

Carolina™ Curriculum Publishing Correlation to




Tennessee Curriculum Standards 2009-2010 Science Grades K-8



Carolina Curriculum Publishing Correlation to Tennessee Curriculum Standards - Science Grades K–8

This document is an alignment of The STC PROGRAM™, GEMS Kits®, GEMS® Space Science for Grades 3–5, Building Blocks of Science® and The Zula Patrol® units with the Tennessee Curriculum Standards, grades K–8. Although each unit was developed for use at a specific grade level, there is some flexibility in grade placement. Below is a chart of the STC PROGRAM™.

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

- The  is made up of 2 research-based, inquiry-centered curriculums:
- Science and Technology for Children® (STC®) for grades K–6; and
 - Science and Technology Concepts for Middle Schools™ (STC/MS™) for grades 6–8

	STC PROGRAM™	GEMS®	Building Blocks of Science™ The Zula Patrol®
Kindergarten	Solids and Liquids	Terrarium Habitats	Understanding My Body Launch Pad for Learning
1 st Grade	Changes Organisms Weather		
2 nd Grade	The Life Cycle of Butterflies Soils		Sky Watchers
3 rd Grade	Animal Studies Rocks and Minerals Sound	Secret Formulas	
4 th Grade	Electric Circuits	Aquatic Habitats Hot Water Warm Homes	Measure It!
5 th Grade	Ecosystems	Dry Ice Investigations Ocean Currents Space Science Sequence	Understanding Cells and DNA

	STC PROGRAM™	GEMS®
6 th Grade	Catastrophic Events (Part I) Earth in Space Energy, Machines, and Motion (Part III)	Electric Circuits
7 th Grade	Catastrophic Events (Part II & III) Energy, Machines, and Motion (Part I and II)	Invisible Universe
8 th Grade	Properties of Matter	Earth, Moon, and Stars Life Though Time



Great Explorations in Math and Science® (GEMS Kits®) are standards-based PreK-8 math and science supplemental kits. The kits have been tested for specific grade levels but can also be used at lower or higher levels.



GEMS® Space Science is a research-based science curriculum that teaches fundamental concepts in space science.



Building Blocks of Science® is a K-5 supplementary science curriculum that can be used as stand-alone instruction.



The Zula Patrol® is a supplementary curriculum that provides PreK–3 students with age appropriate activities to explore basic science, mathematics, and literacy.

Kindergarten : Inquiry

Conceptual Strand

Understandings about scientific inquiry and the ability to conduct inquiry are essential for living in the 21st century.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0007.Inq.1 Observe the world of familiar objects using the senses and tools.	All Units
GLE 0007.Inq.2 Ask questions, make logical predictions, plan investigations, and represent data.	All Units
GLE 0007.Inq.3 Explain the data from an investigation.	All Units

Kindergarten : Technology & Engineering

Conceptual Strand

Society benefits when engineers apply scientific discoveries to design materials and processes that develop into enabling technologies.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0007.T/E.K-2.1 Recognize that both natural materials and human-made tools have specific characteristics that determine their use.	
GLE 0007.T/E.2 Apply engineering design and creative thinking to solve practical problems.	Solids and Liquids TG: L08 (pp63-68) TG: L09.Exts (p73)

Kindergarten - Life Science

Kindergarten : Standard 1 - Cells

Conceptual Strand 1

All living things are made of cells that perform functions necessary for life.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0007.1.1 Recognize that many things are made of parts.	

Kindergarten : Standard 2 - Interdependence

Conceptual Strand 2

All life is interdependent and interacts with the environment.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0007.2.1 Recognize that some things are living and some are not.	Organisms TG: L01 (pp3-10) TG: L15-17 (pp155-182)
GLE 0007.2.2 Know that people interact with their environment through their senses.	Understanding My Body TG: Act 01 (pp 1-7) Solids and Liquids TG: L05.Exts (pp43-45)

Kindergarten : Standard 3 - Flow of Matter and Energy

Conceptual Strand 3

Matter and energy flow through the biosphere.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0007.3.1 Recognize that living things require water, food, and air.	Ant Homes Under the Ground TG: Act01 (pp7-13) Organisms TG: L03-04 (pp21-52) TG: L06-10 (pp65-118) TG: L13 (pp135-148) TG: L15-16 (pp155-178) Terrarium Habitats TG: Act01 (pp5-13) TG: Act02 (pp15-21) Tree Homes TG: Act04 (pp41-49) Weather TG: L10.Exts (p95)

Kindergarten: Standard 4 - Heredity

Conceptual Strand 4

Plants and animals reproduce and transmit hereditary information between generations.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0007.4.1 Observe how plants and animals change as they grow.	Ant Homes Under the Ground TG: Act04 (pp41-47) Comparing and Measuring TG: L12.Exts (p84) Eggs, Eggs, Everywhere TG: Act01 (pp5-15) TG: Act02 (pp17-29) Ladybugs

	<p>TG: Act03-05 (pp43-71)</p> <p>Organisms</p> <p>TG: L03 (pp21-36)</p> <p>TG: L03.Exts (pp29-30)</p> <p>TG: L06 (pp65-74)</p> <p>TG: L10.Exts (p115)</p> <p>TG: L11-13 (pp119-148)</p> <p>TG: L16.Exts (pp172-173)</p> <p>Penguins and Their Young</p> <p>TG: Act02 (pp15-31)</p> <p>TG: Act03 (pp33-37)</p> <p>Tree Homes</p> <p>TG: Act05 (pp51-63)</p> <p>Weather</p> <p>TG: L10.Exts (p95)</p>
GLE 0007.4.2 Observe that offspring resemble their parents.	<p>Understanding My Body</p> <p>TG: Act 04 (pp 1-4)</p>

Kindergarten : Standard 5 - Biodiversity and Change

Conceptual Strand 5
A rich variety of complex organisms have developed in response to a continually changing environment.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0007.5.1 Compare the basic features of plants and animals.	<p>Ant Homes Under the Ground</p> <p>TG: Act01-05 (pp7-73)</p> <p>Comparing and Measuring</p> <p>TG: L12.Exts (p84)</p> <p>Eggs, Eggs, Everywhere</p> <p>TG: Act01-04 (pp5-47)</p> <p>Ladybugs</p> <p>TG: Act01-05 (pp13-71)</p> <p>Organisms</p> <p>TG: L01 (pp3-10)</p> <p>TG: L04 (pp37-52)</p> <p>TG: L06-10 (pp65-118)</p> <p>TG: L13-17 (pp135-182)</p> <p>Penguins and Their Young</p> <p>TG: Act02 (pp15-31)</p> <p>TG: Act03 (pp33-37)</p> <p>Terrarium Habitats</p> <p>TG: Act03-05 (pp23-48)</p> <p>Tree Homes</p> <p>TG: Act01-06 (pp15-68)</p>

Kindergarten - Earth and Space Science

Kindergarten : Standard 6 - The Universe

Conceptual Strand 6

The cosmos is vast and explored well enough to know its basic structure and operational principles.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
<p>GLE 0007.6.1 Know the different objects that are visible in the day and night sky.</p>	<p>Launch Pad for Learning LV1 – See Like a Space Probe LV1 – Keep a Cloud Calendar LV1 – Paint Picture Perfect Skies LV1 – Home Mission – Become a Star LV2 – Collect Cloud Data LV2 – Create a Cloud in a Jar LV2 – Home Mission: Spin the Morphing Moon Wheel Sky Watchers TG: Act 01 (pp 1-3) TG: Act 02 (pp 1-6) TG: Act 04 (pp 1-7)</p>

Kindergarten : Standard 7 – The Earth

Conceptual Strand 7

Major geologic events that occur over eons or brief moments in time continually shape and reshape the surface of the Earth, resulting in continuous global change.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
<p>GLE 0007.7.1 Identify non-living materials found on the surface of the earth.</p>	
<p>GLE 0007.7.2 Recognize that some objects are manmade and that some occur naturally.</p>	

Kindergarten : Standard 8 - The Atmosphere

Conceptual Strand 8

The earth is surrounded by an active atmosphere and an energy system that controls the distribution of life, local weather, climate, and global temperature.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
<p>GLE 0007.8.2 Collect daily weather data at different times of the year.</p>	<p>Launch Pad for Learning LV1 – Become a Water-Dust Partner LV1 – Create a Cloud Calendar LV1 – Paint Picture Perfect Skies</p>

	LV2 – Create a Cloud in a Jar LV2 – Keep a Cloud Calendar LV2 – Make a Rain Gauge Weather TG: L03-05 (pp25-54) TG: L07 (pp63-70) TG: L10 (pp91-100) TG: L15 (pp135-140)
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Kindergarten - Physical Science

Kindergarten : Standard 9 - Matter

Conceptual Strand 9
The composition and structure of matter is known, and it behaves according to principles that are generally understood.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0007.9.1 Describe an object by its observable properties.	Launch Pad for Learning LV1 – Create Clayscapes LV2 – Crash into the Moon Understanding My Body TG: Act 01 (pp 1-7) Solids and Liquids TG: L01-17 (pp3-140)
GLE 0007.9.2 Identify objects and materials as solids or liquids.	Launch Pad for Learning LV1 – Free the Frozen Bear LV2 – Create a Cloud in a Jar Solids and Liquids TG: L01-17 (pp3-140)

Kindergarten : Standard 10 - Energy

Conceptual Strand 10
Various forms of energy are constantly being transformed into other types without any net loss of energy from the system.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0007.10.1 Identify the sun as the source of heat and light.	Launch Pad for Learning LV1 – Chase and Trace Shadows LV1 – Free the Frozen Bears LV2 – Wear and Share Sun Necklaces Sky Watchers TG: Act 03 (pp 1-6)
GLE 0007.10.2 Investigate the effect of the sun on a variety of materials.	Launch Pad for Learning LV1 – Reach for the Rainbows LV1 – Shed Some Light on Earth’s Moon Sky Watchers TG: Act 03 (pp 1-6)

Kindergarten : Standard 11 - Motion

Conceptual Strand 11

Objects move in ways that can be observed, described, predicted, and measured.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0007.11.1 Explore different ways that objects move.	Eggs, Eggs, Everywhere TG: Act04 (pp41-47) Launch Pad for Learning LV1 – Chase and Trace Shadows LV1 – Shed Some Light on Earth’s Moon LV2 – Spin the Morphing Moon Wheel LV2 – Construct Super Sun Towers Solids and Liquids TG: L03 (pp19-28) TG: L04 (pp29-40) TG: L05.Exts (pp43-45) TG: L06.Exts (pp51-52) TG: L09 (pp69-80)

Grade 1 : Inquiry

Conceptual Strand

Understandings about scientific inquiry and the ability to conduct inquiry are essential for living in the 21st century.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0107.Inq.1 Observe the world of familiar objects using the senses and tools.	All Units
GLE 0107.Inq.2 Ask questions, make logical predictions, plan investigations, and represent data.	All Units
GLE 0107.Inq.3 Explain the data from an investigation.	All Units

Grade 1 : Technology & Engineering

Conceptual Strand

Society benefits when engineers apply scientific discoveries to design materials and processes that develop into enabling technologies.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0007.T/E.1 Recognize that both natural materials and human-made tools have specific characteristics that determine their use.	
GLE 0007.T/E.2 Apply engineering design and creative thinking to solve practical problems.	

