

Carolina™ Curriculum Correlation to



Montana Content Standards Science Grades K-8

CAROLINA
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Carolina™ Curriculum Correlation to Montana Content Standards

Science Grades K-8

GRADE	Carolina™ Curriculum Units
Kindergarten	<ul style="list-style-type: none"> • Organisms (STC) • Solids and Liquids (STC)
1 st Grade	<ul style="list-style-type: none"> • Bubble Festival (GEMS) • Penguins and Their Young (GEMS)
2 nd Grade	<ul style="list-style-type: none"> • Changes (STC) • The Life Cycle of Butterflies (STC)
3 rd Grade	<ul style="list-style-type: none"> • Animal Studies (STC) • Human Bodyworks (BBS)
4 th Grade	<ul style="list-style-type: none"> • Ecosystems (STC) • Land and Water (STC)
5 th Grade	<ul style="list-style-type: none"> • Bubble Festival (GEMS) • Life Through Time (GEMS) • *3-5 Space Science (GEMS) • Understanding Cells and DNA (BBS)
6-8 Grade	<ul style="list-style-type: none"> • Catastrophic Events (STC/MS) • Earth in Space (STC/MS) • Energy, Machines, and Motion (STC/MS) • Organisms—From Macro to Micro (STC/MS) • Properties of Matter (STC/MS)

The **STC PROGRAM™** 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

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

Great Explorations in Math and Science® (GEMS®) Space Science is a research-based 3-5 science curriculum that teach fundamental concepts in space 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.

LEGEND - Abbreviations are as follows:

- TG = Teacher’s Guide
- S-Sec3 = Section 3 (containing a section on safety) in the STC® Teacher’s Guide
- L01, L02, etc. = Lesson 1, Lesson 2, etc. Act01=Activity, Ses01=Session 01
- p, pp = page, pages
- RB = STC BOOK™ (a science reading book included in some of the grades 3–5 STC® unit kits)
- Exts = Extensions (found at the end of most lessons in the Teacher’s Guide)
- App-A, App-B = Appendix A, Appendix B (found at the end of Section 4 in the Teacher’s Guide)

***3-5 Space Science covers standards in both 3rd and 5th grades. Module flexibility allows appropriate units to be taught according to grade level content.**

Grade K - Science
Montana Content Standards

CONTENT STANDARD	MT.1.	Students, through the inquiry process, demonstrate the ability to design, conduct, evaluate, and communicate the results and form reasonable conclusions of scientific investigations.
BENCHMARK	K.1.1.	<p>Students will develop the abilities necessary to safely conduct scientific inquiry, including (a step-by-step sequence is not implied): (a) asking questions about objects, events, and organisms in the environment, (b) planning and conducting simple investigations.</p> <ul style="list-style-type: none"> • Organisms • TG: L01-17 (pp3-182) • Solids and Liquids • TG: L01-16 (pp3-136)
BENCHMARK	K.1.2.	<p>Students will select and use appropriate tools including technology to make measurements (including metric units) and represent results of basic scientific investigations.</p> <ul style="list-style-type: none"> • Solids and Liquids • TG: L11 (pp87-94)
BENCHMARK	K.1.3.	<p>Students will use data to describe and communicate the results of scientific investigations.</p> <ul style="list-style-type: none"> • Organisms • TG: L02-16 (pp11-178) • Solids and Liquids • TG: L01-16 (pp3-136)
CONTENT STANDARD	MT.2.	Students, through the inquiry process, demonstrate knowledge of properties, forms, changes and interactions of physical and chemical systems.
BENCHMARK	K.2.1.	<p>Students will create mixtures and separate them based on different physical properties (e.g., salt and sand, iron filings and soil, oil and water)</p> <ul style="list-style-type: none"> • Solids and Liquids • TG: L09.Exts (p73), L14-15 (pp109-124)
BENCHMARK	K.2.2.	<p>Students will examine, measure, describe, compare and classify objects in terms of common physical properties.</p> <ul style="list-style-type: none"> • Solids and Liquids • TG: L01-17 (pp3-140)
BENCHMARK	K.2.3.	<p>Students will identify the basic characteristics of light, heat, motion, magnetism, electricity and sound.</p> <ul style="list-style-type: none"> • Solids and Liquids • TG: L04 (pp29-40), L07 (pp55-62)

