 (pp295-302)</p>
<p>6-5.5 Illustrate the directional transfer of heat energy through convection, radiation, and conduction.</p>	<p>CE - SG: L03-4 (pp26-53) CE - TG: L03-4 (pp27-56) HBS - TG: L13.Exts (p158)</p>
<p>6-5.6 Recognize that energy is the ability to do work (force exerted over a distance).</p>	<p>EECD - SG: L01 (pp2-11) EECD - SG: L10 (pp104-117) EECD - SG: L12 (pp122-133) EECD - SG: L13 (pp134-141) EECD - TG: L01 (pp3-22) EECD - TG: L10 (pp143-156) EECD - TG: L12 (pp169-180) EECD - TG: L13 (pp181-204) EMM - SG: L08 (pp72-81) EMM - SG: L10-16 (pp92-161) EMM - SG: L20-22 (pp200-236) EMM - TG: L07.Exts (p83) EMM - TG: L08 (pp85-98) EMM - TG: L09.Exts (p105) EMM - TG: L10-16 (pp107-202) EMM - TG: L20-22 (pp235-254)</p>

<p>6-5.7 Explain how the design of simple machines (including levers, pulleys, and inclined planes) helps reduce the amount of force required to do work.</p>	<p>EMM - SG: L01 (pp2-11) EMM - SG: L08 (pp72-81) EMM - SG: L11-16 (pp100-161) EMM - SG: L22 (pp226-236) EMM - TG: L01 (pp3-22) EMM - TG: L08 (pp85-98) EMM - TG: L11-17 (pp131-216) EMM - TG: L21.Exts (p245) EMM - TG: L22 (pp247-254)</p>
<p>6-5.8 Illustrate ways that simple machines exist in common tools and in complex machines.</p>	<p>EMM - SG: L01 (pp2-11) EMM - SG: L08 (pp72-81) EMM - SG: L11-16 (pp100-161) EMM - SG: L22 (pp226-236) EMM - TG: L01 (pp3-22) EMM - TG: L07.Exts (p83) EMM - TG: L08 (pp85-98) EMM - TG: L11-17 (pp131-216) EMM - TG: L21.Exts (p245) EMM - TG: L22 (pp247-254) HBS - TG: L05.Exts (p52) MT - TG: L13 (pp123-134) PM - TG: L10.Exts (p119) TP - RB: (pp16-19)</p>

GRADE 7

Standards and Indicators	Curriculum Location
<p>Scientific Inquiry Standard 7-1: The student will demonstrate an understanding of technological design and scientific inquiry, including process skills, mathematical thinking, controlled investigative design and analysis, and problem solving.</p>	
<p>7-1.1 Use appropriate tools and instruments (including a microscope) safely and accurately when conducting a controlled scientific investigation.</p>	<p>CE - SG: L12 (pp134-153) CE - SG: L14 (pp164-169) CE - SG: L16 (pp190-193) CE - SG: L22 -23(pp240-263) CE - TG: L12 (pp163-176) CE - TG: L14 (pp187-196) CE - TG: L16 (pp219-232) CE - TG: L22-23 (pp303-328) EECD - SG: L01 (pp2-11) EECD - SG: L05-7 (pp46-83) EECD - SG: L09 (pp94-103) EECD - SG: L11-12 (pp118-133) EECD - SG: L14-18 (pp144-195) EECD - SG: L22 (pp224-231) EECD - TG: (pp xxxvii - xxxix) EECD - TG: L01 (pp3-22) EECD - TG: L05-7 (pp61-110) EECD - TG: L11-12 (pp157-180) EECD - TG: L14-19 (pp205-276) EECD - TG: L22-23 (pp299-312) EMM - SG: L01-13 (pp2-129) EMM - SG: L16 (pp148-161) EMM - SG: L18-21 (pp174-225) EMM - TG: (pp xxxiii - xxxv) EMM - TG: L01-13 (pp3-166) EMM - TG: L16 (pp185-202) EMM - TG: L18-21 (pp217-246) EP - TG: L02 (pp21-30) EP - TG: L06 (pp57-64) ES - SG: All lessons except L01 ES - TG: (pp xxxiv - xxxvi) ES - TG: All lessons HBS - SG: All lessons except L01, L02, L09 HBS - TG: (pp xxxii - xxxiv) HBS - TG: All lessons except L01 and L08 L - SG: All lessons L - TG: (pp xxxiv - xxxv) L - TG: All lessons MM - TG: All lessons except L01 MT - TG: L02-3 (pp21-42) MT - TG: L07-16 (pp67-148) OMM - SG: All lessons except L01 OMM - TG: (pp xxxiv-xxxv) OMM - TG: All lessons except L01 PM - SG: All lessons except L10 PM - TG: All lessons except L10 TP - TG: L02-4 (pp29-74) TP - TG: L06-11 (pp91-156) TP - TG: L13-14 (pp165-184) TP - TG: L16-18 (pp197-218)</p>

<p>7-1.2 Generate questions that can be answered through scientific investigation.</p>	<p>CE - SG: L01 (pp2-11) CE - SG: L12 (pp134-153) CE - SG: L14 (pp164-169) CE - SG: L17 (pp194-197) CE - SG: L19 (pp210-223) CE - SG: L23-25 (pp252-282) CE - TG: L01 (pp3-16) CE - TG: L12 (pp163-176) CE - TG: L14 (pp187-196) CE - TG: L17 (pp233-256) CE - TG: L19 (pp265-278) CE - TG: L23-25 (pp217-372) EP - TG: L03 (pp31-38) EP - TG: L09 (pp75-80) EP - TG: L13 (pp101-104) EP - TG: L14 (pp105-114) ES - SG: L01-2 (pp2-21) ES - SG: L21-22 (pp334-343) ES - TG: L01-2 (pp3-20) ES - TG: L21-22 (pp309-326) L - SG: L01 (pp2-19) L - TG: L01 (pp3-20) MM - TG: L01 (pp7-10) MM - TG: L02.Exts (pp13-14) MT - TG: L01-3 (pp13-42) MT - TG: L05 (pp49-58) MT - TG: L17 (pp149-150) TP - TG: L13 (pp165-170)</p>
<p>7-1.3 Explain the reasons for testing one independent variable at a time in a controlled scientific investigation.</p>	<p>CE - SG: L25 (pp274-282) CE - TG: L25 (pp347-372) EP - TG: L01-5 (pp9-56) EP - TG: L12 (pp91-100) EP - TG: L14 (pp105-114) MM - TG: L10.Exts (p69) MT - TG: L07-8 (pp67-86) MT - TG: L10 (pp95-108) MT - TG: L12 (pp115-122) MT - TG: L15 (pp139-144) TP - TG: L03-4 (pp49-74) TP - TG: L06-8(pp91-126) TP - TG: L10-11 (pp137-15) TP - TG: L14 (pp171-184)</p>
<p>7-1.4 Explain the importance that repeated trials and a well-chosen sample size have with regard to the validity of a controlled scientific investigation.</p>	<p>EP - TG: L14.Exts (pp109-110)</p>