Grade 1 - Life Science

Grade 1 : Standard 1 - Cells

Conceptual Strand 1

All living things are made of cells that perform functions necessary for life.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0107.1.1 Recognize that living things have parts that work together.	
GLE 0107.1.2 Use tools to examine major body parts and plant structures.	Comparing and Measuring TG: L12.Exts (p84) Organisms TG: L02-03 (pp11-36) TG: L06 (pp65-74)

	TG: L13 (pp135-148) TG: L15 (pp155-168) TG: L17 (pp179-182) Soils TG: L09-10 (pp87-108) TG: L16 (pp159-168) Tree Homes TG: Act01 (pp15-23)
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Grade 1 : Standard 2 - Interdependence

Conceptual Strand 2

All life is interdependent and interacts with the environment.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0107.2.1 Distinguish between living and non-living things in an environment.	Organisms TG: L01 (pp3-10) TG: L15-17 (pp155-182) Soils TG: L01-10 (pp3-108) TG: L13 (pp125-138) The Life Cycle of Butterflies TG: L10 (pp63-68)

Grade 1 : Standard 3 - Flow of Matter and Energy

Conceptual Strand 3

Matter and energy flow through the biosphere.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0107.3.1 Recognize that plants and animals are living things that grow and change over time.	Organisms TG: L01 (pp3-10) TG: L17 (pp179-182)

Grade 1: Standard 4 - Heredity

Conceptual Strand 4

Plants and animals reproduce and transmit hereditary information between generations.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0107.4.1 Observe and illustrate the life cycle of animals.	Ant Homes Under the Ground TG: Act04 (pp41-47) Eggs, Eggs, Everywhere TG: Act01-02 (pp5-29) Ladybugs TG: Act03-05 (pp43-71) Organisms TG: L10.Exts (p115) TG: L11-12 (pp119-134) TG: L16.Exts (pp172-173) The Life Cycle of Butterflies

	TG: L01-09 (pp3-62) TG: L11-16 (pp69-96) TG: App-A (pp97-100) TG: App-B (pp101-110)
GLE 0107.4.2 Describe ways in which animals closely resemble their parents.	Understanding My Body TG: Act 04 (pp 1-4)

Grade 1 : Standard 5 - Biodiversity and Change

Conceptual Strand 5
A rich variety of complex organisms have developed in response to a continually changing environment.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0107.5.1 Investigate how plants and animals can be grouped according to their habitats.	Ladybugs TG: Act02 (pp33-41) Organisms TG: L04 (pp37-52) TG: L11-12 (pp119-134) Terrarium Habitats TG: Act01-05 (pp5-48) Tree Homes TG: Act01-06 (pp15-68) The Life Cycle of Butterflies TG: L01-03 (pp3-22) TG: L10 (pp63-68) TG: L12 (pp75-80) TG: L14-15 (pp85-94)
GLE 0107.5.2 Recognize that some organisms which formerly lived are no longer found on earth.	

Grade 1 - Earth and Space Science

Grade 1 : Standard 6 - The Universe

Conceptual Strand 6
The cosmos is vast and explored well enough to know its basic structure and operational principles.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0107.6.1 Compare and describe features of the day and night sky.	Launch Pad for Learning LV2 – Create a Cloud in a Jar LV2 – Keep a Cloud Calendar LV2 – Make a Rain Gauge Sky Watchers TG: Act 01 (pp 1-3) TG: Act 02 (pp 1-6)

<p>GLE 0107.6.2 Realize that the sun can only be seen during the day, while the moon can be seen at night and sometimes during the day.</p>	<p>Launch Pad for Learning LV2 – Construct Super Sun Towers LV2 – “Snap” Some Sun Prints LV2 – Wear and Share Sun Necklaces LV2 – Crash Into the Moon LV2 – Solve the Mystery of Moonshadows Sky Watchers TG: Act 01 (pp 1-3) TG: Act 02 (pp 1-6)</p>
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Grade 1 : Standard 7 – The Earth

Conceptual Strand 7
Major geologic events that occur over eons or brief moments in time continually shape and reshape the surface of the Earth, resulting in continuous global change.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
<p>GLE 0107.7.1 Realize that water, rocks, soil, living organisms, and man-made objects make up the earth’s surface.</p>	
<p>GLE 0107.7.2 Classify earth materials according to their physical properties.</p>	

Grade 1 : Standard 8 - The Atmosphere

Conceptual Strand 8
The earth is surrounded by an active atmosphere and an energy system that controls the distribution life, local weather, climate, and global temperature.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
<p>GLE 0107.8.1 Gather and interpret daily weather data.</p>	<p>Launch Pad for Learning LV2 – Create a Cloud in a Jar LV2 – Keep a Cloud Calendar LV2 – Make a Rain Gauge Weather TG: L03-05 (pp25-54) TG: L07 (pp63-70) TG: L10 (pp91-100) TG: L15 (pp135-140)</p>

Grade 1 - Physical Science

Grade 1 : Standard 9 - Matter

Conceptual Strand 9

The composition and structure of matter is known, and it behaves according to principles that are generally understood.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
<p>GLE 0107.9.1 Classify objects according to their physical properties.</p>	<p>Balancing and Weighing TG: L03.Exts (p20) TG: L08.Exts (p67) TG: L09.Exts (p76) TG: L10.Exts (pp84-85) TG: L11.Exts (p94) TG: L12.Exts (p104) TG: L13.Exts (pp110-111)</p> <p>Changes TG: L01.Exts (pp10-11) TG: L06.Exts (pp67-69) TG: L13.Exts (p123)</p> <p>Solids and Liquids TG: L02-08 (pp11-68) TG: L10-17 (pp81-140)</p>
<p>GLE 0107.9.2 Distinguish between the properties of solids and liquids.</p>	<p>Changes TG: L01 (pp3-20)</p> <p>Solids and Liquids TG: L01-17 (pp3-140)</p>
<p>GLE 0107.9.3 Predict the changes that may occur when different materials are mixed.</p>	<p>Changes TG: L01 (pp3-20) TG: L03-04 (pp31-52) TG: L12-17 (pp111-158)</p> <p>Launch Pad for Learning LV2 – Create a Cloud in a Jar</p>

Grade 1 : Standard 10 - Energy

Conceptual Strand 10

Various forms of energy are constantly being transformed into other types without any net loss of energy from the system.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
<p>GLE 0107.10.1 Investigate the effect of the sun on land, water, and air.</p>	<p>Launch Pad for Learning LV2 – Construct Super Sun Towers LV2 – “Snap” Some Sun Prints LV2 – Wear and Share Sun Necklaces</p> <p>Sky Watchers TG: Act 03 (pp 1-6)</p>

Grade 1 : Standard 11 - Motion

Conceptual Strand 11

Objects move in ways that can be observed, described, predicted, and measured.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0107.11.1 Investigate how forces (push, pull) can move an object or change its direction.	Solids and Liquids TG: L04 (pp29-40)

Grade 1 : Standard 12 - Forces in Nature

Conceptual Strand 12

Everything in the universe exerts a gravitational force on everything else; there is an interplay between magnetic fields and electrical currents.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0107.12.1 Investigate materials that are attracted to magnets.	Solids and Liquids TG: L07 (pp55-62)

Grade 2 : Inquiry

Conceptual Strand

Understandings about scientific inquiry and the ability to conduct inquiry are essential for living in the 21st century.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0207.Inq.1 Observe the world of familiar objects using the senses and tools.	All Units
GLE 0207.Inq.2 Ask questions, make logical predictions, plan investigations, and represent data.	All Units
GLE 0207.Inq.3 Explain the data from an investigation.	All Units

Grade 2 : Technology & Engineering

Conceptual Strand

Society benefits when engineers apply scientific discoveries to design materials and processes that develop into enabling technologies.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0207.T/E.1 Recognize that both natural materials and human-made tools have specific characteristics that determine their uses.	
GLE 0207.T/E.2 Apply engineering design and creative thinking to solve practical problems	Rocks and Minerals TG: L04.Exts (p32) Solids and Liquids TG: L08 (pp63-68) TG: L09.Exts (p73)

Grade 2 - Life Science

Grade 2: Standard 1 - Cells

Conceptual Strand 1

All living things are made of cells that perform functions necessary for life.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0207.1.1 Recognize that plants and animals are made up of smaller parts and use food, water, and air to survive.	Ant Homes Under the Ground TG: Act01 (pp13-23) Organisms TG: L03-04 (pp21-52) TG: L06-10 (pp65-118) TG: L13 (pp135-148)

	<p>TG: L15-16 (pp155-178)</p> <p>Plant Growth and Development</p> <p>TG: L03-04 (pp13-28)</p> <p>TG: L16.Exts (pp96-97)</p> <p>Soils</p> <p>TG: L09-10 (pp87-108)</p> <p>Terrarium Habitats</p> <p>TG: Act01-02 (pp5-21)</p> <p>The Life Cycle of Butterflies</p> <p>TG: L02-03 (pp11-22)</p> <p>TG: L05-08 (pp29-52)</p> <p>TG: L10-12 (pp63-80)</p> <p>TG: L15-16 (pp89-96)</p> <p>Weather</p> <p>TG: L10.Exts (p95)</p>
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Grade 2 : Standard 2 - Interdependence

Conceptual Strand 2

All life is interdependent and interacts with the environment.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
<p>GLE 0207.2.1 Investigate the habitats of different kinds of local plants and animals.</p>	<p>Ant Homes Under the Ground</p> <p>TG: Act01-05 (pp13-70)</p> <p>TG: Exts (pp70-78)</p> <p>Buzzing a Hive</p> <p>TG: Les03 (pp27-37)</p> <p>On Sandy Shores</p> <p>TG: Act04 (pp59-89)</p> <p>Organisms</p> <p>TG: L04 (pp37-52)</p> <p>TG: L11-12 (pp119-134)</p> <p>Terrarium Habitats</p> <p>TG: Act01-05 (pp5-48)</p> <p>The Life Cycle of Butterflies</p> <p>TG: L01-03 (pp3-22)</p> <p>TG: L12 (pp75-80)</p>
<p>GLE 0207.2.2 Investigate living things found in different places.</p>	<p>Ant Homes Under the Ground</p> <p>TG: Act01-05 (pp13-70)</p> <p>TG: Exts (pp70-78)</p> <p>Buzzing a Hive</p> <p>TG: Les03 (pp27-37)</p> <p>On Sandy Shores</p> <p>TG: Act04 (pp59-89)</p> <p>Organisms</p> <p>TG: L01 (pp3-10)</p> <p>TG: L04 (pp37-52)</p> <p>TG: L11-12 (pp119-134)</p> <p>TG: L17 (pp179-182)</p> <p>Terrarium Habitats</p> <p>TG: Act01-05 (pp5-48)</p> <p>The Life Cycle of Butterflies</p>

	TG: L01-03 (pp3-22) TG: L12 (pp75-80)
GLE 0207.2.3 Identify basic ways that plants and animals depend on each other.	Buzzing a Hive TG: Les04-05 (pp39-59) TG: Exts (p67) Organisms TG: L04.Exts (pp43-45) TG: L11-12 (pp119-134) TG: L14.Exts (pp152-153) Plant Growth and Development TG: L11 (pp61-66) TG: L14.Exts (pp86-87) Terrarium Habitats TG: Act03-05 (pp23-48) The Life Cycle of Butterflies TG: L10 (pp63-68)

Grade 2 : Standard 3 - Flow of Matter and Energy	
Conceptual Strand 3 <i>Matter and energy flow through the biosphere.</i>	
Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0207.3.1 Recognize that animals eat plants or other animals for food.	

Grade 2: Standard 4 - Heredity	
Conceptual Strand 4 <i>Plants and animals reproduce and transmit hereditary information between generations.</i>	
Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0207.4.1 Compare the life cycles of various organisms.	Ant Homes Under the Ground TG: Act04-05 (pp45-70) Buzzing a Hive TG: Les04 (pp39-53) Organisms TG: L10.Exts (p115) TG: L11-12 (pp119-134) TG: L16.Exts (pp172-173) The Life Cycle of Butterflies TG: L01-09 (pp3-62) TG: L11-16 (pp69-96) TG: App-A (pp97-100) TG: App-B (pp101-110)
GLE 0207.4.2 Realize that parents pass along physical characteristics to their offspring.	Understanding My Body TG: Act 04 (pp 1-4)

Grade 2 : Standard 5 - Biodiversity and Change

Conceptual Strand 5

A rich variety of complex organisms have developed in response to a continually changing environment.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
<p>GLE 0207.5.1 Investigate the relationship between an animal’s characteristics and the features of the environment where it lives.</p>	<p>Ant Homes Under the Ground TG: Act02-03 (pp25-43) TG: Act05 (pp61-70)</p> <p>Buzzing a Hive TG: Exts (p67)</p> <p>On Sandy Shores TG: Act04 (pp59-89)</p> <p>Terrarium Habitats TG: Act03-05 (pp23-48)</p> <p>The Life Cycle of Butterflies TG: L01-06 (pp3-38) TG: L08-16 (pp47-96)</p> <p>Weather TG: L10.Exts (p95)</p>
<p>GLE 0207.5.2 Draw conclusions from fossils about organisms that lived in the past.</p>	

Grade 2 - Earth and Space Science

Grade 2 : Standard 6 - The Universe

Conceptual Strand 6

The cosmos is vast and explored well enough to know its basic structure and operational principles.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
<p>GLE 0207.6.1 Realize that the sun is our nearest star and that its position in the sky appears to change.</p>	<p>Sky Watchers TG: Act 02 (pp 1-6) TG: Act 03 (pp 1-6)</p>
<p>GLE 0207.6.2 Make observations of changes in the moon’s appearance over time.</p>	<p>Sky Watchers TG: Act 04 (pp 1-7)</p>

Grade 2 : Standard 7 – The Earth

Conceptual Strand 7

Major geologic events that occur over eons or brief moments in time continually shape and reshape the surface of the Earth, resulting in continuous global change.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
<p>GLE 0207.7.1 Compare and record the components of a variety of soil types.</p>	<p>Soils TG: L12.Exts (p118)</p>

	Terrarium Habitats TG: Act01 (pp5-13)
GLE 0207.7.2 Describe rocks according to their origin, size, shape, texture, and color.	On Sandy Shores TG: Act02 (pp27-43) Rocks and Minerals TG: L02-03 (pp13-26) TG: L15 (pp103-112) TG: L17 (pp127-128)
GLE 0207.7.3 Differentiate between renewable and non-renewable resources.	