BENCHMARK	K.2.4.	<p>Students will model and explain that matter exists as solids, liquids, and gases and can change from one form to another.</p> <ul style="list-style-type: none"> • Solids and Liquids • TG: L01 (pp3-10), L09.Exts (p73), L10.Exts (p85), L12.Exts (p98), L15.Exts (p124), L17 (pp137-140)
BENCHMARK	K.2.5.	<p>Students will identify that the position of an object can be described by its location relative to another object and its motions described, and measured by external forces action upon it.</p> <ul style="list-style-type: none"> • Solids and Liquids • TG: L04 (pp29-40)
BENCHMARK	K.2.6.	<p>Students will identify, build, and describe mechanical systems and the forces acting within those systems.</p> <ul style="list-style-type: none"> • Solids and Liquids • TG: L09.Exts (p73)
BENCHMARK	K.2.7.	<p>Students will observe, measure and manipulate forms of energy: sound, light, heat, electrical, magnetic.</p> <ul style="list-style-type: none"> • Solids and Liquids • TG: L07 (pp55-62), L09 (pp69-80)
CONTENT STANDARD	MT.3.	<p>Students, through the inquiry process, demonstrate knowledge of characteristics, structures and function of living things, the process and diversity of life, and how living organisms interact with each other and their environment.</p>
BENCHMARK	K.3.1.	<p>Students will identify that plants and animals have structures and systems that serve different functions for growth, survival, and reproduction.</p> <ul style="list-style-type: none"> • Organisms • TG: L07-10 (pp75-118), L13-15 (pp135-168), L17 (pp179-182)
BENCHMARK	K.3.3.	<p>Students will describe and use models that trace the life cycles of different plants and animals and discuss how they differ from species to species.</p> <ul style="list-style-type: none"> • Organisms • TG: L03.Exts (pp29-30), L06 (pp65-74), L10.Exts (p115), L11-13 (pp119-148), L16.Exts (pp172-173)
BENCHMARK	K.3.4.	<p>Students will explain cause and effect relationships between nonliving and living components within ecosystems; and explain individual response to the changes in the environment including identifying differences between inherited, instinctual, and learned behaviors.</p> <ul style="list-style-type: none"> • Organisms • TG: L01 (pp3-10), L04.Exts (pp43-45), L09-12 (pp97-134), L14 (pp149-154), L17 (pp179-182)

BENCHMARK	K.3.5.	Students will create and use a classification system to group a variety of plants and animals according to their similarities and differences. <ul style="list-style-type: none"> Organisms TG: L01 (pp3-10), L02.Exts (pp15-16), L05.Exts (p59), L17 (pp179-182)
CONTENT STANDARD	MT.5.	Students, through the inquiry process, understand how scientific knowledge and technological developments impact communities, cultures and societies.
BENCHMARK	K.5.3.	Students will simulate scientific collaboration by sharing and communicating ideas to identify and describe problems. <ul style="list-style-type: none"> Organisms TG: L02-16 (pp11-178) Solids and Liquids TG: L01-16 (pp3-136)
BENCHMARK	K.5.4.	Students will use scientific knowledge to make inferences and propose solutions for simple environmental problems. <ul style="list-style-type: none"> Organisms TG: L01-16 (pp3-178) Solids and Liquids TG: L14 (pp109-120)
CONTENT STANDARD	MT.K.GLE.	Science - Grade Level Expectations
BENCHMARK	K.GLE.1.	Asks appropriate questions after sharing a common experience. <ul style="list-style-type: none"> Organisms TG: L01-17 (pp3-182) Solids and Liquids TG: L01-16 (pp3-136)
CONTENT STANDARD	MT.K.GLE.	Science - Grade Level Expectations
BENCHMARK	K.GLE.2.	Demonstrates knowledge of matter.
GRADE LEVEL EXPECTATION	K.GLE.2.a.	Identifies solids liquids and gases (e.g. Ice, water, vapor [breath on a cold day]) <ul style="list-style-type: none"> Solids and Liquids TG: L01 (pp3-10), L15.Exts (p124), L17 (pp137-140)
GRADE LEVEL EXPECTATION	K.GLE.2.b.	Explains experiences with light, magnetism, and motion. <ul style="list-style-type: none"> Solids and Liquids TG: L04 (pp29-40), L07 (pp55-62), L09 (pp69-80)
BENCHMARK	K.GLE.3.	With directions, identifies living (biotic) and non-living (abiotic) objects; groups objects based on attributes. <ul style="list-style-type: none"> Organisms TG: L01 (pp3-10), L15-17 (pp155-182)