<p>7-1.5 Explain the relationships between independent and dependent variables in a controlled scientific investigation through the use of appropriate graphs, tables, and charts.</p>	<p>CE - SG: L25 (pp274-282) CE - TG: L25 (pp347-372) EP - TG: L01-5 (pp9-56) EP - TG: L12 (pp91-100) EP - TG: L14 (pp105-114) MM - TG: L10.Exts (p69) MT - TG: L07 (pp67-74) MT - TG: L08 (pp75-86) MT - TG: L10 (pp95-108) MT - TG: L12 (pp115-122) MT - TG: L15 (pp139-144) TP - TG: L03 (pp49-60) TP - TG: L04 (pp61-74) TP - TG: L06-8 (pp91-126) TP - TG: L10 (pp137-148) TP - TG: L11 (pp149-156) TP - TG: L14 (pp171-184)</p>
<p>7-1.6 Critique a conclusion drawn from a scientific investigation.</p>	<p>CE - SG: L12 (pp134-153) CE - SG: L22-25 (pp240-282) CE - TG: L12 (pp163-176) CE - TG: L2225 (pp303-372) EECD - SG: L02 (pp12-25) EECD - SG: L20 (pp210-213) EECD - TG: L02 (pp23-36) EECD - TG: L20 (pp277-290) EMM - SG: L07 (pp62-71) EMM - TG: L04 (pp37-46) EMM - TG: L07 (pp75-84) EMM - TG: L11 (pp131-146) EMM - TG: L13 (pp157-166) EMM - TG: L18 (pp217-228) EMM - TG: L19 (pp229-234) EP - TG: L10 (pp81-84) EP - TG: L11 (pp85-90) EP - TG: L13 (pp101-104) EP - TG: L15 (pp115-122) EP - TG: L16 (pp123-128) ES - SG: L04 (pp42-61) ES - SG: L21 (pp334-339) ES - SG: L22 (pp340-343) ES - TG: L04 (pp37-52) ES - TG: L20.Exts (p297) ES - TG: L21 (pp309-310) ES - TG: L22 (pp311-326) HBS - SG: L10 (pp76-89) HBS - TG: L10 (pp113-130) L - SG: L07 (pp68-81) L - SG: L19 (pp214-223) L - TG: L07 (pp83-98) L - TG: L19 (pp247-274) MT - TG: L06 (pp59-66) MT - TG: L11 (pp109-114) MT - TG: L14 (pp135-138) PM - SG: L16 (pp130-139) PM - TG: L16 (pp169-178) TP - TG: L05 (pp75-90) TP - TG: L07 (pp107-116) TP - TG: L08 (pp117-126) TP - TG: L12-18 (pp157-218)</p>

<p>7-1.7 Use appropriate safety procedures when conducting investigations.</p>	<p>CE - SG: L19 (pp210-223) CE - SG: L22 (pp240-251) CE - TG: (pp xxxiii - xxxv) CE - TG: L19 (pp265-278) CE - TG: L22 (pp303-316) EECD - SG: L01 (pp2-11) EECD - SG: L05 (pp46-57) EECD - SG: L11 (pp118-121) EECD - SG: L12 (pp122-133) EECD - SG: L14-19 (pp144-209) EECD - SG: L22 (pp224-231) EECD - SG: L23 (pp232-243) EECD - TG: (pp xxxvii - xxxix) EECD - TG: L01 (pp3-22) EECD - TG: L05 (pp61-76) EECD - TG: L11 (pp157-168) EECD - TG: L12 (pp169-180) EECD - TG: L14-19 (pp205-276) EECD - TG: L22 (pp299-304) EECD - TG: L23 (pp305-312) EMM - SG: All lessons except L14, L15, L17 EMM - TG: (pp xxxiii - xxxv) EMM - TG: All lessons except L14, L15, L17 EP - TG: All lessons ES - SG: All lessons except L01 ES - TG: (pp xxxiv - xxxvi) ES - TG: All lessons HBS - SG: All lessons except L01, L02, L09 HBS - TG: (pp xxxii - xxxiv) HBS - TG: All lessons except L01, L08, L09 L - SG: All lessons L - TG: (pp xxxiv - xxxv) L - TG: All lessons except L13 MM - TG: All lessons except L01 MT - TG: L03 (pp31-42) MT - TG: L07-16 (pp67-148) OMM - SG: All lessons except L01 OMM - TG: (pp xxxiv-xxxv) OMM - TG: All lessons except L01 PM - SG: All lessons except l10 PM - TG: (pp xxxi - xxxiii) PM - TG: All lessons except L10 TP - TG: L02-4 (pp29-74) TP - TG: L06-11 (pp91-156) TP - TG: L13 (pp165-170) TP - TG: L14 (pp171-184) TP - TG: L16-18 (pp197-218)</p>
<p>Cells and Heredity Standard 7-2: The student will demonstrate an understanding of the structure and function of cells, cellular reproduction, and heredity. (Life Science)</p>	
<p>7-2.1 Summarize the structures and functions of the major components of plant and animal cells (including the cell wall, the cell membrane, the nucleus, chloroplasts, mitochondria, and vacuoles).</p>	<p>HBS - SG: L06 (pp40-49) OMM - SG: L07-8 (pp82-105) OMM - TG: L07-8 (pp105-150)</p>