Grade 2 : Standard 8 - The Atmosphere

Conceptual Strand 8

The earth is surrounded by an active atmosphere and an energy system that controls the distribution life, local weather, climate, and global temperature.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0207.8.1 Associate temperature patterns with seasonal changes.	

Grade 2 - Physical Science

Grade 2 : Standard 9 - Matter

Conceptual Strand 9

The composition and structure of matter is known, and it behaves according to principles that are generally understood.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0207.9.1 Use tools to observe the physical properties of objects.	Balancing and Weighing TG: L02-17 (pp9-138) Sky Watchers TG: Act 03 (pp 1-6) Plant Growth and Development TG: L01 (pp3-8) Weather TG: L05-09 (pp43-90)
GLE 0207.9.2 Investigate how temperature changes affect the state of matter.	Bubble Festival TG: Act10 (pp108-113) Changes TG: L01-03 (pp3-42) Chemical Tests TG: L10 (pp93-100) Solids and Liquids TG: L10.Exts (p85) TG: L12.Exts (p98) TG: L13.Exts (pp104-105)

	TG: L15.Exts (p124) TG: L17 (pp137-140) Weather TG: L05.Exts (pp47-48) TG: L08.Exts (p76) TG: L13.Exts (p126)
GLE 0207.9.3 Recognize that air takes up space.	Changes TG: L01 (pp3-20)

Grade 2 : Standard 10 - Energy

Conceptual Strand 10

Various forms of energy are constantly being transformed into other types without any net loss of energy from the system.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0207.10.1 Explain why the sun is the primary source of the earth's energy.	Sky Watchers TG: Act 03 (pp 1-6)

Grade 2 : Standard 11 - Motion

Conceptual Strand 11

Objects move in ways that can be observed, described, predicted, and measured.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0207.11.1 Investigate how vibrating objects produce sound.	Sound TG: L01-02 (pp3-16) TG: L03.Exts (p20) TG: L04-10 (pp23-78) TG: L12-17 (pp85-118)
GLE 0207.11.2 Classify sounds according to their loudness and pitch.	Sound TG: L03 (pp17-22) TG: L04.Exts (pp26-27) TG: L05-06 (pp33-48) TG: L08.Exts (pp61-62) TG: L09-13 (pp67-94) TG: L14.Exts (p98) TG: L15-17 (pp103-118)

Grade 2 : Standard 12 - Forces in Nature

Conceptual Strand 12

Everything in the universe exerts a gravitational force on everything else; there is an interplay between magnetic fields and electrical currents.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0207.12.1 Experiment with magnets to determine that objects can move without being touched.	

GLE 0207.12.2 Realize that things fall toward the ground unless something holds them up.	
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Grade 3 Inquiry

Conceptual Strand

Understandings about scientific inquiry and the ability to conduct inquiry are essential for living in the 21st century.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0307.Inq.1 Explore different scientific phenomena by asking questions, making logical predictions, planning investigations, and recording data.	All Units
GLE 0307.Inq.2 Select and use appropriate tools and simple equipment to conduct an investigation.	All Units
GLE 0307.Inq.3 Organize data into appropriate tables, graphs, drawings, or diagrams.	All Units
GLE 0307.Inq.4 Identify and interpret simple patterns of evidence to communicate the findings of multiple investigations.	Bubble Festival TG Act05 (pp80-85) Motion and Design TG L07 (pp65-72) Plant Growth and Development TG L01 (pp3-8) Space Science for Grades 3-5 TG Ses 4.1-4.5 (pp 340-423) The Life Cycle of Butterflies TG L01 (pp3-10) TG L04 (pp23-28) TG L08 (pp47-52) TG L11-12 (pp69-80) TG L15 (pp89-94)
GLE 0307.Inq.5 Recognize that people may interpret the same results in different ways.	All Units
GLE 0307.Inq.6 Compare the results of an investigation with what scientists already accept about this question.	Understanding Cells and DNA TG Act 02 (pp 27-33) STC Book Land and Water (pp07-09)

Grade 3 Technology & Engineering

Conceptual Strand

Society benefits when engineers apply scientific discoveries to design materials and processes that develop into enabling technologies.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0307.T/E.1 Describe how tools, technology, and inventions help to answer questions and solve problems.	Electric Circuits TG L04 Exts (p24) TG L08 Exts (p47) GEMS Electric Circuits TG Ses01 (pp13-33) Motion and Design TG L02 (pp15-24) STC Book Electric Circuits (pp07-12), (pp17-21), (pp36-38), (pp56-59) STC Book Motion and Design (pp20-22), (pp29-40)
GLE 0307.T/E.2 Recognize that new tools, technology, and inventions are always being developed.	Bubble Festival TG Act04 (pp74-79)
GLE 0307.T/E.3 Identify appropriate materials, tools, and machines that can extend or enhance the ability to solve a specified problem.	STC Book Electric Circuits (pp17-21) STC Book Land and Water (pp32-35)
GLE 0307.T/E.4 Recognize the connection between scientific advances, new knowledge, and the availability of new tools and technologies.	
GLE 0307.T/E.5 Apply a creative design strategy to solve a particular problem generated by societal needs and wants.	Motion and Design TG L01-02 (pp3-24) TG L05 (pp47-56) TG L09 (pp81-90) TG L15-17 (pp139-156) STC Book Motion and Design (pp29-31), (pp54-57), (p63)

Grade 3 - Life Science

Grade 3 Standard 1 - Cells

Conceptual Strand 1

All living things are made of cells that perform functions necessary for life.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0307.1.1 Use magnifiers to make observations of specific plant and body parts and describe their functions.	Aquatic Habitats TG Act02-03 (pp25-43) TG Exts (pp70-78) Animal Studies TG L03-06 (pp21-74) TG L08 (pp87-96)

TG L13.Exts (p138)
 TG L14-15 (pp143-164)
 TG L16.Exts (p167)
Buzzing a Hive
 TG Les01-02 (pp5-25)
Human Bodyworks
 TG Ext 01 (p 21)
 TG Ext 04 (p 41)
 TG Ext 12 (p 83)
Understanding Cells and DNA
 TG Pre Assessment (pp 17-19)
 TG Ext 02 (p 32)
 TG Post Assessment (pp 85-91)
Chemical Tests
 TG L03.Exts (pp28-29)
 TG L08.Exts (p82)
Land and Water
 TG L05-06 (pp51-74)
 TG L14.Exts (p156)
On Sandy Shores
 TG Act02 (pp27-43)
Plant Growth and Development
 TG L02 (pp9-12)
 TG L04-05 (pp25-32)
 TG L08-10 (pp43-60)
 TG L13-14 (pp71-88)
Schoolyard Ecology
 TG Act02 (pp21-31)
 TG Act04 (pp43-49)
Soils
 TG L10 (pp97-108)
 TG L16.Exts (pp164-166)
Sound
 TG L04.Exts (pp26-27)
 TG L14.Exts (p98)
Terrarium Habitats
 TG Act03-05 (pp23-48)
The Life Cycle of Butterflies
 TG L01-11 (pp3-74)
 TG L13-16 (pp81-96)
 TG App-B (pp101-110)
STC Book Animal Studies (pp06-08), (pp16-19)
STC Book Electric Circuits (pp11-12), (pp47-49)
STC Book Motion and Design (pp07-09)

Grade 3 Standard 2 - Interdependence

Conceptual Strand 2

All life is interdependent and interacts with the environment

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0307.2.1 Categorize things as living or non-living.	Animal Studies TG L02 (pp11-20) Understanding Cells and DNA TG Act 01 (pp 21-26) On Sandy Shores TG Act01 (pp13-25) Soils TG L01-10 (pp3-108) TG L13 (pp125-138) The Life Cycle of Butterflies TG L10 (pp63-68)
GLE 0307.2.2 Explain how organisms with similar needs compete with one another for resources.	

Grade 3 Standard 3 - Flow of Matter and Energy

Conceptual Strand 3

Matter and energy flow through the biosphere.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0307.3.1 Describe how animals use food to obtain energy and materials for growth and repair.	

Grade 3 Standard 4 - Heredity

Conceptual Strand 4

Plants and animals reproduce and transmit hereditary information between generations.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0307.4.1 Identify the different life stages through which plants and animals pass.	Aquatic Habitats TG Act04-05 (pp45-70) Animal Studies TG L04.Exts (pp41-42) TG L07.Exts (pp79-80) TG L09.Exts (pp101-102) Buzzing a Hive TG Les04 (pp39-53) Plant Growth and Development TG L10 (pp55-60) TG L12 (pp67-70)

	<p>TG L15-17 (pp89-100)</p> <p>Soils</p> <p>TG L16.Exts (pp164-166)</p> <p>The Life Cycle of Butterflies</p> <p>TG L01-09 (pp3-62)</p> <p>TG L11-16 (pp69-96)</p> <p>TG App-A (pp97-100)</p> <p>TG App-B (pp101-110)</p> <p>STC Book Animal Studies (pp06-08), (pp12-15), (pp35-39)</p>
<p>GLE 0307.4.2 Recognize common human characteristics that are transmitted from parents to offspring.</p>	

<h2 style="margin: 0;">Grade 3 Standard 5 - Biodiversity and Change</h2>	
<h3 style="margin: 0;">Conceptual Strand 5</h3> <p style="margin: 0; text-align: center;"><i>A rich variety of complex organisms have developed in response to a continually changing environment.</i></p>	
<h4 style="margin: 0;">Grade Level Expectations</h4>	<h4 style="margin: 0;">Correlation to Carolina Curriculum Publishing</h4>
<p>GLE 0307.5.1 Explore the relationship between an organism’s characteristics and its ability to survive in a particular environment.</p>	<p>Aquatic Habitats</p> <p>TG Act02-03 (pp25-43)</p> <p>TG Act05 (pp61-70)</p> <p>Animal Studies</p> <p>TG L01-16 (pp03-168)</p> <p>Buzzing a Hive</p> <p>TG Les01-02 (pp5-25)</p> <p>TG Exts (p67)</p> <p>Human Bodyworks</p> <p>TG Ext 01 (p 21)</p> <p>TG Ext 04 (p 41)</p> <p>TG Ext 12 (p 83)</p> <p>Land and Water</p> <p>TG L14.Exts (p156)</p> <p>On Sandy Shores</p> <p>TG Act04 (pp59-89)</p> <p>Plant Growth and Development</p> <p>TG L02 (pp9-12)</p> <p>TG L04-05 (pp25-32)</p> <p>TG L08-10 (pp43-60)</p> <p>TG L13-14 (pp71-88)</p> <p>Schoolyard Ecology</p> <p>TG Act02 (pp21-31)</p> <p>TG Act04 (pp43-49)</p> <p>Soils</p> <p>TG L10 (pp97-108)</p> <p>TG L16.Exts (pp164-166)</p> <p>Sound</p> <p>TG L04.Exts (pp26-27)</p> <p>TG L14.Exts (p98)</p>

	Terrarium Habitats TG Act03-05 (pp23-48) The Life Cycle of Butterflies TG L01-16 (pp3-96) TG App-B (pp101-110) STC Book Animal Studies (pp06-11), (pp16-19), (pp30-32), (pp45-49) STC Book Electric Circuits (pp11-12), (pp47-49) STC Book Motion and Design (pp07-09), (pp14-17)
GLE 0307.5.2 Classify organisms as thriving, threatened, endangered, or extinct.	STC Book Animal Studies (pp35-37), (pp40-42)

Grade 3 - Earth and Space Science

Grade 3 Standard 6 - The Universe

Conceptual Strand 6
The cosmos is vast and explored well enough to know its basic structure and operational principles.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0307.6.1 Identify and compare the major components of the solar system.	Space Science for Grades 3-5 TG Ses 1 Pre Assessment (p 1) TG Ses 1 Post Assessment (pp 1-2) TG Ses 1.2 (pp 46-55) TG Ses 1.4-1.9 (pp 70-167) TG Ses 2.4 Reading (pp 1-2) TG Ses 3.1-3.3 (pp 286-323)

Grade 3 Standard 7 – The Earth

Conceptual Strand 7
Major geologic events that occur over eons or brief moments in time continually shape and reshape the surface of the Earth, resulting in continuous global change.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0307.7.1 Use information and illustrations to identify the earth’s major landforms and water bodies.	Land and Water TG L01-05 (pp3-62) TG L09.Exts (p103) TG L10-12 (pp109-142) STC Book Land and Water (pp41-49)
GLE 0307.7.2 Recognize that rocks can be composed of one or more minerals.	Rocks and Minerals TG L01-02 (pp3-18) TG L03.Exts (p22) TG L04 (pp27-34) TG L16-17 (pp113-128) STC Book Land and Water (pp15-18)
GLE 0307.7.3 Distinguish between natural and manmade objects.	