Grade 1

BENCHMARK	1.1.1.	<p>Students will develop the abilities necessary to safely conduct scientific inquiry, including (a step-by-step sequence is not implied): (a) asking questions about objects, events, and organisms in the environment, (b) planning and conducting simple investigations.</p> <ul style="list-style-type: none"> • Bubble Festival • TG: Act01-12 (pp54-124)
BENCHMARK	1.1.2.	<p>Students will select and use appropriate tools including technology to make measurements (including metric units) and represent results of basic scientific investigations.</p> <ul style="list-style-type: none"> • Bubble Festival • TG: Act01-12 (pp54-124) • Penguins and Their Young • TG: Act01-4 (pp5-45)
BENCHMARK	1.1.3.	<p>Students will use data to describe and communicate the results of scientific investigations.</p> <ul style="list-style-type: none"> • Bubble Festival • TG: Act01-12 (pp54-124) • Penguins and Their Young • TG: Act01-4 (pp5-45)
BENCHMARK	1.1.4.	<p>Students will use models that illustrate simple concepts and compare those models to the actual phenomenon.</p> <ul style="list-style-type: none"> • Penguins and Their Young • TG: Act01 (pp5-13)
BENCHMARK	1.2.2.	<p>Students will examine, measure, describe, compare and classify objects in terms of common physical properties.</p> <ul style="list-style-type: none"> • Bubble Festival • TG: Act015 (pp54-85), Act09-12 (pp102-124)
BENCHMARK	1.2.4.	<p>Students will model and explain that matter exists as solids, liquids, and gases and can change from one form to another.</p> <ul style="list-style-type: none"> • Penguins and Their Young • TG: Act01 (pp5-13)
BENCHMARK	1.2.7.	<p>Students will observe, measure and manipulate forms of energy: sound, light, heat, electrical, magnetic.</p> <ul style="list-style-type: none"> • Bubble Festival • TG: Act05 (pp80-85)

BENCHMARK	1.3.1.	<p>Students will identify that plants and animals have structures and systems that serve different functions for growth, survival, and reproduction.</p> <ul style="list-style-type: none"> • Penguins and Their Young • TG: Act02 (pp15-31)
BENCHMARK	1.3.4.	<p>Students will explain cause and effect relationships between nonliving and living components within ecosystems; and explain individual response to the changes in the environment including identifying differences between inherited, instinctual, and learned behaviors.</p> <ul style="list-style-type: none"> • Penguins and Their Young • TG: Act01-3 (pp5-37)
BENCHMARK	1.5.3.	<p>Students will simulate scientific collaboration by sharing and communicating ideas to identify and describe problems.</p> <ul style="list-style-type: none"> • Bubble Festival • TG: Act01-12 (pp54-124) • Penguins and Their Young • TG: Act01-4 (pp5-45)
CONTENT STANDARD	MT.1.GLE.	Science - Grade Level Expectations
BENCHMARK	1.GLE.1.	<p>With step by step directions, does a simple investigation.</p> <ul style="list-style-type: none"> • Bubble Festival • TG: Act02-12 (pp59-124) • Penguins and Their Young • TG: Act01-4 (pp5-45)
CONTENT STANDARD	MT.1.GLE.	Science - Grade Level Expectations
BENCHMARK	1.GLE.2.	Demonstrates knowledge of matter.
GRADE LEVEL EXPECTATION	1.GLE.2.a.	<p>Selects and uses simple tools for simple measurement of solids, liquids, and gases.</p> <ul style="list-style-type: none"> • Bubble Festival • TG: Act01-12 (pp54-124) • Penguins and Their Young • TG: Act01-4 (pp5-45)
GRADE LEVEL EXPECTATION	1.GLE.2.b.	<p>Demonstrates experiments with light (e.g. prisms, and mirrors)</p> <ul style="list-style-type: none"> • Bubble Festival • TG: Act05 (pp80-85)
BENCHMARK	1.GLE.3.	<p>Illustrates a simple food chain with herbivores, carnivores.</p> <ul style="list-style-type: none"> • Penguins and Their Young • TG: Act03 (pp33-37) •