7-2.2 Compare the major components of plant and animal cells.	OMM - SG: L07-8 (pp82-105) OMM - TG: L07-8 (pp105-150)
7-2.3 Compare the body shapes of bacteria (spiral, coccus, and bacillus) and the body structures that protists (euglena, paramecium, amoeba) use for food gathering and locomotion.	HBS - SG: L09 (pp68-75) OMM - SG: L11 (pp132-145) OMM - TG: L11 (pp185-200)
7-2.4 Explain how cellular processes (including respiration, photosynthesis in plants, mitosis, and waste elimination) are essential to the survival of the organism.	EP - RB: (pp07-10) HBS - SG: L12-13 (pp98-119) HBS - TG: L12-13 (pp137-158) L - SG: L11 (pp116-131) L - TG: L11.Exts (p131) OMM - SG: L07-8 (pp82-105) OMM - SG: L10 (pp120-131) OMM - TG: L07-8 (pp105-150) OMM - TG: L10 (pp167-184)
7-2.5 Summarize how genetic information is passed from parent to offspring by using the terms <i>genes</i> , <i>chromosomes</i> , <i>inherited traits</i> , <i>genotype</i> , <i>phenotype</i> , <i>dominant traits</i> , and <i>recessive traits</i> .	EP - RB: (pp36-40) EP - RB: (pp50-56) EP - RB: (pp62) OMM - SG: L08 (pp96-105) OMM - SG: L19 (pp216-235) OMM - TG: L08 (pp131-150) OMM - TG: L19 (pp303-330) PM - TG: L18.Exts (p201)
7-2.6 Use Punnett squares to predict inherited monohybrid traits.	OMM - SG: L19 (pp216-235) OMM - TG: L19 (pp303-330)
7-2.7 Distinguish between inherited traits and those acquired from environmental factors.	EP - RB: (pp11-13) EP - RB: (pp36-40) EP - RB: (pp44-46) EP - RB: (pp54-56) HBS - TG: L04.Exts (p35) OMM - SG: L01 (pp2-11) OMM - SG: L19 (pp216-235) OMM - TG: L01 (pp3-14) OMM - TG: L19 (pp303-330)
Human Body Systems and Disease Standard 7-3: The student will demonstrate an understanding of the functions and interconnections of the major human body systems, including the breakdown in structure or function that disease causes. (Life Science)	
7-3.1 Summarize the levels of structural organization within the human body (including cells, tissues, organs, and systems).	HBS - SG: L01 (pp2-7) HBS - SG: L18 (pp150-159) HBS - TG: L01 (pp3-10) HBS - TG: L07.Exts (pp74-75) HBS - TG: L18 (pp209-218)
7-3.2 Recall the major organs of the human body and their function within their particular body system.	HBS - SG: L01 (pp2-7) HBS - SG: L18 (pp150-159) HBS - SG: L20-23 (pp168-195) HBS - TG: All lessons

<p>7-3.3 Summarize the relationships of the major body systems (including the circulatory, respiratory, digestive, excretory, nervous, muscular, and skeletal systems).</p>	<p>HBS - SG: L01 (pp2-7) HBS - SG: L15 (pp130-137) HBS - SG: L17 (pp144-147) HBS - SG: L18 (pp150-159) HBS - SG: L20-23 (pp168-195) HBS - TG: All lessons</p>
<p>7-3.4 Explain the effects of disease on the major organs and body systems (including infectious diseases such as colds and flu, AIDS, and athlete's foot and noninfectious diseases such as diabetes, Parkinson's, and skin cancer).</p>	<p>HBS - SG: L09 (pp68-75) HBS - SG: L16 (pp138-143) HBS - TG: L05.Exts (p52) HBS - TG: L08.Exts (p85) HBS - TG: L09 (pp103-112) HBS - TG: L12.Exts (pp147-148) HBS - TG: L16 (pp183-190) HBS - TG: L19.Exts (p225) OMM - SG: L15 (pp180-187) OMM - TG: L15 (pp253-266)</p>
<p>Ecology: The Biotic and Abiotic Environment Standard 7-4: The student will demonstrate an understanding of how organisms interact with and respond to the biotic and abiotic components of their environment. (Earth Science, Life Science)</p>	
<p>7-4.1 Summarize the characteristics of the levels of organization within ecosystems (including populations, communities, habitats, niches, and biomes).</p>	<p>OMM - TG: L12.Exts (p207)</p>
<p>7-4.2 Illustrate energy flow in food chains, food webs, and energy pyramids</p>	<p>ES - TG: L07.Exts (pp92-93) HBS - SG: L13 (pp110-119) HBS - TG: L13 (pp153-158) L - SG: L11 (pp116-131) L - TG: L11.Exts (p131)</p>
<p>7-4.3 Explain the interaction among changes in the environment due to natural hazards (including landslides, wildfires, and floods), changes in populations, and limiting factors (including climate and the availability of food and water, space, and shelter).</p>	<p>CE - SG: L24 (pp264-273) CE - TG: L09.Exts (p132) CE - TG: L24 (pp329-346) EP - RB: (pp24-25) EP - TG: L02.Exts (p24) ES - SG: L17 (pp268-289) ES - TG: L17 (pp269-276) OMM - SG: L06 (pp64-81) OMM - SG: L12 (pp146-155) OMM - TG: L01.Exts (p12) OMM - TG: L05.Exts (pp69-70) OMM - TG: L10.Exts (pp175-176) OMM - TG: L12 (pp201-218)</p>
<p>7-4.4 Explain the effects of soil quality on the characteristics of an ecosystem.</p>	<p>CE - SG: L17 (pp194-197) CE - TG: L17 (pp233-256) OMM - TG: L05.Exts (pp69-70) OMM - TG: L14.Exts (p247)</p>
<p>7-4.5 Summarize how the location and movement of water on Earth's surface through groundwater zones and surface-water drainage basins, called watersheds, are important to ecosystems and to human activities.</p>	