GLE 0307.7.4 Design a simple investigation to demonstrate how earth materials can be conserved or recycled.	Land and Water TG L14-15 (pp153-172) STC Book Land and Water (pp36-38)
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Grade 3 Standard 8 - The Atmosphere

Conceptual Strand 8
The earth is surrounded by an active atmosphere and an energy system that controls the distribution life, local weather, climate, and global temperature.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0307.8.1 Recognize that there are a variety of atmospheric conditions that can be measured.	Space Science for Grades 3-5 TG Ses 1.1 (pp 28-45)
GLE 0307.8.2 Use tools such as the barometer, thermometer, anemometer, and rain gauge to measure atmospheric conditions.	Measure It! TG L04-05 (pp 39-47) STC Book Electric Circuits (pp56-59) STC Book Land and Water (pp59-61)
GLE 0307.8.3 Identify cloud types associated with particular atmospheric conditions.	Space Science for Grades 3-5 TG Ses 1.6 (pp 104-121)
GLE 0307.8.4 Predict the weather based on cloud observations.	Space Science for Grades 3-5 TG Ses 1.6 (pp 104-121)

Grade 3 - Physical Science

Grade 3 Standard 9 - Matter

Conceptual Strand 9
The composition and structure of matter is known, and it behaves according to principles that are generally understood.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0307.9.1 Design a simple experiment to determine how the physical properties of matter can change over time and under different conditions.	Changes TG L01 (pp3-20) TG L03-04 (pp31-52) TG L12-14 (pp111-136) TG L16-17 (pp147-158) Chemical Tests TG L10.Exts (p97) TG L11.Exts (pp103-104) TG L15.Exts (pp140-141) TG L16.Exts (pp152-153) TG L17 (pp155-158) Liquid Explorations TG Act03 (pp25-31)

<p>GLE 0307.9.2 Investigate different types of mixtures.</p>	<p>Bubble Festival TG Act01-02 (pp54-65) TG Act04-12 (pp74-124) Changes TG L04-08 (pp43-84) TG L09.Exts (pp89-90) TG L10-13 (pp95-128) TG L15.Exts (p143) TG L16 (pp147-154) Chemical Tests TG L04 (pp35-44) TG L05.Exts (p50) TG L06 (pp57-68) TG L17 (pp155-158) Involving Dissolving TG Act01-04 (pp5-35) Secret Formulas TG Ses01 (pp15-25) TG Ses03 (pp33-41) Soils TG L08 (pp73-86)</p>
<p>GLE 0307.9.3 Describe different methods to separate mixtures.</p>	<p>Changes TG L04 (pp43-52) TG L06.Exts (pp67-69) TG L10-11 (pp95-110) Chemical Tests TG L05.Exts (p50) TG L06.Exts (p61) TG L17 (pp155-158)</p>

<h2 style="background-color: #0056b3; color: white; padding: 5px;">Grade 3 Standard 10 - Energy</h2>	
<h3 style="background-color: #d3d3d3; padding: 5px;">Conceptual Strand 10</h3> <p style="text-align: center; font-style: italic;">Various forms of energy are constantly being transformed into other types without any net loss of energy from the system.</p>	
<h4 style="text-align: center;">Grade Level Expectations</h4>	<h4 style="text-align: center;">Correlation to Carolina Curriculum Publishing</h4>
<p>GLE 0307.10.1 Investigate phenomena that produce heat.</p>	
<p>GLE 0307.10.2 Design and conduct an experiment to investigate the ability of different materials to conduct heat.</p>	<p>Changes TG L02.Exts (pp26-27)</p>

Grade 3 Standard 11 - Motion

Conceptual Strand 11

Objects move in ways that can be observed, described, predicted, and measured.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0307.11.1 Explore how the direction of a moving object is affected by unbalanced forces.	Motion and Design TG L04-05 (pp35-56)
GLE 0307.11.2 Recognize the relationship between the mass of an object and the force needed to move it.	
GLE 0307.11.3 Investigate how the pitch and volume of a sound can be changed.	Human Bodyworks TG Act 12 (pp 81-84) Sound TG L03 (pp17-22) TG L04.Exts (pp26-27) TG L05-06 (pp33-48) TG L08.Exts (pp61-62) TG L09-13 (pp67-94) TG L14.Exts (p98) TG L15-17 (pp103-118)

Grade 3 Standard 12 - Forces in Nature

Conceptual Strand 12

Everything in the universe exerts a gravitational force on everything else; there is an interplay between magnetic fields and electrical currents.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0307.12.1 Explore how magnets attract objects made of certain metals.	Rocks and Minerals TG L11.Exts (p80)

Grade 4 Inquiry

Conceptual Strand

Understandings about scientific inquiry and the ability to conduct inquiry are essential for living in the 21st century.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0407.Inq.1 Explore different scientific phenomena by asking questions, making logical predictions, planning investigations, and recording data.	All Units
GLE 0407.Inq.2 Select and use appropriate tools and simple equipment to conduct an investigation.	All Units
GLE 0407.Inq.3 Organize data into appropriate tables, graphs, drawings, or diagrams.	All Units
GLE 0407.Inq.4 Identify and interpret simple patterns of evidence to communicate the findings of multiple investigations.	Microworlds TG L02 (pp9-14) TG L04 (pp21-24) Motion and Design TG L07 (pp65-72) Plant Growth and Development TG L01 (pp3-8) Space Science for Grades 3-5 TG Ses 4.1-4.5 (pp 340-423)
GLE 0407.Inq.5 Recognize that people may interpret the same results in different ways.	All Units
GLE 0407.Inq.6 Compare the results of an investigation with what scientists already accept about this question.	Cells and DNA TG Act 02 (pp 27-33) STC Book Land and Water (pp07-09)

Grade 4 Technology & Engineering

Conceptual Strand

Society benefits when engineers apply scientific discoveries to design materials and processes that develop into enabling technologies.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0407.T/E.1 Describe how tools, technology, and inventions help to answer questions and solve problems.	Electric Circuits TG L04 Exts (p24) TG L08 Exts (p47) Floating and Sinking TG L15 (pp119-128) Motion and Design TG L02 (pp15-24) STC Book Electric Circuits (pp07-12), (pp17-21),

	(pp36-38), (pp56-59) STC Book Floating and Sinking (pp11-14), (pp18-26), (pp31-33) STC Book Microworlds (pp07-09) STC Book Motion and Design (pp20-22), (pp29-40), (pp52-57)
GLE 0407.T/E.2 Recognize that new tools, technology, and inventions are always being developed.	STC Book Floating and Sinking (pp31-35), (pp43-45)
GLE 0407.T/E.3 Identify appropriate materials, tools, and machines that can extend or enhance the ability to solve a specified problem.	STC Book Electric Circuits (pp17-21) STC Book Floating and Sinking (pp41-42) STC Book Land and Water (pp32-35)
GLE 0407.T/E.4 Recognize the connection between scientific advances, new knowledge, and the availability of new tools and technologies.	
GLE 0407.T/E.5 Apply a creative design strategy to solve a particular problem generated by societal needs and wants.	Motion and Design TG L01-02 (pp3-24) TG L05 (pp47-56) TG L09 (pp81-90) TG L15-17 (pp139-156) STC Book Floating and Sinking (pp34-35) STC Book Motion and Design (pp29-31), (pp54-57), (p63)

Grade 4 - Life Science

Grade 4 Standard 1 - Cells

Conceptual Strand 1

All living things are made of cells that perform functions necessary for life.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0407.1.1 Recognize that cells are the building blocks of all living things.	Understanding Cells and DNA TG Pre Assessment (pp 17-19) TG Act 01-05 (pp 21-73) TG Post Assessment (pp 85-91) Microworlds TG L11-16 (pp61-86)

Grade 4 Standard 2 - Interdependence

Conceptual Strand 2

All life is interdependent and interacts with the environment.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0407.2.1 Analyze the effects of changes in the environment on the stability of an ecosystem.	

Grade 4 Standard 3 - Flow of Matter and Energy

Conceptual Strand 3

Matter and energy flow through the biosphere.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0407.3.1 Demonstrate that plants require light energy to grow and survive.	Ecosystems TG L03 (pp25-38) Land and Water TG L14.Exts (p156) Microworlds TG L12.Exts (pp69-70) Plant Growth and Development TG L03-04 (pp13-28) TG L16.Exts (pp96-97)
GLE 0407.3.2 Investigate different ways that organisms meet their energy needs.	Aquatic Habitats TG Act04-05 (pp45-70) Ecosystems TG L03-04 (pp25-52) TG L07 (pp75-82) TG L12 (pp117-124) STC Book Animal Studies (pp09-11) STC Book Ecosystems (pp14-19)

Grade 4 Standard 4 - Heredity

Conceptual Strand 4

Plants and animals reproduce and transmit hereditary information between generations.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0407.4.1 Recognize the relationship between reproduction and the continuation of a species.	STC Book Animal Studies (pp45-49)
GLE 0407.4.2 Differentiate between complete and incomplete metamorphosis.	Aquatic Habitats TG Act04-05 (pp45-70) STC Book Animal Studies (pp06-08), (pp38-39)

Grade 4 Standard 5 - Biodiversity and Change

Conceptual Strand 5

A rich variety of complex organisms have developed in response to a continually changing environment.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0407.5.1 Analyze physical and behavioral adaptations that enable organisms to survive in their environment.	Aquatic Habitats TG Act02-03 (pp25-43) TG Act05 (pp61-70) TG Exts (pp70-78) Animal Studies TG L01-16 (pp3-168)

	Human Bodyworks TG Ext 01 (p 21) Plant Growth and Development TG L08.Exts (p44) TG L11 (pp61-66) TG L14.Exts (pp86-87) Schoolyard Ecology TG Act02-04 (pp21-49) STC Book Animal Studies (pp06-19), (pp22-32), (pp45-52) STC Book Ecosystems (pp11-13) STC Book Floating and Sinking (pp51-61) STC Book Motion and Design (pp14-17)
GLE 0407.5.2 Describe how environmental changes caused the extinction of various plant and animal species.	STC Book Ecosystems (pp20-23)

Grade 4 - Earth and Space Science

Grade 4 Standard 6 - The Universe

Conceptual Strand 6
The cosmos is vast and explored well enough to know its basic structure and operational principles.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0407.6.1 Analyze patterns, relative movements, and relationships among the sun, moon, and earth.	Space Science for Grades 3-5 TG Ses 1.1-1.3 (pp 28-69) TG Ses 3 Pre Assessment (pp 1-2) TG Ses 3 Post Assessment (pp 1-2) TG Ses 3 Reading (pp 1-2) TG Ses 3.1-3.4 (pp 286-335) TG Ses 4 Pre Assessment (pp 1-2) TG Ses 4 Post Assessment (pp 1-2) TG Ses 4.1-4.5 (pp 340-423)

Grade 4 Standard 7 – The Earth

Conceptual Strand 7
Major geologic events that occur over eons or brief moments in time continually shape and reshape the surface of the Earth, resulting in continuous global change.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0407.7.1 Investigate how the Earth’s geological features change as a result of erosion (weathering and transportation) and deposition.	Land and Water TG L03-07 (pp29-84) TG L09.Exts (p103) TG L10-16 (pp109-182) STC Book Land and Water (pp07-09), (pp36-38), (pp50-52)

GLE 0407.7.2 Evaluate how some earth materials can be used to solve human problems and enhance the quality of life.	
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Grade 4 Standard 8 - The Atmosphere

Conceptual Strand 8	
<i>The earth is surrounded by an active atmosphere and an energy system that controls the distribution of life, local weather, climate, and global temperature.</i>	
Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0407.8.1 Recognize the major components of the water cycle.	Chemical Tests TG L05.Exts (p50) Land and Water TG L01-03 (pp3-36) TG L06 (pp63-74)
GLE 0407.8.2 Differentiate between weather and climate.	