CONTENT STANDARD	MT.1.GLE.	Science - Grade Level Expectations
BENCHMARK	1.GLE.5.	<p>Identifies and explains technologies used in school.</p> <ul style="list-style-type: none"> • Bubble Festival • TG: Act01-12 (pp54-124) • Penguins and Their Young • TG: Act01-4 (pp5-45)

Grade 2

CONTENT STANDARD	MT.1.	Students, through the inquiry process, demonstrate the ability to design, conduct, evaluate, and communicate the results and form reasonable conclusions of scientific investigations.
BENCHMARK	2.1.1.	<p>Students will develop the abilities necessary to safely conduct scientific inquiry, including (a step-by-step sequence is not implied): (a) asking questions about objects, events, and organisms in the environment, (b) planning and conducting simple investigations.</p> <ul style="list-style-type: none"> • Changes • TG: L01-17 (pp3-158)
BENCHMARK	2.1.2.	<p>Students will select and use appropriate tools including technology to make measurements (including metric units) and represent results of basic scientific investigations.</p> <ul style="list-style-type: none"> • The Life Cycle of Butterflies • TG: L01.Exts (p7), TG: L02-9 (pp11-62), L11.Exts (pp71-73), L12 (pp75-80), L14 (pp85-88)
BENCHMARK	2.1.3.	<p>Students will use data to describe and communicate the results of scientific investigations.</p> <ul style="list-style-type: none"> • Changes • TG: L01-17 (pp3-158)
CONTENT STANDARD	MT.2.	Students, through the inquiry process, demonstrate knowledge of properties, forms, changes and interactions of physical and chemical systems.
BENCHMARK	2.2.1.	<p>Students will create mixtures and separate them based on different physical properties (e.g., salt and sand, iron filings and soil, oil and water)</p> <ul style="list-style-type: none"> • Changes • TG: L04-6 (pp43-70), L07.Exts (p76), L08.Exts (p82), L10-13 (pp95-128), L16 (pp147-154)
BENCHMARK	2.2.2.	<p>Students will examine, measure, describe, compare and classify objects in terms of common physical properties.</p> <ul style="list-style-type: none"> • Changes • TG: L01 (pp3-20), L11 (pp103-110)

BENCHMARK	2.2.4.	<p>Students will model and explain that matter exists as solids, liquids, and gases and can change from one form to another.</p> <ul style="list-style-type: none"> • Changes • TG: L01-3 (pp3-42), L08.Exts (p82), L09 (pp85-94), L13.Exts (p123), L17 (pp155-158)
CONTENT STANDARD	MT.3.	Students, through the inquiry process, demonstrate knowledge of characteristics, structures and function of living things, the process and diversity of life, and how living organisms interact with each other and their environment.
BENCHMARK	2.3.1.	<p>Students will identify that plants and animals have structures and systems that serve different functions for growth, survival, and reproduction.</p> <ul style="list-style-type: none"> • The Life Cycle of Butterflies • TG: App-B (pp101-110), L01-11 (pp3-74), L13-16 (pp81-96)
BENCHMARK	2.3.3.	<p>Students will describe and use models that trace the life cycles of different plants and animals and discuss how they differ from species to species.</p> <ul style="list-style-type: none"> • The Life Cycle of Butterflies • TG: App-A (pp97-100), App-B (pp101-110), L01-516 (pp3-96)
BENCHMARK	2.3.4.	<p>Students will explain cause and effect relationships between nonliving and living components within ecosystems; and explain individual response to the changes in the environment including identifying differences between inherited, instinctual, and learned behaviors.</p> <ul style="list-style-type: none"> • The Life Cycle of Butterflies • TG: L02.Exts (pp14-15), L04 (pp23-28), L10-11 (pp63-74)
BENCHMARK	2.3.5.	<p>Students will create and use a classification system to group a variety of plants and animals according to their similarities and differences.</p> <ul style="list-style-type: none"> • The Life Cycle of Butterflies • TG: L02 (pp11-18), L10 (pp63-68), L14-15 (pp85-88)
CONTENT STANDARD	MT.5.	Students, through the inquiry process, understand how scientific knowledge and technological developments impact communities, cultures and societies.
BENCHMARK	2.5.3.	<p>Students will simulate scientific collaboration by sharing and communicating ideas to identify and describe problems.</p> <ul style="list-style-type: none"> • Changes • TG: L01-17 (pp3-158) • The Life Cycle of Butterflies • TG: L01 (pp3-10), L15-16 (pp89-96)
CONTENT STANDARD	MT.6.	Students understand historical developments in science and technology.
BENCHMARK	2.6.2.	Students will describe how scientific inquiry has produced much knowledge about the world and a variety of contributions toward understanding events and phenomenon within the universe.