7-4.6 Classify resources as renewable or nonrenewable and explain the implications of their depletion and the importance of conservation.	EMM - SG: L04 (pp26-35) TP - TG: L08.Exts (pp122-123) TP - TG: L13.Exts (pp167-168)
The Chemical Nature of Matter Standard 7-5: The student will demonstrate an understanding of the classifications and properties of matter and the changes that matter undergoes. (Physical Science)	
7-5.1 Recognize that matter is composed of extremely small particles called atoms.	PM - TG: L21.Exts (p251)
7-5.2 Classify matter as element, compound, or mixture on the basis of its composition.	L - TG: L10.Exts (p124) PM - SG: L01 (pp2-13) PM - SG: L11 (pp98-105) PM - SG: L12 (pp106-111) PM - SG: L14 (pp116-121) PM - SG: L15 (pp122-129) PM - SG: L17-22 (pp140-207) PM - TG: L01 (pp3-14) PM - TG: L11 (pp125-134) PM - TG: L12 (pp135-142) PM - TG: L14 (pp153-160) PM - TG: L15 (pp161-168) PM - TG: L16.Exts (p178) PM - TG: L17-22 (pp179-274) PM - TG: L23.Exts (p284) TP - TG: L11 (pp149-156)
7-5.3 Compare the physical properties of metals and nonmetals.	OMM - TG: L05.Exts (pp69-70) PM - SG: L22-23 (pp198-217) PM - TG: L22-23 (pp263-294)
7-5.4 Use the periodic table to identify the basic organization of elements and groups of elements (including metals, nonmetals, and families).	PM - SG: L21 (pp186-197) PM - TG: L21 (pp241-260)
7-5.5 Translate chemical symbols and the chemical formulas of common substances to show the component parts of the substances (including NaCl [table salt], H ₂ O [water], C ₆ H ₁₂ O ₆ [simple sugar], O ₂ [oxygen gas], CO ₂ [carbon dioxide], and N ₂ [nitrogen gas]).	
7-5.6 Distinguish between acids and bases and use indicators (including litmus paper, pH paper, and phenolphthalein) to determine their relative pH.	OMM - TG: L10.Exts (pp175-176)
7-5.7 Identify the reactants and products in chemical equations.	PM - SG: L22 (pp198-207) PM - TG: L22 (pp263-274)
7-5.8 Explain how a balanced chemical equation supports the law of conservation of matter.	PM - SG: L22 (pp198-207) PM - SG: L25 (pp224-229) PM - TG: L22 (pp263-274) PM - TG: L25 (pp303-312)
7-5.9 Compare physical properties of matter (including melting or boiling point, density, and color) to the chemical property of reactivity with a certain substance (including the ability to burn or to rust).	HBS - TG: L03.Exts (p24) PM - SG: L18 (pp150-161) PM - SG: L19 (pp162-167) PM - SG: L21-23 (pp186-217) PM - TG: L18 (pp193-208) PM - TG: L19 (pp209-226) PM - TG: L21-23 (pp241-294)

7-5.10 Compare physical changes (including changes in size, shape, and state) to chemical changes that are the result of chemical reactions (including changes in color or temperature and formation of a precipitate or gas).	PM - SG: L06 (pp56-63) PM - SG: L18 (pp150-161) PM - SG: L20 (pp170-185) PM - SG: L24 (pp218-223) PM - TG: L06 (pp65-78) PM - TG: L17.Exts (p185) PM - TG: L18 (pp193-208) PM - TG: L20 (pp227-240) PM - TG: L22.Exts (p270) PM - TG: L24 (pp295-302)
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GRADE 8

Standards and Indicators	Curriculum Location
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Scientific Inquiry

Standard 8-1: The student will demonstrate an understanding of technological design and scientific inquiry, including process skills, mathematical thinking, controlled investigative design and analysis, and problem solving.

8-1.1 Design a controlled scientific investigation.	CE - SG: L17 (pp194-197) CE - SG: L24 (pp264-273) CE - SG: L25 (pp274-282) CE - TG: L02.Exts (p23) CE - TG: L03.Exts (pp35-36) CE - TG: L06.Exts (pp77-78) CE - TG: L14.Exts (pp193-194) CE - TG: L17 (pp233-256) CE - TG: L18.Exts (pp262-263) CE - TG: L23.Exts (pp325-326) CE - TG: L24 (pp329-346) CE - TG: L25 (pp347-372) EECD - SG: L04 (pp36-45) EECD - SG: L07 (pp70-83) EECD - SG: L08 (pp84-93) EECD - SG: L13 (pp134-141) EECD - SG: L15 (pp156-167) EECD - SG: L17 (pp174-185) EECD - SG: L24 (pp244-251) EECD - TG: L02.Exts (pp35-36) EECD - TG: L04 (pp49-60) EECD - TG: L07 (pp93-110) EECD - TG: L08 (pp111-122) EECD - TG: L13 (pp181-204) EECD - TG: L15 (pp213-226) EECD - TG: L16.Exts (pp236-237) EECD - TG: L17 (pp240-248) EECD - TG: L23.Exts (p312) EECD - TG: L24 (pp313-326) EMM - SG: L17 (pp164-173) EMM - SG: L22 (pp226-236) EMM - TG: L07 (pp75-84) EMM - TG: L12 (pp147-156) EMM - TG: L16 (pp185-202) EMM - TG: L17 (pp203-216) EMM - TG: L22 (pp247-254) ES - SG: L22 (pp340-343) ES - TG: L10.Exts (p152) ES - TG: L20.Exts (p297) ES - TG: L22 (pp311-326) HBS - SG: L09 (pp68-75) HBS - SG: L10 (pp76-89)
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	<p>HBS - SG: L23 (pp190-195) HBS - TG: L06.Exts (p63) HBS - TG: L08-10 (pp81-130) HBS - TG: L17 (pp191-208) HBS - TG: L19.Exts (p225) HBS - TG: L23 (pp261-276) L - SG: L03 (pp32-39) L - SG: L07 (pp68-81) L - SG: L15 (pp154-165) L - SG: L19 (pp214-223) L - SG: L21 (pp230-243) L - SG: L22 (pp244-251) L - TG: L03 (pp37-48) L - TG: L07 (pp83-98) L - TG: L15 (pp181-194) L - TG: L19 (pp247-274) L - TG: L21 (pp295-304) L - TG: L22 (pp305-312) OMM - SG: L15 (pp180-187) OMM - SG: L20 (pp236-243) OMM - TG: L15 (pp253-266) OMM - TG: L20 (pp331-350) PM - TG: L04.Exts (p45) PM - TG: L07.Exts (p86) PM - TG: L13.Exts (p148)</p>
<p>8-1.2 Recognize the importance of a systematic process for safely and accurately conducting investigations.</p>	<p>CE - SG: All lessons CE - TG: All lessons EECD - SG: All lessons EECD - TG: (pp xxxvii - xxxix) EECD - TG: All lessons EMM - SG: All lessons EMM - TG: (pp xxxiii - xxxv) EMM - TG: All lessons ES - SG: All lessons ES - TG: (pp xxxiv - xxxvi) ES - TG: All lessons HBS - SG: All lessons except L01 and L09 HBS - TG: (pp xxxii - xxxiv) HBS - TG: All lessons except L01 L - SG: All lessons L - TG: (pp xxxiv - xxxv) L - TG: All lessons OMM - SG: All lessons OMM - TG: (pp xxxiv-xxxv) OMM - TG: All lessons PM - SG: All lessons PM - TG: All lessons</p>

8-1.3 Construct explanations and conclusions from interpretations of data obtained during a controlled scientific investigation.