Grade 4 - Physical Science

Grade 4 Standard 9 - Matter

Conceptual Strand 9	
<i>The composition and structure of matter is known, and it behaves according to principles that are generally understood.</i>	
Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0407.9.1 Collect data to illustrate that the physical properties of matter can be described with tools that measure weight, mass, length, and volume.	
GLE 0407.9.2 Explore different types of physical changes in matter.	Chemical Tests TG L11.Exts (pp103-104) TG L16.Exts (pp152-153) TG L17 (pp155-158) Ecosystems TG L13.Exts (p127) Floating and Sinking TG L06 (pp49-54) Land and Water TG L02.Exts (p19)

Grade 4 Standard 10 - Energy

Conceptual Strand 10

Various forms of energy are constantly being transformed into other types without any net loss of energy from the system.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0407.10.1 Distinguish among heat, radiant, and chemical forms of energy.	Chemical Tests TG L10 (pp93-100) Electric Circuits TG L01-17 (pp3-86) STC Book Electric Circuits (pp07-21), (pp24-44), (pp47-61)
GLE 0407.10.2 Investigate how light travels and is influenced by different types of materials and surfaces.	STC Book Electric Circuits (pp39-41)

Grade 4 Standard 11 - Motion

Conceptual Strand 11

Objects move in ways that can be observed, described, predicted, and measured.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0407.11.1 Recognize that the position of an object can be described relative to other objects or a background.	
GLE 0407.11.2 Design a simple investigation to demonstrate how friction affects the movement of an object.	Motion and Design TG L07.Exts (pp68-69) TG L08 (pp73-80) TG L10-13 (pp91-124) TG L15 (pp139-144) STC Book Motion and Design (pp23-28)
GLE 0407.11.3 Investigate the relationship between the speed of an object and the distance traveled during a certain time period.	Land and Water TG L07 (pp75-84) TG L13 (pp143-152) Motion and Design TG L03-05 (pp25-56) TG L07-09 (pp65-90) TG L15-16 (pp139-152)

Grade 4 Standard 12 - Forces in Nature

Conceptual Strand 12

Everything in the universe exerts a gravitational force on everything else; there is an interplay between magnetic fields and electrical currents.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0407.12.1 Explore the interactions between magnets.	Rocks and Minerals TG L11.Exts (p80)

<p>GLE 0407.12.2 Observe that electrically charged objects exert a pull on other materials.</p>	<p>Electric Circuits TG L02 (pp7-14) TG L08 (pp45-48)</p>
<p>GLE 0407.12.3 Explain how electricity in a simple circuit requires a complete loop through which current can pass.</p>	<p>Electric Circuits TG L01-17 (pp3-86) STC Book Electric Circuits (pp13-16), (pp29-33), (pp39-44)</p>

Grade 5 Inquiry

Conceptual Strand

Understandings about scientific inquiry and the ability to conduct inquiry are essential for living in the 21st century.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0507.Inq.1 Explore different scientific phenomena by asking questions, making logical predictions, planning investigations, and recording data.	All Units
GLE 0507.Inq.2 Select and use appropriate tools and simple equipment to conduct an investigation.	All Units
GLE 0507.Inq.3 Organize data into appropriate tables, graphs, drawings, or diagrams.	All Units
GLE 0507.Inq.4 Identify and interpret simple patterns of evidence to communicate the findings of multiple investigations.	Microworlds TG L02 (pp9-14) TG L04 (pp21-24) Motion and Design TG L07 (pp65-72) Space Science for Grades 3-5 TG Ses 4.1-4.5 (pp 340-423)
GLE 0507.Inq.5 Recognize that people may interpret the same results in different ways.	All Units
GLE 0507.Inq.6 Compare the results of an investigation with what scientists already accept about this question.	Building Blocks of Science Understanding Cells and DNA TG Act 02 (pp 27-33) STC Book Land and Water (pp07-09)

Grade 5 Technology & Engineering

Conceptual Strand

Society benefits when engineers apply scientific discoveries to design materials and processes that develop into enabling technologies.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0507.T/E.1 Describe how tools, technology, and inventions help to answer questions and solve problems.	Electric Circuits TG L04 Exts (p24) TG L08 Exts (p47) Floating and Sinking TG L15 (pp119-128) Motion and Design TG L02 (pp15-24) STC Book Electric Circuits (pp07-12), (pp17-21), (pp36-38), (pp56-59)

	<p>STC Book Motion and Design (pp20-22), (pp29-40), (pp52-57)</p> <p>STC Book Experiments with Plants (pp11-13), (pp41-46)</p> <p>STC Book Floating and Sinking (pp11-14), (pp18-26), (pp31-33)</p> <p>STC Book Magnets and Motors (pp07-08), (pp12-13), (pp28-38), (pp41-44), (pp53-57)</p> <p>STC Book Microworlds (pp07-09)</p>
GLE 0507.T/E.2 Recognize that new tools, technology, and inventions are always being developed.	<p>STC Book Floating and Sinking (pp31-35), (pp43-45)</p> <p>STC Book Magnets and Motors (pp55-57)</p>
GLE 0507.T/E.3 Identify appropriate materials, tools, and machines that can extend or enhance the ability to solve a specified problem.	<p>Magnets and Motors TG L05 (pp27-36)</p> <p>STC Book Electric Circuits (pp17-21)</p> <p>STC Book Floating and Sinking (pp41-42)</p> <p>STC Book Land and Water (pp32-35)</p> <p>STC Book Magnets and Motors (pp33-38)</p>
GLE 0507.T/E.4 Recognize the connection between scientific advances, new knowledge, and the availability of new tools and technologies.	
GLE 0507.T/E.5 Apply a creative design strategy to solve a particular problem generated by societal needs and wants	<p>Motion and Design TG L01-02 (pp3-24) TG L05 (pp47-56) TG L09 (pp81-90) TG L15-17 (pp139-156)</p> <p>STC Book Experiments with Plants (pp50-53)</p> <p>STC Book Floating and Sinking (pp34-35)</p> <p>STC Book Magnets and Motors (pp41-44)</p> <p>STC Book Motion and Design (pp29-31), (pp54-57), (p63)</p>

Grade 5 - Life Science

Grade 5 Standard 1 - Cells

Conceptual Strand 1

All living things are made of cells that perform functions necessary for life.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
<p>GLE 0507.1.1 Distinguish between the basic structures and functions of plant and animal cells.</p>	<p>Understanding Cells and DNA TG Pre Assessment (pp 17-19) TG Ext 02 (p 32) TG Act 03-05 (pp 35-73) TG Post Assessment (pp 85-91)</p> <p>Microworlds TG L11 (pp61-66)</p>

Grade 5 Standard 2 - Interdependence

Conceptual Strand 2

All life is interdependent and interacts with the environment.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
<p>GLE 0507.2.1 Investigate different nutritional relationships among organisms in an ecosystem.</p>	<p>Aquatic Habitats TG Act04-05 (pp45-70)</p> <p>Ecosystems TG L03-04 (pp25-52) TG L07 (pp75-82) TG L12 (pp117-124)</p> <p>STC Book Animal Studies (pp09-11) STC Book Ecosystems (pp14-19)</p>
<p>GLE 0507.2.2 Explain how organisms interact through symbiotic, commensal, and parasitic relationships.</p>	<p>Experiments with Plants TG L06-07 (pp57-70)</p> <p>Microworlds TG L12.Exts (pp69-70) TG L14.Exts (p78)</p> <p>STC Book Experiments with Plants (pp30-33) STC Book Microworlds (pp34-36)</p>
<p>GLE 0507.2.3 Establish the connections between human activities and natural disasters and their impact on the environment.</p>	<p>Human Bodyworks TG Ext 08 (p 64)</p> <p>Ecosystems TG L08-16 (pp83-168)</p> <p>Experiments with Plants TG L02.Exts (p24)</p> <p>Food Chemistry TG L02.Exts (p19)</p> <p>Land and Water TG L14 (pp153-162)</p> <p>Ocean Currents TG Act01-02 (pp9-45)</p> <p>STC Book Animal Studies (pp09-11), (pp40-42) STC Book Ecosystems (pp26-27), (pp31-37), (pp40-42), (pp60-61) STC Book Experiments with Plants (pp20-21), (pp24-25) STC Book Floating and Sinking (pp48-50) STC Book Land and Water (pp36-38)</p>

Grade 5 Standard 3 - Flow of Matter and Energy

Conceptual Strand 3

Matter and energy flow through the biosphere..

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
<p>GLE 0507.3.1 Demonstrate how all living things rely on the process of photosynthesis to obtain energy.</p>	<p>Microworlds TG L12.Exts (pp69-70) STC Book Experiments with Plants (pp07-10)</p>

Grade 5 Standard 4 - Heredity

Conceptual Strand 4

Plants and animals reproduce and transmit hereditary information between generations.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
<p>GLE 0507.4.1 Describe how genetic information is passed from parents to offspring during reproduction.</p>	<p>Understanding Cells and DNA TG Pre Assessment (pp 17-19) Experiments with Plants TG L05-09 (pp51-80) TG L13 (pp101-104) Microworlds TG L13 (pp71-74) STC Book Animal Studies (pp40-42) STC Book Experiments with Plants (pp07-13), (pp36-40), (pp44-46), (pp54-56), (pp60-61)</p>
<p>GLE 0507.4.2 Recognize that some characteristics are inherited while others result from interactions with the environment.</p>	<p>Animal Studies TG L11.Exts (p119) TG L13.Exts (p138) Understanding Cells and DNA TG Pre Assessment (pp 17-19) TG Act 06 (pp 75-79) TG Post Assessment (pp 85-91) STC Book Experiments with Plants (pp11-13), (pp36-40), (pp44-46), (pp50-56)</p>

Grade 5 Standard 5 - Biodiversity and Change

Conceptual Strand 5

A rich variety of complex organisms have developed in response to a continually changing environment.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
<p>GLE 0507.5.1 Investigate physical characteristics associated with different groups of animals.</p>	<p>Animal Studies TG L03-04 (pp21-48) TG L07.Exts (pp79-80) TG L09.Exts (pp101-102) TG L10.Exts (p110) TG L14.Exts (p145) Space Science for Grades 3-5 TG Ses 1.6 (pp 104-121) STC Book Animal Studies (pp06-08), (pp12-19), (pp22-29), (pp35-42), (pp45-49), (pp53-61) STC Book Ecosystems (pp28-30) STC Book Floating and Sinking (pp57-61) STC Book Magnets and Motors (pp23-25) STC Book Microworlds (pp40-43), (pp58-61) STC Book Motion and Design (pp07-09)</p>

GLE 0507.5.2 Analyze fossils to demonstrate the connection between organisms and environments that existed in the past and those that currently exist.	
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Grade 5 - Earth and Space Science

Grade 5 Standard 6 - The Universe

Conceptual Strand 6
The cosmos is vast and explored well enough to know its basic structure and operational principles.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0507.6.1 Compare planets based on their known characteristics.	Space Science for Grades 3-5 TG Ses 1.2 (pp 46-55) TG Ses 1.4-1.9 (pp 70-167)
GLE 0507.6.2 Recognize that charts can be used to locate and identify star patterns.	