		<ul style="list-style-type: none"> • The Life Cycle of Butterflies • TG: L05 (pp29-34)
CONTENT STANDARD	MT.2.GLE.	Science - Grade Level Expectations
BENCHMARK	2.GLE.1.	<p>Completes a simple investigation and communicates results.</p> <ul style="list-style-type: none"> • Changes • TG: L01-17 (pp3-158) • The Life Cycle of Butterflies • TG: L01-16 (pp3-96)
CONTENT STANDARD	MT.2.GLE.	Science - Grade Level Expectations
BENCHMARK	2.GLE.2.	Demonstrates knowledge of matter.
GRADE LEVEL EXPECTATION	2.GLE.2.a.	<p>Creates mixtures and separates them (e.g. oil and water, soil and iron filings)</p> <ul style="list-style-type: none"> • Changes • TG: L04-13 (pp43-128), L16 (pp147-154)
BENCHMARK	2.GLE.3.	<p>Compares three features of plant and animal life cycles.</p> <ul style="list-style-type: none"> • The Life Cycle of Butterflies • TG: App-A (pp97-100), App-B (pp101-110), L01-16 (pp3-96)

Grade 3

CONTENT STANDARD	MT.1.	Students, through the inquiry process, demonstrate the ability to design, conduct, evaluate, and communicate the results and form reasonable conclusions of scientific investigations.
BENCHMARK	3.1.1.	<p>Students will develop the abilities necessary to safely conduct scientific inquiry, including (a step-by-step sequence is not implied): (a) asking questions about objects, events, and organisms in the environment, (b) planning and conducting simple investigations.</p> <ul style="list-style-type: none"> • Animal Studies • TG: L07 (pp75 - 86), L12 (pp123-134) • Building Blocks of Science: Human Bodyworks • TG: Act 01 (pp 19-24), Act 03 (pp 31-35), Act 05-12 (pp 45-84)
BENCHMARK	3.1.2.	<p>Students will select and use appropriate tools including technology to make measurements (including metric units) and represent results of basic scientific investigations.</p> <ul style="list-style-type: none"> • Animal Studies • TG: L02-10 (pp11-114), L12-15 (pp123-164) • Building Blocks of Science: Human Bodyworks • TG: Act 03-4 (pp 31-43), Act 06-12 (pp 49-84)
BENCHMARK	3.1.3.	<p>Students will use data to describe and communicate the results of scientific investigations.</p> <ul style="list-style-type: none"> • Animal Studies • TG: L16 (pp165-168), • Building Blocks of Science: Human Bodyworks • TG: Act 01-12 (pp 19-84)