CE - SG: L12 (pp134-153)
CE - SG: L13 (pp154-163)
CE - SG: L15 (pp170-189)
CE - SG: L17 (pp194-197)
CE - SG: L22-25 (pp240-282)
CE - TG: L06.Exts (pp77-78)
CE - TG: L12 (pp163-176)
CE - TG: L13 (pp177-186)
CE - TG: L15 (pp197-218)
CE - TG: L17 (pp233-256)
CE - TG: L22-256(pp303-372)
EECD - SG: L01-4 (pp2-45)
EECD - SG: L06-8 (pp58-93)
EECD - SG: L10 (pp104-117)
EECD - SG: L11 (pp118-121)
EECD - SG: L15 (pp156-167)
EECD - SG: L17 (pp174-185)
EECD - SG: L20 (pp210-213)
EECD - SG: L23 (pp232-243)
EECD - SG: L24 (pp244-251)
EECD - TG: L01-4 (pp3-60)
EECD - TG: L06-8 (pp77-122)
EECD - TG: L10 (pp143-156)
EECD - TG: L11 (pp157-168)
EECD - TG: L15 (pp213-226)
EECD - TG: L17 (pp240-248)
EECD - TG: L20-24 (pp277-326)
EMM - SG: L07 (pp62-71)
EMM - SG: L10 (pp92-97)
EMM - SG: L13 (pp120-129)
EMM - SG: L15 (pp140-147)
EMM - TG: L04 (pp37-46)
EMM - TG: L07 (pp75-84)
EMM - TG: L10 (pp107-130)
EMM - TG: L13 (pp157-166)
EMM - TG: L15 (pp177-184)
EMM - TG: L16 (pp185-202)
EMM - TG: L18 (pp217-228)
EMM - TG: L19 (pp229-234)
EMM - TG: L20.Exts (p238)
ES - SG: L03-4 (pp22-61)
ES - SG: L22 (pp340-343)
ES - TG: L03-4 (pp21-52)
ES - TG: L22 (pp311-326)
HBS - SG: L03 (pp14-23)
HBS - SG: L06 (pp40-49)
HBS - SG: L09 (pp68-75)
HBS - SG: L14 (pp120-129)
HBS - SG: L21 (pp174-181)
HBS - TG: L03 (pp19-28)
HBS - TG: L06 (pp57-68)
HBS - TG: L09 (pp103-112)
HBS - TG: L14 (pp159-172)
HBS - TG: L20.Exts (p239)
HBS - TG: L21 (pp245-252)
L - SG: L12 (pp132-137)
L - SG: L13 (pp138-141)
L - SG: L20 (pp224-227)
L - SG: L25 (pp284-293)
L - TG: L09.Exts (p115)
L - TG: L12 (pp137-152)

	<p>L - TG: L13 (pp153-168) L - TG: L25 (pp335-348) OMM - SG: L15 (pp180-187) OMM - TG: L15 (pp253-266) PM - SG: L03-4 (pp24-37) PM - SG: L08-9 (pp74-83) PM - SG: L13-14 (pp112-121) PM - SG: L16-17 (pp130-149) PM - SG: L19 (pp162-167) PM - SG: L23-24 (pp208-223) PM - SG: L26 (pp230-235) PM - TG: L03-4 (pp27-48) PM - TG: L08-9 (pp91-112) PM - TG: L13-14 (pp143-160) PM - TG: L16-17 (pp169-192) PM - TG: L19 (pp209-226) PM - TG: L23-24 (pp275-302) PM - TG: L26 (pp313-332)</p>
<p>8-1.4 Generate questions for further study on the basis of prior investigations.</p>	<p>CE - SG: L01 (pp2-11) CE - SG: L12 (pp134-153) CE - SG: L14 (pp164-169) CE - SG: L17 (pp194-197) CE - SG: L19 (pp210-223) CE - SG: L23-25 (pp252-282) CE - TG: L01 (pp3-16) CE - TG: L12 (pp163-176) CE - TG: L14 (pp187-196) CE - TG: L17 (pp233-256) CE - TG: L19 (pp265-278) CE - TG: L23-25 (pp217-372) ES - SG: L01 (pp2-11) ES - SG: L02 (pp12-21) ES - SG: L21 (pp334-339) ES - SG: L22 (pp340-343) ES - TG: L01 (pp3-10) ES - TG: L02 (pp11-20) ES - TG: L21 (pp309-310) ES - TG: L22 (pp311-326) L - SG: L01 (pp2-19) L - TG: L01 (pp3-20)</p>

8-1.6 Use appropriate tools and instruments (including convex lenses, plane mirrors, color filters, prisms, and slinky springs) safely and accurately when conducting a controlled scientific investigation.

CE - SG: L12 (pp134-153)
 CE - SG: L14 (pp164-169)
 CE - SG: L16 (pp190-193)
 CE - SG: L22 (pp240-251)
 CE - SG: L23 (pp252-263)
 CE - TG: L12 (pp163-176)
 CE - TG: L14 (pp187-196)
 CE - TG: L16 (pp219-232)
 CE - TG: L22 (pp303-316)
 CE - TG: L23 (pp217-328)
 EECD - SG: L01 (pp2-11)
 EECD - SG: L05-7 (pp46-83)
 EECD - SG: L09 (pp94-103)
 EECD - SG: L11 (pp118-121)
 EECD - SG: L12 (pp122-133)
 EECD - SG: L14-18 (pp144-195)
 EECD - SG: L22 (pp224-231)
 EECD - TG: (pp xxxvii - xxxix)
 EECD - TG: L01 (pp3-22)
 EECD - TG: L05-7 (pp61-110)
 EECD - TG: L09 (pp123-142)
 EECD - TG: L11 (pp157-168)
 EECD - TG: L12 (pp169-180)
 EECD - TG: L14-19 (pp205-276)
 EECD - TG: L22 (pp299-304)
 EECD - TG: L23 (pp305-312)
 EMM - SG: L01-13 (pp2-129)
 EMM - SG: L16 (pp148-161)
 EMM - SG: L18-21 (pp174-2257)
 EMM - TG: (pp xxxiii - xxxv)
 EMM - TG: L01-13 (pp3-166)
 EMM - TG: L16 (pp185-202)
 EMM - TG: L18-21 (pp217-246)
 ES - SG: All lessons except L01
 ES - TG: (pp xxxiv - xxxvi)
 ES - TG: All lessons
 HBS - SG: All lessons except L01, L02, and L09
 HBS - TG: (pp xxxii - xxxiv)
 HBS - TG: All lessons except L01 and L08
 L - SG: All lessons
 L - TG: (pp xxxiv - xxxv)
 L - TG: All lessons
 OMM - SG: All lessons except L01
 OMM - TG: (pp xxxiv-xxxv)
 OMM - TG: All lessons except L01
 PM - SG: All lessons except L10
 PM - TG: All lessons except L10