Grade 5 Standard 7 – The Earth

Conceptual Strand 7
Major geologic events that occur over eons or brief moments in time continually shape and reshape the surface of the Earth, resulting in continuous global change.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0507.7.1 Compare geologic events responsible for the earth’s major geological features.	STC Book Land and Water (pp07-09)

Grade 5 Standard 8 - The Atmosphere

Conceptual Strand 8
The earth is surrounded by an active atmosphere and an energy system that controls the distribution life, local weather, climate, and global temperature.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0507.8.1 Analyze and predict how major landforms and bodies of water affect atmospheric conditions.	STC Book Floating and Sinking (pp48-50)

Grade 5 - Physical Science

Grade 5 Standard 9 - Matter

Conceptual Strand 9

The composition and structure of matter is known, and it behaves according to principles that are generally understood.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0507.9.1 Observe and measure the simple chemical properties of common substances.	
GLE 0507.9.2 Design and conduct an experiment to demonstrate how various types of matter freeze, melt, or evaporate.	Land and Water TG L02.Exts (p19)
GLE 0507.9.3 Investigate factors that affect the rate at which various materials freeze, melt, or evaporate.	Land and Water TG L02.Exts (p19)

Grade 5 Standard 10 - Energy

Conceptual Strand 10

Various forms of energy are constantly being transformed into other types without any net loss of energy from the system.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0507.10.1 Design an experiment to illustrate the difference between potential and kinetic energy.	Motion and Design TG L06-07 (pp57-72) TG L11-12 (pp101-116) STC Book Electric Circuits (pp13-16)
GLE 0507.10.2 Conduct experiments on the transfer of heat energy through conduction, convection, and radiation.	

Grade 5 Standard 11 - Motion

Conceptual Strand 11

Objects move in ways that can be observed, described, predicted, and measured.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0507.11.1 Design an investigation, collect data and draw conclusions about the relationship among mass, force, and distance traveled.	Motion and Design TG L04-05 (pp35-56)

Grade 5 Standard 12 - Forces in Nature

Conceptual Strand 12

*Everything in the universe exerts a gravitational force on everything else;
there is an interplay between magnetic fields and electrical currents.*

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0507.12.1 Recognize that the earth attracts objects without directly touching them.	Motion and Design TG L03.Exts (pp29-30) Space Science for Grades 3-5 TG Ses 2.5-2.6 (pp 246-281)
GLE 0507.12.2 Investigate how the shape of an object influences the way that it falls toward the earth.	Space Science for Grades 3-5 TG Ses 2.5-2.6 (pp 246-281)
GLE 0507.12.3 Provide examples of how forces can act at a distance.	Space Science for Grades 3-5 TG Ses 2.5-2.6 (pp 246-281)

Grade 6 : Inquiry

Conceptual Strand

Understandings about scientific inquiry and the ability to conduct inquiry are essential for living in the 21st century.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0607.Inq.1 Design and conduct open-ended scientific investigations.	All Units
GLE 0607.Inq.2 Use appropriate tools and techniques to gather, organize, analyze, and interpret data.	All Units
GLE 0607.Inq.3 Synthesize information to determine cause and effect relationships between evidence and explanations.	All Units
GLE 0607.Inq.4 Recognize possible sources of bias and error, alternative explanations, and questions for further exploration.	<p>Earth in Space SG: L01 (pp2-11) SG: L21 (pp334-339) TG: L01 (pp3-10) TG: L21 (pp309-310)</p> <p>Experiments with Plants TG: L03 (pp31-38) TG: L09 (pp75-80) TG: L13 (pp101-104) TG: L14 (pp105-114)</p> <p>Floating and Sinking TG: L17 (pp135-136)</p> <p>Food Chemistry TG: L03-05 (pp23-56) TG: L07-08 (pp69-84)</p> <p>Light SG: L26 (pp294-297) TG: L26 (pp349-367)</p> <p>Magnets and Motors TG: L02.Exts (pp13-14)</p> <p>Microworlds TG: L01 (pp3-8) TG: L17 (pp87-88)</p>
GLE 0607.Inq.5 Communicate scientific understanding using descriptions, explanations, and models.	All Units

Grade 6 : Technology & Engineering

Conceptual Strand

Society benefits when engineers apply scientific discoveries to design materials and processes that develop into enabling technologies.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
<p>GLE 0607.T/E.1 Explore how technology responds to social, political, and economic needs.</p>	<p>Earth in Space SG: L20-21 (pp324-339) TG: L20-21 (pp293-310)</p> <p>Plate Tectonics TG: Ses01 (pp21-29)</p> <p>Properties of Matter TG: L21.Exts (p251)</p>
<p>GLE 0607.T/E.2 Know that the engineering design process involves an ongoing series of events that incorporate design constraints, model building, testing, evaluating, modifying, and retesting.</p>	<p>Catastrophic Events SG: L11 (pp120-133) TG: L06.Exts (pp77-78) TG: L11 (pp149-162) TG: L23.Exts (pp325-326)</p> <p>Earth in Space SG: L20-21 (pp324-339) TG: L20-21 (pp293-310)</p> <p>Electrical Energy and Circuit Design SG: L24 (pp244-251) TG: L02.Exts (pp35-36) TG: L03.Exts (pp47-48) TG: L07.Exts (pp105-106) TG: L12.Exts (pp177-178) TG: L13.Exts (p191) TG: L14.Exts (p210) TG: L21.Exts (p295) TG: L22.Exts (p304) TG: L23.Exts (p312) TG: L24 (pp313-326)</p> <p>Energy, Machines, and Motion SG: L03 (pp20-25) SG: L16-18 (pp148-18761) SG: L21-22 (pp214-236) TG: L03 (pp31-36) TG: L06.Exts (pp68-69) TG: L08.Exts (pp92-93) TG: L09.Exts (p105) TG: L16-17 (pp185-216) TG: L18.Exts (p224) TG: L19.Exts (p234) TG: L20.Exts (p238) TG: L21.Exts (p245) TG: L22 (pp247-254)</p> <p>Magnets and Motors TG: L15 (pp95-98)</p> <p>Organisms—From Macro to Micro TG: L05.Exts (pp69-70)</p> <p>Properties of Matter</p>

	<p>SG: L10 (pp86-97) TG: L10 (pp113-124) STC Book: Experiments with Plants (pp50-53) STC Book: Floating and Sinking (pp29-30), (pp34-35), (pp43-45) STC Book: Magnets and Motors (pp41-44), (pp45-46), (pp47-50), (pp58-59)</p>
<p>GLE 0607.T/E.3 Compare the intended benefits with the unintended consequences of a new technology.</p>	<p>Earth in Space SG: L20-21 (pp324-339) TG: L20-21 (pp293-310) Plate Tectonics TG: Ses01 (pp21-29) Properties of Matter TG: L21.Exts (p251)</p>
<p>GLE 0607.T/E.4 Describe and explain adaptive and assistive bioengineered products.</p>	<p>Catastrophic Events TG: L24.Exts (pp337-338) Light SG: L04 (pp40-47) Properties of Matter SG: L08 (pp74-77) TG: L08 (pp91-100)</p>

Grade 6 - Life Science

Grade 6 : Standard 2 - Interdependence

Conceptual Strand 2

All life is interdependent and interacts with the environment.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
<p>GLE 0607.2.1 Examine the roles of consumers, producers, and decomposers in a biological community.</p>	<p>Ecosystems TG: L03-04 (pp25-52) TG: L07 (pp75-82) TG: L12 (pp117-124) STC Book: Ecosystems: (pp14-16), (pp17-19)</p>
<p>GLE 0607.2.2 Describe how matter and energy are transferred through an ecosystem.</p>	<p>Earth in Space TG: L07.Exts (pp92-93) Ecosystems TG: L01 (pp3-12) TG: L07 (pp75-82) TG: L12.Exts (p120) Human Body Systems SG: L13 (pp110-119) TG: L13 (pp153-158) Light SG: L11 (pp116-131) STC Book: Ecosystems: (pp14-16)</p>
<p>GLE 0607.2.3 Draw conclusions from data about interactions between the biotic and abiotic elements of a particular environment.</p>	<p>Organisms—From Macro to Micro SG: L12-13 (pp146-171) TG: L12-13 (pp201-236)</p>

<p>GLE 0607.2.4 Analyze the environments and the interdependence among organisms found in the world’s major biomes.</p>	<p>Experiments with Plants TG: L02.Exts (p24) Light SG: L11 (pp116-131) Organisms—From Macro to Micro TG: L18.Exts (pp299-300) STC Book: Experiments with Plants (pp24-25), (pp30-33), (pp57-59)</p>
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Grade 6 - Earth and Space Science

Grade 6 : Standard 6 - The Universe

Conceptual Strand 6
The cosmos is vast and explored well enough to know its basic structure and operational principles.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
<p>GLE 0607.6.1 Analyze information about the major components of the universe.</p>	<p>Catastrophic Events SG: L02 (pp12-25) TG: L02 (pp17-26) Earth in Space SG: L02 (pp12-21) Invisible Universe TG: Act04-05 (pp58-91) Light SG: L09 (pp92-107) SG: L16 (pp166-185)</p>
<p>GLE 0607.6.2 Describe the relative distance of objects in the solar system from earth.</p>	<p>Earth in Space SG: L02-03 (pp12-41) SG: L06 (pp74-87) TG: L02-03 (pp11-36) TG: L06 (pp73-82)</p>
<p>GLE 0607.6.3 Explain how the positional relationships among the earth, moon, and sun control the length of the day, lunar cycle, and year.</p>	<p>Catastrophic Events SG: L07 (pp80-95) TG: L01.Exts (pp10-11) TG: L07 (pp83-102) Earth, Moon, and Stars TG: Act03 (pp17-24) TG: Act04 (pp25-32) Earth in Space SG: L01-09 (pp2-127) L16 (pp244-265) TG: L01-09 (pp3-146) TG: L16 (pp245-268)</p>
<p>GLE 0607.6.4 Describe the different stages in the lunar cycle.</p>	<p>Earth, Moon, and Stars TG: Act03 (pp17-24) TG: Act04 (pp25-32) Earth in Space SG: L02 (pp12-21)</p>

	<p>SG: L05-06 (pp62-87) SG: L16 (pp244-265) TG: L02 (pp11-20) TG: L05-06 (pp53-82) TG: L16 (pp245-268)</p>
GLE 0607.6.5 Produce a model to demonstrate how the moon produces tides.	<p>Earth in Space SG: L16 (pp244-265) TG: L16 (pp245-268)</p>
GLE 0607.6.6 Illustrate the relationship between the seasons and the earth-sun system.	<p>Catastrophic Events SG: L03 (pp26-41) SG: L07 (pp80-95) TG: L01.Exts (pp10-11) TG: L03 (pp27-44) TG: L07 (pp83-102) Earth, Moon, and Stars TG: Act05-06 (pp33-52) Earth in Space SG: L02-04 (pp12-61) SG: L06 (pp74-87) SG: L08 (pp102-121) TG: L02-04 (pp11-52) TG: L06 (pp73-82) TG: L08 (pp97-120) Organisms—From Macro to Micro TG: L10.Exts (pp175-176)</p>
GLE 0607.6.7 Describe the causes of lunar and solar eclipses.	<p>Earth, Moon, and Stars TG: Act04 (pp25-32) Earth in Space SG: L06-07 (pp74-101) TG: L06-07 (pp73-96) Invisible Universe TG: Act04 (pp58-77) Light SG: L05 (pp48-57) TG: L05 (pp59-72) Stories in Stone TG: Ses02 (pp23-31)</p>

Grade 6 : Standard 8 - The Atmosphere

Conceptual Strand 8

The earth is surrounded by an active atmosphere and an energy system that controls the distribution life, local weather, climate, and global temperature.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0607.8.1 Design and conduct an investigation to determine how the sun drives atmospheric convection.	

GLE 0607.8.2 Describe how the sun’s energy produces the wind.	Catastrophic Events SG: L02 (pp12-25) SG: L05 (pp54-67) SG: L07 (pp80-95) TG: L02 (pp17-26) TG: L07 (pp83-102)
GLE 0607.8.3 Investigate the relationship between currents and oceanic temperature differences.	Catastrophic Events SG: L07 (pp80-95) TG: L07 (pp83-102) Properties of Matter TG: L05.Exts (p56) STC Book: Floating and Sinking (pp48-50), (pp23-25)
GLE 0607.8.4 Analyze meteorological data to predict weather conditions.	