BENCHMARK	3.1.4.	<p>Students will use models that illustrate simple concepts and compare those models to the actual phenomenon.</p> <ul style="list-style-type: none"> • Building Blocks of Science: Human Bodyworks • TG: Pre Assessment (pp 13-17), Act 01-2 (pp 19-29), Act 04 (pp 37-43), Act 06-12 (pp 49-84)
CONTENT STANDARD	MT.2.	<p>Students, through the inquiry process, demonstrate knowledge of properties, forms, changes and interactions of physical and chemical systems.</p>
BENCHMARK	3.2.6.	<p>Students will identify, build, and describe mechanical systems and the forces acting within those systems.</p> <ul style="list-style-type: none"> • Building Blocks of Science: Human Bodyworks • TG: Act 01-2 (pp 19-29), Act 04 (pp 37-43), Act 06-12 (pp 49-84)
BENCHMARK	3.2.7.	<p>Students will observe, measure and manipulate forms of energy: sound, light, heat, electrical, magnetic.</p> <ul style="list-style-type: none"> • Building Blocks of Science: Human Bodyworks • TG: Act 12 (pp 81-84)
CONTENT STANDARD	MT.3.	<p>Students, through the inquiry process, demonstrate knowledge of characteristics, structures and function of living things, the process and diversity of life, and how living organisms interact with each other and their environment.</p>
BENCHMARK	3.3.1.	<p>Students will identify that plants and animals have structures and systems that serve different functions for growth, survival, and reproduction.</p> <ul style="list-style-type: none"> • Animal Studies • RB: (pp06-08), (pp16-19) • TG: L03-6 (pp21-74), L08 (pp87-96), L13.Exts (p138), L14-15 (pp143-164) • Building Blocks of Science: Human Bodyworks • TG: Ext 01 (pp 21), Ext 04 (pp 41), Ext 12 (pp 83)
BENCHMARK	3.3.2.	<p>Students will identify, measure, and describe basic requirements of energy and nutritional needs for an organism.</p> <ul style="list-style-type: none"> • Animal Studies • TG: L05.Exts (p58)
BENCHMARK	3.3.3.	<p>Students will describe and use models that trace the life cycles of different plants and animals and discuss how they differ from species to species.</p> <ul style="list-style-type: none"> • Animal Studies • RB: (pp06-08), RB: (pp12-15), (pp35-37) • TG: L04.Exts (pp41-42), L07.Exts (pp79-80), L09.Exts (pp101-102)
BENCHMARK	3.3.4.	<p>Students will explain cause and effect relationships between nonliving and living components within ecosystems; and explain individual response to the changes in the environment including identifying differences between inherited, instinctual, and learned behaviors.</p> <ul style="list-style-type: none"> • Animal Studies • RB: (pp16-32), (pp40-42), (pp50-61) • TG: L01-17 (pp3-172)

BENCHMARK	3.3.5.	<p>Students will create and use a classification system to group a variety of plants and animals according to their similarities and differences.</p> <ul style="list-style-type: none"> • Animal Studies • RB: (pp26-29) • TG: L01-3 (pp3-36), L17 (pp169-172) • Building Blocks of Science: Human Bodyworks • TG: Pre Assessment (pp 13-17), Act 02-4 (pp 25-43), Act 06-7 (pp 49-58), Act 09-10 (pp 67-75), Act 12 (pp 81-84) • Post Assessment (pp 85-88)
CONTENT STANDARD	MT.5.	Students, through the inquiry process, understand how scientific knowledge and technological developments impact communities, cultures and societies.
BENCHMARK	3.5.1.	<p>Students will describe and discuss examples of how people use science and technology.</p> <ul style="list-style-type: none"> • Animal Studies • TG: L08.Exts (p94)
BENCHMARK	3.5.3.	<p>Students will simulate scientific collaboration by sharing and communicating ideas to identify and describe problems.</p> <ul style="list-style-type: none"> • Animal Studies • TG: L01-11 (pp3-122), L11.Exts (p119), L12-17 (pp123-172) • Building Blocks of Science: Human Bodyworks • TG: Act 07-12 (pp 55-84), Ext 09 (pp 68), Post Assessment (pp 85-88)
BENCHMARK	3.5.4.	<p>Students will use scientific knowledge to make inferences and propose solutions for simple environmental problems.</p> <ul style="list-style-type: none"> • Animal Studies • RB: (pp40-42)
CONTENT STANDARD	MT.6.	Students understand historical developments in science and technology.
BENCHMARK	3.6.2.	<p>Students will describe how scientific inquiry has produced much knowledge about the world and a variety of contributions toward understanding events and phenomenon within the universe.</p> <ul style="list-style-type: none"> • Animal Studies • TG: L16 (pp165-168)
CONTENT STANDARD	MT.3.GLE.	Science - Grade Level Expectations
BENCHMARK	3.GLE.1.	<p>With direction, safely completes a simple investigation (direct inquiry) by asking questions with identified variables using appropriate tools, and communicates results. Identifies that observation is a key inquiry process used by American Indians.</p> <ul style="list-style-type: none"> • Animal Studies • RB: (pp58-61) • TG: L01-17 (pp3-172) • Building Blocks of Science: Human Bodyworks • TG: Pre Assessment (pp 13-17), Act 01-12 (pp 19-84)
BENCHMARK	3.GLE.3.	<p>Classifies living things based on similarities and differences in behavior, basic structure, function, life cycle, and energy needs.</p> <ul style="list-style-type: none"> • Animal Studies