<p>8-1.7 Use appropriate safety procedures when conducting investigations.</p>	<p>CE - SG: L19 (pp210-223) CE - SG: L22 (pp240-251) CE - TG: (pp xxxiii - xxxv) CE - TG: L19 (pp265-278) CE - TG: L22 (pp303-316) EECD - SG: L01 (pp2-11) EECD - SG: L05 (pp46-57) EECD - SG: L11-12 (pp118-133) EECD - SG: L14-19 (pp144-209) EECD - SG: L22-23 (pp224-243) EECD - TG: (pp xxxvii - xxxix) EECD - TG: L01 (pp3-22) EECD - TG: L05 (pp61-76) EECD - TG: L11-12 (pp157-180) EECD - TG: L14-19 (pp205-276) EECD - TG: L22-23 (pp299-312) EMM - SG: All lessons EMM - TG: (pp xxxiii - xxxv) EMM - TG: All lessons except L14, L15, L17 ES - SG: All lessons except L01 ES - TG: (pp xxxiv - xxxvi) ES - TG: All lessons HBS - SG: All lessons except L01, L02, L09 HBS - TG: (pp xxxii - xxxiv) HBS - TG: All lessons except L01, L08, L09 L - SG: All lessons L - TG: (pp xxxiv - xxxv) L - TG: All lessons except L13 OMM - SG: All lessons except L01 OMM - TG: (pp xxxiv-xxxv) OMM - TG: All lessons except L01 PM - SG: All lessons except L10 PM - TG: (pp xxxi - xxxiii) PM - TG: All lessons except L10</p>
<p>Earth’s Biological History Standard 8-2: The student will demonstrate an understanding of Earth’s biological diversity over time. (Life Science, Earth Science)</p>	
<p>8-2.1 Explain how biological adaptations of populations enhance their survival in a particular environment.</p>	<p>ES - TG: L10.Exts (p152) HBS - TG: L22.Exts (p258) OMM - SG: L06 (pp64-81) OMM - SG: L08 (pp96-105) OMM - SG: L13 (pp158-171) OMM - TG: L06 (pp73-104) OMM - TG: L10.Exts (pp175-176) OMM - TG: L13 (pp219-236) OMM - TG: L18.Exts (pp299-300)</p>
<p>8-2.2 Summarize how scientists study Earth’s past environment and diverse life-forms by examining different types of fossils (including molds, casts, petrified fossils, preserved and carbonized remains of plants and animals, and trace fossils).</p>	<p>ES - SG: L18 (pp290-311) ES - TG: L18 (pp277-286) HBS - TG: L18.Exts (pp215-216)</p>

8-2.3 Explain how Earth’s history has been influenced by catastrophes (including the impact of an asteroid or comet, climatic changes, and volcanic activity) that have affected the conditions on Earth and the diversity of its life-forms.	CE - SG: L19 (pp210-223) CE - SG: L23-25 (pp252-282) CE - TG: L18.Exts (pp262-263) CE - TG: L19 (pp265-278) CE - TG: L23-25 (pp217-372) ES - SG: L18 (pp290-311) ES - TG: L18 (pp277-286) L - SG: L21 (pp230-243)
8-2.4 Recognize the relationship among the units—era, epoch, and period—into which the geologic time scale is divided.	ES - SG: L18 (pp290-311) ES - TG: L18 (pp277-286)
8-2.5 Illustrate the vast diversity of life that has been present on Earth over time by using the geologic time scale.	ES - SG: L18 (pp290-311) ES - TG: L18 (pp277-286) HBS - TG: L18.Exts (pp215-216)
8-2.6 Infer the relative age of rocks and fossils from index fossils and the ordering of the rock layers.	ES - SG: L18 (pp290-311) ES - TG: L18 (pp277-286)
8-2.7 Summarize the factors, both natural and man-made, that can contribute to the extinction of a species.	
Earth’s Structure and Processes Standard 8-3: The student will demonstrate an understanding of materials that determine the structure of Earth and the processes that have altered this structure. (Earth Science)	
8-3.1 Summarize the three layers of Earth—crust, mantle, and core—on the basis of relative position, density, and composition.	CE - SG: L10 (pp114-119) CE - SG: L14-18 (pp164-209) CE - TG: L10 (pp143-148) CE - TG: L14-18 (pp187-264) PM - SG: L05 (pp38-55)
8-3.2 Explain how scientists use seismic waves—primary, secondary, and surface waves—and Earth’s magnetic fields to determine the internal structure of Earth.	
8-3.3 Infer an earthquake’s epicenter from seismographic data.	CE - SG: L11-13 (pp120-163) CE - TG: L11-13 (pp149-186)
8-3.4 Explain how igneous, metamorphic, and sedimentary rocks are interrelated in the rock cycle.	CE - SG: L21-22 (pp232-251) CE - TG: L2-22 (pp293-316)
8-3.5 Summarize the importance of minerals, ores, and fossil fuels as Earth resources on the basis of their physical and chemical properties.	EMM - TG: L04.Exts (pp41-42)
8-3.6 Explain how the theory of plate tectonics accounts for the motion of the lithospheric plates, the geologic activities at the plate boundaries, and the changes in landform areas over geologic time.	CE - SG: L10 (pp114-119) CE - SG: L13-17 (pp154-197) CE - TG: L10 (pp143-148) CE - TG: L13-17 (pp177-256) ES - SG: L13 (pp174-199) ES - TG: L13 (pp197-208) PM - SG: L05 (pp38-55)
8-3.7 Illustrate the creation and changing of landforms that have occurred through geologic processes (including volcanic eruptions and mountain-building forces).	CE - SG: All lessons CE - TG: All lessons ES - SG: L13 (pp174-199) ES - TG: L13 (pp197-208)