Grade 6 - Physical Science

Grade 6 : Standard 10 - Energy

Conceptual Strand 10

Various forms of energy are constantly being transformed into other types without any net loss of energy from the system.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0607.10.1 Compare and contrast the three forms of potential energy.	Electrical Energy and Circuit Design SG: L07-09 (pp70-103) TG: L07-09 (pp93-142) TG: L15 (pp213-226) Energy, Machines, and Motion SG: L02-04 (pp12-35) TG: L02-04 (pp23-46) TG: L21 (pp239-246) GEMS: Electric Circuits TG: Ses03 (pp73-87) Light TG: L02 (pp21-36)
GLE 0607.10.2 Analyze various types of energy transformations.	Electrical Energy and Circuit Design SG: L01-02 (pp2-25) SG: L08-10 (pp84-117) SG: L12 (pp122-133) SG: L15-19 (pp156-209) TG: L01-02 (pp3-36) TG: L08-10 (pp111-156) TG: L12 (pp169-180) TG: L15-19 (pp213-276) Energy, Machines, and Motion SG: L02-04 (pp12-35) SG: L07-10 (pp62-97) SG: L17 (pp164-173) SG: L19-20 (pp188-213)

	<p>SG: L22 (pp226-236) TG: L02-04 (pp23-46) TG: L07-10 (pp75-130) TG: L17 (pp203-216) TG: L19-22 (pp229-254)</p> <p>Light SG: L02 (pp20-31) SG: L07 (pp68-81) SG: L26 (pp294-297) TG: L02 (pp21-36) TG: L26 (pp349-367)</p> <p>Magnets and Motors TG: L12-17 (pp77-108)</p> <p>STC Book: Magnets and Motors (pp45-46), (pp53-54), (pp58-59)</p>
<p>GLE 0607.10.3 Explain the principles underlying the Law of Conservation of Energy.</p>	<p>Electrical Energy and Circuit Design SG: L01 (pp2-11) SG: L12 (pp122-133) TG: L01 (pp3-22) TG: L12 (pp169-180)</p> <p>Energy, Machines, and Motion TG: L19 (pp229-234)</p>

Grade 6: Standard 12 - Forces in Nature

Conceptual Strand 12

Everything in the universe exerts a gravitational force on everything else; there is an interplay between magnetic fields and electrical currents.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
<p>GLE 0607.12.1 Describe how simple circuits are associated with the transfer of electrical energy.</p>	<p>Electrical Energy and Circuit Design SG: L05-08 (pp46-93) SG: L11 (pp118-121) SG: L19-20 (pp196-213) TG: L05-08 (pp61-122) TG: L10.Exts (pp152-153) TG: L11 (pp157-168) TG: L12.Exts (pp177-178) TG: L15.Exts (pp223-224) TG: L19-20 (pp263-290)</p> <p>Energy, Machines, and Motion TG: L07.Exts (p83) TG: L09.Exts (p105)</p> <p>GEMS: Electric Circuits TG: Ses03-04 (pp73-108) TG: Ses06-10 (pp121-168)</p>
<p>GLE 0607.12.2 Explain how simple electrical circuits can be used to determine which materials conduct electricity.</p>	<p>Electrical Energy and Circuit Design TG: L02-03 (pp23-71)</p> <p>GEMS: Electric Circuits TG: Ses02-03 (pp35-87) TG: Ses05 (pp111-119)</p>

Grade 7 : Inquiry

Conceptual Strand

Understandings about scientific inquiry and the ability to conduct inquiry are essential for living in the 21st century.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0707.Inq.1 Design and conduct open-ended scientific investigations.	All Units
GLE 0707.Inq.2 Use appropriate tools and techniques to gather, organize, analyze, and interpret data.	All Units
GLE 0707.Inq.3 Synthesize information to determine cause and effect relationships between evidence and explanations.	All Units
GLE 0707.Inq.4 Recognize possible sources of bias and error, alternative explanations, and questions for further exploration.	All Units
GLE 0707.Inq.5 Communicate scientific understanding using descriptions, explanations, and models.	All Units

Grade 7 : Technology & Engineering

Conceptual Strand

Society benefits when engineers apply scientific discoveries to design and processes that develop into enabling technologies.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0707.T/E.1 Explore how technology responds to social, political, and economic needs.	Earth in Space SG: L20-21 (pp324-339) TG: L20-21 (pp293-310) Plate Tectonics TG: Ses01 (pp21-29) Properties of Matter TG: L21.Exts (p251)
GLE 0707.T/E.2 Know that the engineering design process involves an ongoing series of events that incorporate design constraints, model building, testing, evaluating, modifying, and retesting.	Catastrophic Events SG: L11 (pp120-133) TG: L06.Exts (pp77-78) TG: L11 (pp149-162) TG: L23.Exts (pp325-326) Earth in Space SG: L20-21 (pp324-339) TG: L20-21 (pp293-310)

	<p>Electrical Energy and Circuit Design SG: L24 (pp244-251) TG: L02.Exts (pp35-36) TG: L03.Exts (pp47-48) TG: L07.Exts (pp105-106) TG: L12.Exts (pp177-178) TG: L13.Exts (p191) TG: L14.Exts (p210) TG: L21.Exts (p295) TG: L22.Exts (p304) TG: L23.Exts (p312) TG: L24 (pp313-326)</p> <p>Energy, Machines, and Motion SG: L03 (pp20-25) SG: L16-18 (pp148-187) SG: L21-22 (pp214-236) TG: L03 (pp31-36) TG: L06.Exts (pp68-69) TG: L08.Exts (pp92-93) TG: L09.Exts (p105) TG: L16-17 (pp185-216) TG: L18.Exts (p224) TG: L19.Exts (p234) TG: L20.Exts (p238) TG: L21.Exts (p245) TG: L22 (pp247-254)</p> <p>Organisms—From Macro to Micro TG: L05.Exts (pp69-70)</p> <p>Properties of Matter SG: L10 (pp86-97) TG: L10 (pp113-124)</p>
<p>GLE 0707.T/E.3 Compare the intended benefits with the unintended consequences of a new technology.</p>	<p>Earth in Space SG: L20-21 (pp324-339) TG: L20-21 (pp293-310)</p> <p>Plate Tectonics TG: Ses01 (pp21-29)</p> <p>Properties of Matter TG: L21.Exts (p251)</p>
<p>GLE 0707.T/E.4 Describe and explain adaptive and assistive bioengineered products.</p>	<p>Catastrophic Events TG: L24.Exts (pp337-338)</p> <p>Light SG: L04 (pp40-47)</p> <p>Properties of Matter SG: L08 (pp74-77) TG: L08 (pp91-100)</p>

Grade 7 - Life Science

Grade 7 : Standard 1 - Cells

Conceptual Strand 1

All living things are made of cells that perform functions necessary for life.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
<p>GLE 0707.1.1 Make observations and describe the structure and function of organelles found in plant and animal cells.</p>	<p>Organisms—From Macro to Micro SG: L07 (pp82-93) TG: L07 (pp105-130)</p>
<p>GLE 0707.1.2 Summarize how the different levels of organization are integrated within living systems.</p>	
<p>GLE 0707.1.3 Describe the function of different organ systems and how collectively they enable complex multicellular organisms to survive.</p>	<p>Human Body Systems SG: L01 (pp2-7) TG: L01 (pp3-10) TG: L07.Exts (pp74-75) Organisms—From Macro to Micro SG: L05 (pp46-63) SG: L10 (pp120-131) SG: L18 (pp204-215) TG: L05 (pp57-72) TG: L10 (pp167-184) TG: L18 (pp293-302)</p>
<p>GLE 0707.1.4 Illustrate how cell division occurs in sequential stages to maintain the chromosome number of a species.</p>	<p>Organisms—From Macro to Micro SG: L08-09 (pp96-119) SG: L19 (pp216-235) TG: L03.Exts (p41) TG: L08-09 (pp131-166) TG: L19 (pp303-330)</p>
<p>GLE 0707.1.5 Observe and explain how move through simple diffusion.</p>	

Grade 7 : Standard 3 - Flow of Matter and Energy

Conceptual Strand 3

Matter and energy flow through the biosphere.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
<p>GLE 0707.3.1 Distinguish between the basic features of photosynthesis and respiration.</p>	<p>Human Body Systems SG: L12-13 (pp98-119) TG: L12-13 (pp137-158) Light SG: L11 (pp116-131) TG: L11.Exts (p131) Organisms—From Macro to Micro SG: L07 (pp82-93)</p>

	SG: L10 (pp120-131) TG: L07 (pp105-130) TG: L10 (pp167-184)
GLE 0707.3.2 Investigate the exchange of oxygen and carbon dioxide between living things and the environment.	Human Body Systems SG: L12-13 (pp98-119) TG: L12-13 (pp137-158) Light SG: L11 (pp116-131) TG: L11.Exts (p131) Organisms—From Macro to Micro SG: L07 (pp82-93) SG: L10 (pp120-131) TG: L07 (pp105-130) TG: L10 (pp167-184)

Grade 7 : Standard 4 - Heredity

Conceptual Strand 4

Plants and animals reproduce and transmit hereditary information between generations.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0707.4.1 Compare and contrast the fundamental features of sexual and asexual reproduction.	Organisms—From Macro to Micro SG: L03 (pp28-37) SG: L09 (pp106-119) SG: L12 (pp146-155) SG: L14 (pp172-179) SG: L17-18 (pp194-215) TG: L03 (pp33-48) TG: L09 (pp151-166) TG: L12 (pp201-218) TG: L14 (pp237-252) TG: L17 (pp281-292)
GLE 0707.4.2 Demonstrate an understanding of sexual reproduction in flowering plants.	Organisms—From Macro to Micro SG: L05 (pp46-63) SG: L18 (pp204-215) TG: L05 (pp57-72) TG: L06.Exts (pp89-91) TG: L18 (pp293-302)
GLE 0707.4.3 Explain the relationship among genes, chromosomes, and inherited traits.	Organisms—From Macro to Micro SG: L08 (pp96-105) SG: L19 (pp216-235) TG: L08 (pp131-150) TG: L19 (pp303-330)
GLE 0707.4.4 Predict the probable appearance of offspring based on the genetic characteristics of the parents.	Organisms—From Macro to Micro SG: L19 (pp216-235) TG: L19 (pp303-330)

Grade 7 : Standard 7 – The Earth

Conceptual Strand 7

Major geologic events that occur over eons or brief moments in time continually shape and reshape the surface of the Earth, resulting in continuous global change.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0707.7.1 Describe the physical properties of minerals.	
GLE 0707.7.2 Summarize the basic events that occur during the rock cycle.	Catastrophic Events SG: L21-22 (pp232-251) TG: L21-22 (pp293-316) Plate Tectonics TG: Ses07 (pp93-111) Stories in Stone TG: Ses08 (pp103-113)
GLE 0707.7.3 Analyze the characteristics of the earth’s layers and the location of the major plates.	Catastrophic Events SG: L10 (pp114-119) SG: L13-18 (pp154-209) TG: L10 (pp143-148) TG: L13-18 (pp177-264) Plate Tectonics TG: Ses02-03 (pp31-55) TG: Ses05-06 (pp69-91) Properties of Matter SG: L05 (pp38-55) Stories in Stone TG: Ses07 (pp83-101)
GLE 0707.7.4 Explain how earthquakes, mountain building, volcanoes, and sea floor spreading are associated with movements of the earth’s major plates.	Catastrophic Events SG: L10 (pp114-119) SG: L13-16 (pp154-193) SG: L18 (pp200-209) TG: L10 (pp143-148) TG: L13-16 (pp177-232) TG: L18 (pp257-264) TG: L19.Exts (pp274-275) Plate Tectonics TG: Ses02 (pp31-41) TG: Ses05-07 (pp69-111) Stories in Stone TG: Ses07 (pp83-101) TG: Exts (p114)
GLE 0707.7.5 Differentiate between renewable and nonrenewable resources in terms of their use by man.	Energy, Machines, and Motion SG: L04 (pp26-35)

<p>GLE 0707.7.6 Evaluate how human activities affect the earth’s land, oceans, and atmosphere.</p>	<p>Catastrophic Events SG: L24 (pp264-273) TG: L24 (pp329-346)</p> <p>Earth in Space SG: L17 (pp268-289) SG: L19 (pp312-323) TG: L17 (pp269-276) TG: L19 (pp287-292)</p> <p>Organisms-From Macro to Micro TG: L17.Exts (pp287-288)</p> <p>Properties of Matter SG: L12 (pp106-111) TG: L12.Exts (p140)</p> <p>River Cutters TG: Ses04-05 (pp49-57) TG: Exts (p73)</p>
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Grade 7 : Standard 11 - Motion