		<ul style="list-style-type: none"> • RB: (pp26-29), (pp40-42) • TG: L01-3 (pp3-36), L09.Exts (pp101-102), L13.Exts (p138), L14.Exts (p145), L17 (pp169-172) • Building Blocks of Science: Human Bodyworks • TG: Pre Assessment (pp 13-17), Act 02-4 (pp 25-43), Act 06-7 (pp 49-58), Act 09-12 (pp 67-84), Post Assessment (pp 85-88)
CONTENT STANDARD	MT.3.GLE.	Science - Grade Level Expectations
GRADE LEVEL EXPECTATION	3.GLE.4.a.	<p>Recognizes how technology, science and society are connected; recognizes Montana American Indian contributions.</p> <ul style="list-style-type: none"> • Animal Studies • RB: (pp50-52)
BENCHMARK	3.GLE.5.	<p>List the occupations that historically use science, (e.g. doctor, veterinarian, pharmacist, ethno botanist) including Montana American Indian examples.</p> <ul style="list-style-type: none"> • Animal Studies • RB: (pp50-52) • TG: L08.Exts (p94) • Building Blocks of Science: Human Bodyworks • TG: Ext 08 (pp 64)

Grade 4

CONTENT STANDARD	MT.1.	Students, through the inquiry process, demonstrate the ability to design, conduct, evaluate, and communicate the results and form reasonable conclusions of scientific investigations.
BENCHMARK	4.1.1.	<p>Students will develop the abilities necessary to safely conduct scientific inquiry, including (a step-by-step sequence is not implied): (a) asking questions about objects, events, and organisms in the environment, (b) planning and conducting simple investigations.</p> <ul style="list-style-type: none"> • Ecosystems • TG: L09 (pp95-98)
BENCHMARK	4.1.2.	<p>Students will select and use appropriate tools including technology to make measurements (including metric units) and represent results of basic scientific investigations.</p> <ul style="list-style-type: none"> • Ecosystems • TG: L02 (pp13-24) • Land and Water • RB: (pp32-35) • TG: L02-16 (pp11-182)
BENCHMARK	4.1.3.	<p>Students will use data to describe and communicate the results of scientific investigations.</p> <ul style="list-style-type: none"> • Ecosystems • TG: L13-14 (pp125-144) • Land and Water • TG: L01-17 (pp3-186)