8-3.8 Explain how earthquakes result from forces inside Earth.	CE - SG: L08 (pp96-101) CE - SG: L10-13 (pp114-163) CE - SG: L15-17 (pp170-197) CE - TG: L08 (pp103-126) CE - TG: L10-13 (pp143-186) CE - TG: L15-17 (pp197-256)
8-3.9 Identify and illustrate geologic features of South Carolina and other regions of the world through the use of imagery (including aerial photography and satellite imagery) and topographic maps.	CE - SG: L02 (pp12-25) CE - TG: L02 (pp17-26) L - SG: L09 (pp92-107) L - SG: L16 (pp166-185)
Astronomy: Earth and Space Systems Standard 8-4: The student will demonstrate an understanding of the characteristics, structure, and predictable motions of celestial bodies. (Earth Science)	
8-4.1 Summarize the characteristics and movements of objects in the solar system (including planets, moons, asteroids, comets, and meteors).	ES - SG: All lessons except L09, L14, and L16 ES - TG: All lessons
8-4.2 Summarize the characteristics of the surface features of the Sun: photosphere, corona, sunspots, prominences, and solar flares.	ES - SG: L02 (pp12-21) ES - SG: L07 (pp88-101) ES - SG: L08 (pp102-121) ES - TG: L02 (pp11-20) ES - TG: L03.Exts (p33) ES - TG: L04.Exts (pp45-46) ES - TG: L06.Exts (p81) ES - TG: L07 (pp83-96) ES - TG: L08 (pp97-120) ES - TG: L09 (pp121-146) ES - TG: L11 (pp159-180) L - SG: L02 (pp20-31)
8-4.3 Explain how the surface features of the Sun may affect Earth.	ES - SG: L02 (pp12-21) ES - SG: L07 (pp88-101) ES - SG: L08 (pp102-121) ES - TG: L02 (pp11-20) ES - TG: L03.Exts (p33) ES - TG: L04.Exts (pp45-46) ES - TG: L06.Exts (p81) ES - TG: L07 (pp83-96) ES - TG: L08 (pp97-120) ES - TG: L09 (pp121-146) ES - TG: L11 (pp159-180) L - SG: L02 (pp20-31)
8-4.4 Explain the motions of Earth and the Moon and the effects of these motions as they orbit the Sun (including day, year, phases of the Moon, eclipses, and tides).	ES - SG: L02 (pp12-21) ES - SG: L05 (pp62-73) ES - SG: L06 (pp74-87) ES - SG: L16 (pp244-265) ES - TG: L02 (pp11-20) ES - TG: L05 (pp53-72) ES - TG: L06 (pp73-82) ES - TG: L16 (pp245-268) L - SG: L05 (pp48-57) L - TG: L05.Exts (p65)

<p>8-4.5 Explain how the tilt of Earth’s axis affects the length of the day and the amount of heating on Earth’s surface, thus causing the seasons of the year.</p>	<p>CE - SG: L03 (pp26-41) CE - SG: L07 (pp80-95) CE - TG: L01.Exts (pp10-11) CE - TG: L03 (pp27-44) CE - TG: L07 (pp83-102) ES - SG: L02-4 (pp12-61) ES - SG: L06 (pp74-87) ES - SG: L08 (pp102-121) ES - TG: L02-4 (pp11-52) ES - TG: L06 (pp73-82) ES - TG: L08 (pp97-120) OMM - TG: L10.Exts (pp175-176)</p>
<p>8-4.6 Explain how gravitational forces are influenced by mass and distance.</p>	<p>ES - SG: L15 (pp216-243) ES - TG: L15 (pp221-244)</p>
<p>8-4.7 Explain the effects of gravity on tides and planetary orbits.</p>	<p>EMM - TG: L05.Exts (pp53-54) ES - SG: L14-16 (pp200-265) ES - TG: L14-16 (pp209-268)</p>
<p>8-4.8 Explain the difference between mass and weight by using the concept of gravitational force.</p>	<p>EMM - SG: L05 (pp36-47) EMM - TG: L05 (pp47-58) ES - SG: L14 (pp200-215) ES - TG: L14 (pp209-220) PM - SG: L02 (pp14-23) PM - TG: L02 (pp15-26)</p>
<p>8-4.9 Recall the Sun’s position in the universe, the shapes and composition of galaxies, and the distance measurement unit (light year) needed to identify star and galaxy locations.</p>	<p>ES - SG: L02 (pp12-21) ES - SG: L07 (pp88-101) ES - SG: L11 (pp146-159) ES - SG: L22 (pp340-343) ES - TG: L02 (pp11-20) ES - TG: L04.Exts (pp45-46) ES - TG: L07 (pp83-96) ES - TG: L11 (pp159-180) ES - TG: L22 (pp311-326) L - SG: L03 (pp32-39)</p>
<p>8-4.10 Compare the purposes of the tools and the technology that scientists use to study space (including various types of telescopes, satellites, space probes, and spectroscopes).</p>	<p>CE - SG: L02 (pp12-25) CE - TG: L02 (pp17-26) ES - SG: L08 (pp102-121) ES - SG: L16 (pp244-265) ES - TG: L05.Exts (p64) ES - TG: L07.Exts (pp92-93) ES - TG: L08 (pp97-120) ES - TG: L16 (pp245-268) L - SG: L09 (pp92-107) L - SG: L16 (pp166-185) L - SG: L22 (pp244-251) L - TG: L22.Exts (pp310-311)</p>
<p>Forces and Motion Standard 8-5: The student will demonstrate an understanding of the effects of forces on the motion of an object. (Physical Science)</p>	