Conceptual Strand 11

Objects move in ways that can be observed, described, predicted, and measured.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
<p>GLE 0707.11.1 Identify six types of simple machines.</p>	<p>Energy, Machines, and Motion SG: L01 (pp2-11) SG: L08 (pp72-81) SG: L11-16 (pp100-161) SG: L19 (pp188-199) SG: L22 (pp226-236) TG: L01 (pp3-22) TG: L08 (pp85-98) TG: L11-17 (pp131-216) TG: L21.Exts (p245) TG: L22 (pp247-254)</p>
<p>GLE 0707.11.2 Apply the equation for work in experiments with simple machines to determine the amount of force needed to do work.</p>	<p>Electrical Energy and Circuit Design SG: L01 (pp2-11) SG: L10 (pp104-117) SG: L12-13 (pp122-141) TG: L01 (pp3-22) TG: L10 (pp143-156) TG: L12-13 (pp169-204)</p> <p>Energy, Machines, and Motion SG: L08 (pp72-81) SG: L10-16 (pp92-161) SG: L20-22 (pp200-236) TG: L07.Exts (p83) TG: L08 (pp85-98) TG: L09.Exts (p105) TG: L10-16 (pp107-202) TG: L20-22 (pp235-254)</p>

<p>GLE 0707.11.3 Distinguish between speed and velocity.</p>	<p>Energy, Machines, and Motion SG: L06 (pp48-61) SG: L18-19 (pp174-199) SG: L21 (pp214-225) TG: L01.Exts (p14) TG: L06.Exts (pp68-69) TG: L18-19 (pp217-234) TG: L21 (pp239-246)</p>
<p>GLE 0707.11.4 Investigate how Newton’s laws of motion explain an object’s movement.</p>	<p>Catastrophic Events SG: L12 (pp134-153) TG: L12 (pp163-176) Earth in Space SG: L15 (pp216-243) TG: L15-16 (pp221-268) Energy, Machines, and Motion SG: L19 (pp188-199) SG: L21 (pp214-225) TG: L18.Exts (p224) Light TG: L02 (pp21-36)</p>
<p>GLE 0707.11.5 Compare and contrast the basic parts of a wave.</p>	<p>Catastrophic Events SG: L11-12 (pp120-153) SG: L14 (pp164-169) SG: L17 (pp194-197) TG: L11-12 (pp149-176) TG: L14 (pp187-196) TG: L17 (pp233-256) Energy, Machines, and Motion SG: L18 (pp174-187) Invisible Universe TG: Act01 (pp15-24) Light SG: L07 (pp68-81) SG: L09 (pp92-107) SG: L12 (pp132-137) TG: L07.Exts (p92) TG: L09 (pp107-118) TG: L19.Exts (p257)</p>
<p>GLE 0707.11.6 Investigate the types and fundamental properties of waves.</p>	<p>Catastrophic Events SG: L11-12 (pp120-153) SG: L14 (pp164-169) SG: L17 (pp194-197) TG: L11-12 (pp149-176) TG: L14 (pp187-196) TG: L17 (pp233-256) Energy, Machines, and Motion SG: L18 (pp174-187) Invisible Universe TG: Act01 (pp15-24) Light SG: L07 (pp68-81) SG: L09 (pp92-107) SG: L12 (pp132-137)</p>

TG: L07.Exts (p92) TG: L09 (pp107-118) TG: L19.Exts (p257)
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Grade 8 : Inquiry

Conceptual Strand

Understandings about scientific inquiry and the ability to conduct inquiry are essential for living in the 21st century.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0807.Inq.1 Design and conduct open-ended scientific investigations.	All Units
GLE 0807.Inq.2 Use appropriate tools and techniques to gather, organize, analyze, and interpret data.	All Units
GLE 0807.Inq.3 Synthesize information to determine cause and effect relationships between evidence and explanations.	All Units
GLE 0807.Inq.4 Recognize possible sources of bias and error, alternative explanations, and questions for further exploration.	All Units
GLE 0807.Inq.5 Communicate scientific understanding using descriptions, explanations, and models.	All Units

Grade 8 : Technology & Engineering

Conceptual Strand

Society benefits when engineers apply scientific discoveries to design and processes that develop into enabling technologies.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0807.T/E.1 Explore how technology responds to social, political, and economic needs.	Earth in Space SG: L20-21 (pp324-339) TG: L20-21 (pp293-310) Plate Tectonics TG: Ses01 (pp21-29) Properties of Matter TG: L21.Exts (p251)

<p>GLE 0807.T/E.2 Know that the engineering design process involves an ongoing series of events that incorporate design constraints, model building, testing, evaluating, modifying, and retesting.</p>	<p>Catastrophic Events SG: L11 (pp120-133) TG: L06.Exts (pp77-78) TG: L11 (pp149-162) TG: L23.Exts (pp325-326)</p> <p>Earth in Space SG: L20-21 (pp324-339) TG: L20-21 (pp293-310)</p> <p>Electrical Energy and Circuit Design SG: L24 (pp244-251) TG: L02.Exts (pp35-36) TG: L03.Exts (pp47-48) TG: L07.Exts (pp105-106) TG: L12.Exts (pp177-178) TG: L13.Exts (p191) TG: L14.Exts (p210) TG: L21.Exts (p295) TG: L22.Exts (p304) TG: L23.Exts (p312) TG: L24 (pp313-326)</p> <p>Energy, Machines, and Motion SG: L03 (pp20-25) SG: L16-18 (pp148-187) SG: L21-22 (pp214-236) TG: L03 (pp31-36) TG: L06.Exts (pp68-69) TG: L08.Exts (pp92-93) TG: L09.Exts (p105) TG: L16-17 (pp185-216) TG: L18.Exts (p224) TG: L19.Exts (p234) TG: L20.Exts (p238) TG: L21.Exts (p245) TG: L22 (pp247-254)</p> <p>Organisms—From Macro to Micro TG: L05.Exts (pp69-70)</p> <p>Properties of Matter SG: L10 (pp86-97) TG: L10 (pp113-124)</p>
<p>GLE 0807.T/E.3 Compare the intended benefits with the unintended consequences of a new technology.</p>	<p>Earth in Space SG: L20-21 (pp324-339) TG: L20-21 (pp293-310)</p> <p>Plate Tectonics TG: Ses01 (pp21-29)</p> <p>Properties of Matter TG: L21.Exts (p251)</p>
<p>GLE 0807.T/E.4 Describe and explain adaptive and assistive bioengineered products.</p>	<p>Catastrophic Events TG: L24.Exts (pp337-338)</p> <p>Light SG: L04 (pp40-47)</p> <p>Properties of Matter SG: L08 (pp74-77) TG: L08 (pp91-100)</p>

Grade 8 - Life Science

Grade 8 : Standard 5 - Biodiversity and Change

Conceptual Strand 5

A rich variety of complex organisms have developed in response to a continually changing environment.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
<p>GLE 0807.5.1 Identify various criteria used to classify organisms into groups.</p>	<p>Life Through Time TG: Ses01-06 (pp13-234) Organisms—From Macro to Micro SG: L01 (pp2-11) SG: L04-05 (pp38-63) SG: L07 (pp82-93) SG: L11 (pp132-145) SG: L14-16 (pp172-193) SG: L20 (pp236-243) TG: L05 (pp57-72) TG: L06.Exts (pp89-91) TG: L07 (pp105-130) TG: L10.Exts (pp175-176) TG: L11 (pp185-200) TG: L14-16 (pp237-280) TG: L20 (pp331-350)</p>
<p>GLE 0807.5.2 Use a simple classification key to identify a specific organism.</p>	<p>Organisms—From Macro to Micro SG: L01 (pp2-11) SG: L06 (pp64-81) SG: L11 (pp132-145) TG: L01 (pp3-14) TG: L06 (pp73-104) TG: L11 (pp185-200)</p>
<p>GLE 0807.5.3 Analyze how structural, behavioral, and physiological adaptations within a population enable it to survive in a given environment.</p>	<p>Life Through Time TG: Ses05-07 (pp173-269) Organisms—From Macro to Micro SG: L13 (pp158-171) TG: L13 (pp219-236)</p>
<p>GLE 0807.5.4 Explain why variation within a population can enhance the chances for group survival.</p>	<p>Life Through Time TG: Ses05-07 (pp173-269) Organisms—From Macro to Micro SG: L13 (pp158-171) TG: L13 (pp219-236)</p>
<p>GLE 0807.5.5 Describe the importance of maintaining the earth’s biodiversity.</p>	<p>Organisms—From Macro to Micro SG: L02 (pp12-27) SG: L04 (pp38-45)</p>
<p>GLE 0807.5.6 Investigate fossils in sedimentary rock layers to gather evidence of changing life forms.</p>	

Grade 8 - Physical Science

Grade 8 : Standard 9 - Matter

Conceptual Strand 9

The composition and structure of matter is known, and it behaves according to principles that are generally understood.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
<p>GLE 0807.9.1 Understand that all matter is made up of atoms.</p>	<p>Properties of Matter SG: L06-07 (pp56-73) SG: L10-11 (pp86-105) SG: L13 (pp112-115) SG: L15 (pp122-129) SG: L25 (pp224-229) TG: L06-07 (pp65-90) TG: L10-11 (pp113-134) TG: L13 (pp143-152) TG: L15 (pp161-168) TG: L21.Exts (p251) TG: L25 (pp303-312)</p>
<p>GLE 0807.9.2 Explain that matter has properties that are determined by the structure and arrangement of its atoms.</p>	<p>Light TG: L10.Exts (p124) Properties of Matter SG: L06-07 (pp56-73) SG: L10-11 (pp86-105) SG: L13 (pp112-115) SG: L15 (pp122-129) SG: L20-22 (pp170-207) SG: L25 (pp224-229) TG: L06-07 (pp65-90) TG: L10-11 (pp113-134) TG: L13 (pp143-152) TG: L15 (pp161-168) TG: L20-22 (pp227-274) TG: L25 (pp303-312)</p>
<p>GLE 0807.9.3 Interpret data from an investigation to differentiate between physical and chemical changes.</p>	<p>Properties of Matter SG: L06 (pp56-63) SG: L24 (pp218-223) TG: L06 (pp65-78) TG: L24 (pp295-302)</p>
<p>GLE 0807.9.4 Distinguish among elements, compounds, and mixtures.</p>	<p>Crime Lab Chemistry TG: Act01-03 (pp7-62) TG: Exts (pp63-64) Light TG: L10.Exts (p124) Properties of Matter SG: L01 (pp2-13) SG: L11-12 (pp98-111) SG: L14-15 (pp116-129) SG: L17-22 (pp140-207)</p>

	TG: L01 (pp3-14) TG: L11-12 (pp125-142) TG: L14-15 (pp153-168) TG: L16.Exts (p178) TG: L17-22 (pp179-274) TG: L23.Exts (p284)
GLE 0807.9.5 Apply the chemical properties of the atmosphere to illustrate a mixture of gases.	Catastrophic Events SG: L03 (pp26-41) TG: L03 (pp27-44) Earth in Space SG: L19 (pp312-323) TG: L19 (pp287-292) Properties of Matter SG: L04 (pp30-37)
GLE 0807.9.6 Use the periodic table to determine the characteristics of an element.	Light TG: L10.Exts (p124) Properties of Matter SG: L20-22 (pp170-207) TG: L20-22 (pp227-274)
GLE 0807.9.7 Explain the Law of Conservation of Mass.	Properties of Matter SG: L08 (pp74-77) SG: L14 (pp116-121) SG: L25 (pp224-229) TG: L08 (pp91-100) TG: L14 (pp153-160) TG: L25 (pp303-312)
GLE 0807.9.8 Interpret the events represented by a chemical equation.	Properties of Matter SG: L22 (pp198-207) TG: L22 (pp263-274)
GLE 0807.9.9 Explain the basic difference between acids and bases.	

Grade 8 : Standard 12 - Forces in Nature

Conceptual Strand 12

Everything in the universe exerts a gravitational force on everything else; there is an interplay between magnetic fields and electrical currents.

Grade Level Expectations	Correlation to Carolina Curriculum Publishing
GLE 0807.12.1 Investigate the relationship between magnetism and electricity.	
GLE 0807.12.2 Design an investigation to change the strength of an electromagnet.	
GLE 0807.12.3 Compare and contrast the earth's magnetic field to that of a magnet and an electromagnet.	Earth in Space TG: L08.Exts (pp108-109) Living with a Star TG: Act01 (pp15-38)

	TG: Act03 (pp61-84) Plate Tectonics TG: Ses07 (pp93-111)
GLE 0807.12.4 Identify factors that influence the amount of gravitational force between objects.	
GLE 0807.12.5 Recognize that gravity is the force that controls the motion of objects in the solar system.	Earth, Moon, and Stars TG: Act02 (pp9-16) Earth in Space SG: L14-16 (pp200-265) TG: L14-16 (pp209-268) Energy, Machines, and Motion TG: L05.Exts (pp53-54)

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2700 York Road • Burlington NC 27215-3398
800.227.1150 • www.carolinacurriculum.com