<p>8-5.1 Use measurement and time-distance graphs to represent the motion of an object in terms of its position, direction, or speed.</p>	<p>CE - SG: L11-12 (pp120-153) CE - SG: L15 (pp170-189) CE - TG: L11-12 (pp149-176) CE - TG: L15 (pp197-218) EMM - SG: L01 (pp2-11) EMM - SG: L05-13 (pp36-129.) EMM - SG: L15-22 (pp140-236) EMM - TG: L01 (pp3-22) EMM - TG: L05-13 (pp47-166) EMM - TG: L15-22 (pp177-254) ES - SG: L15 (pp216-243) ES - TG: L15 (pp221-244)</p>
<p>8-5.2 Use the formula for average speed, $v = d/t$, to solve real-world problems.</p>	<p>EMM - SG: L06 (pp48-61) EMM - SG: L18 (pp174-187) EMM - SG: L19 (pp188-199) EMM - SG: L21 (pp214-225) EMM - TG: L01.Exts (p14) EMM - TG: L06.Exts (pp68-69) EMM - TG: L18 (pp217-228) EMM - TG: L19 (pp229-234) EMM - TG: L21 (pp239-246)</p>
<p>8-5.3 Analyze the effects of forces (including gravity and friction) on the speed and direction of an object.</p>	<p>CE - SG: L11 (pp120-133) CE - SG: L12 (pp134-153) CE - SG: L15 (pp170-189) CE - TG: L11 (pp149-162) CE - TG: L12 (pp163-176) CE - TG: L15 (pp197-218) EMM - SG: L01 (pp2-11) EMM - SG: L05-13 (pp36-129) EMM - SG: L15-22 (pp140-236) EMM - TG: L01 (pp3-22) EMM - TG: L05-13 (pp47-166) EMM - TG: L15-22 (pp177-254) ES - SG: L15 (pp216-243) ES - TG: L15 (pp221-244)</p>
<p>8-5.4 Predict how varying the amount of force or mass will affect the motion of an object.</p>	<p>EMM - SG: L21 (pp214-225) EMM - TG: L18.Exts (p224) ES - TG: L15 (pp221-244)</p>
<p>8-5.5 Analyze the resulting effect of balanced and unbalanced forces on an object's motion in terms of magnitude and direction.</p>	
<p>8-5.6 Summarize and illustrate the concept of inertia.</p>	<p>CE - SG: L12 (pp134-153) CE - TG: L12 (pp163-176) EMM - SG: L21 (pp214-225) EMM - TG: L18.Exts (p224) ES - SG: L15 (pp216-243) ES - TG: L15 (pp221-244)</p>

<p>Waves Standard 8-6: The student will demonstrate an understanding of the properties and behaviors of waves. (Physical Science)</p>	
<p>8-6.1 Recall that waves transmit energy but not matter.</p>	<p>CE - SG: L11 (pp120-133) CE - SG: L14 (pp164-169) CE - SG: L17 (pp194-197) CE - TG: L11 (pp149-162) CE - TG: L12.Exts (p172) CE - TG: L14 (pp187-196) CE - TG: L17 (pp233-256) EMM - SG: L18 (pp174-187) L - SG: L09 (pp92-107) L - SG: L12 (pp132-137) L - TG: L07.Exts (p92) L - TG: L09.Exts (p115) L - TG: L19.Exts (p257)</p>
<p>8-6.2 Distinguish between mechanical and electromagnetic waves.</p>	<p>CE - SG: L11 (pp120-133) CE - SG: L14 (pp164-169) CE - SG: L17 (pp194-197) CE - TG: L11 (pp149-162) CE - TG: L12.Exts (p172) CE - TG: L14 (pp187-196) CE - TG: L17 (pp233-256) EMM - SG: L18-19 (pp174-199) EMM - TG: L19 (pp229-234) ES - SG: L07 (pp88-101) ES - TG: L07 (pp83-96) L - SG: L09-12 (pp92-137) L - TG: L07.Exts (p92) L - TG: L08.Exts (p105) L - TG: L09 (pp107-118) L - TG: L10 (pp119-126) L - TG: L17.Exts (p216) L - TG: L19.Exts (p257)</p>
<p>8-6.3 Summarize factors that influence the basic properties of waves (including frequency, amplitude, wavelength, and speed).</p>	<p>CE - SG: L11-12 (pp120-153) CE - SG: L14 (pp164-169) CE - SG: L17 (pp194-197) CE - TG: L11-12 (pp149-176) CE - TG: L14 (pp187-196) CE - TG: L17 (pp233-256) EMM - SG: L18 (pp174-187) L - SG: L07 (pp68-81) L - SG: L09 (pp92-107) L - SG: L12 (pp132-137) L - TG: L07.Exts (p92) L - TG: L09 (pp107-118) L - TG: L19.Exts (p257)</p>

<p>8-6.4 Summarize the behaviors of waves (including refraction, reflection, transmission, and absorption).</p>	<p>CE - SG: L03 (pp26-41) CE - SG: L11-12 (pp120-153) CE - SG: L14 (pp164-169) CE - SG: L17 (pp194-197) CE - TG: L03 (pp27-44) CE - TG: L11-12 (pp149-176) CE - TG: L14 (pp187-196) CE - TG: L17 (pp233-256) EMM - SG: L18 (pp174-187) L - SG: L07 (pp68-81) L - SG: L09 (pp92-107) L - SG: L12 (pp132-137) L - SG: L16 (pp166-185) L - SG: L19 (pp214-223) L - TG: L07.Exts (p92) L - TG: L09 (pp107-118) L - TG: L19 (pp247-274)</p>
<p>8-6.5 Explain hearing in terms of the relationship between sound waves and the ear.</p>	<p>CE - TG: L14.Exts (pp193-194) EMM - SG: L15 (pp140-147) EMM - TG: L15 (pp177-184)</p>
<p>8-6.6 Explain sight in terms of the relationship between the eye and the light waves emitted or reflected by an object.</p>	<p>HBS - TG: L10.Exts (p122) L - SG: L07-10 (pp68-115) L - SG: L12 (pp132-137) L - SG: L17 (pp186-199) L - SG: L19 (pp214-223) L - SG: L24 (pp266-297) L - TG: L08-9 (pp99-118) L - TG: L17 (pp205-224) L - TG: L25-26 (pp335-367)</p>
<p>8-6.7 Explain how the absorption and reflection of light waves by various materials result in the human perception of color.</p>	<p>L - SG: L01 (pp2-19) L - SG: L08-9 (pp82-107) L - SG: L11-12 (pp116-137) L - SG: L20 (pp224-227) L - TG: L01 (pp3-20) L - TG: L08-9 (pp99-118) L - TG: L11-12 (pp127-152) L - TG: L17.Exts (p216)</p>
<p>8-6.8 Compare the wavelength and energy of waves in various parts of the electromagnetic spectrum (including visible light, infrared, and ultraviolet radiation).</p>	<p>EMM - SG: L19 (pp188-199) EMM - TG: L19 (pp229-234) ES - SG: L07 (pp88-101) ES - TG: L07 (pp83-96) L - SG: L09-11 (pp92-131) L - TG: L08.Exts (p105) L - TG: L09-10 (pp107-126) L - TG: L17.Exts (p216)</p>