BENCHMARK	4.1.4.	Students will use models that illustrate simple concepts and compare those models to the actual phenomenon. <ul style="list-style-type: none"> • Ecosystems • TG: L02-10 (pp13-110), L13 (pp125-132) • Land and Water • TG: L02-4 (pp11-50), L09-12 (pp99-142), L15.Exts (p167), L16 (pp173-182)
CONTENT STANDARD	MT.2.	Students, through the inquiry process, demonstrate knowledge of properties, forms, changes and interactions of physical and chemical systems.
BENCHMARK	4.2.4.	Students will model and explain that matter exists as solids, liquids, and gases and can change from one form to another. <ul style="list-style-type: none"> • Land and Water • TG: L02.Exts (p19)
CONTENT STANDARD	MT.3.	Students, through the inquiry process, demonstrate knowledge of characteristics, structures and function of living things, the process and diversity of life, and how living organisms interact with each other and their environment.
BENCHMARK	4.3.1.	Students will identify that plants and animals have structures and systems that serve different functions for growth, survival, and reproduction. <ul style="list-style-type: none"> • Land and Water • TG: L14.Exts (p156)
BENCHMARK	4.3.3.	Students will describe and use models that trace the life cycles of different plants and animals and discuss how they differ from species to species. <ul style="list-style-type: none"> • Ecosystems • RB: (pp31-34) • TG: L03.Exts (p29), L05-6 (pp53-74)
BENCHMARK	4.3.4.	Students will explain cause and effect relationships between nonliving and living components within ecosystems; and explain individual response to the changes in the environment including identifying differences between inherited, instinctual, and learned behaviors. <ul style="list-style-type: none"> • Ecosystems • RB: (pp11- 27), (pp49-51) • TG: L01-7 (pp3-82), L12 (pp117-124), L17 (pp169-171)
CONTENT STANDARD	MT.4.	Students, through the inquiry process, demonstrate knowledge of the composition, structures, processes and interactions of Earth's systems and other objects in space.
BENCHMARK	4.4.1.	Students will describe and give examples of earth's changing features. <ul style="list-style-type: none"> • Land and Water • RB: (pp36-38) • TG: L03-7 (pp29-84), L09-15 (pp99-172)
BENCHMARK	4.4.4.	Students will observe and describe the water cycle and the local weather and demonstrate how weather conditions are measured. <ul style="list-style-type: none"> • Land and Water • TG: L01-3 (pp3-36), L06 (pp63-74)

CONTENT STANDARD	MT.5.	Students, through the inquiry process, understand how scientific knowledge and technological developments impact communities, cultures and societies.
BENCHMARK	4.5.1.	Students will describe and discuss examples of how people use science and technology. <ul style="list-style-type: none"> • Land and Water • RB: (pp21-29)
BENCHMARK	4.5.3.	Students will simulate scientific collaboration by sharing and communicating ideas to identify and describe problems. <ul style="list-style-type: none"> • Ecosystems • TG: L02-10 (pp13-110), L12-17 (pp117-171) • Land and Water • TG: L01-9 (pp3-108), L11-13 (pp119-152), L15-17 (pp163-186)
BENCHMARK	4.5.4.	Students will use scientific knowledge to make inferences and propose solutions for simple environmental problems. <ul style="list-style-type: none"> • Ecosystems • RB: (pp26-37), (pp40-42), (pp45-51), (pp54-61) • TG: L08-16 (pp83-168) • Land and Water • RB: (pp36-38) • TG: L14-15 (pp153-172)
CONTENT STANDARD	MT.6.	Students understand historical developments in science and technology.
BENCHMARK	4.6.2.	Students will describe how scientific inquiry has produced much knowledge about the world and a variety of contributions toward understanding events and phenomenon within the universe. <ul style="list-style-type: none"> • Ecosystems • RB: (pp07-10), (pp54-61) • Land and Water • RB: (pp07-09), (pp36-38), (pp41-44), (pp57-58) • TG: L02-3 (pp11-36), L09 (pp99-108), L13 (pp143-152), .L17 (pp182-186)
CONTENT STANDARD	MT.4.GLE.	Science - Grade Level Expectations
BENCHMARK	4.GLE.1.	With direction, safely completes a simple investigation (direct inquiry) by asking questions with identified variables, using appropriate tools, and communicates results with appropriate data. Identifies that observation is a key inquiry process used by Montana American Indians. <ul style="list-style-type: none"> • Ecosystems • RB: (pp07-23), (pp26-37), (pp40-51), (pp54-61) • TG: L01-17 (pp3-171) • Land and Water • RB: (pp07-18), (pp21-61) • TG: L01-17 (pp3-186)
BENCHMARK	4.GLE.2.	Selects and safely uses tools for the simple measurement of each state of matter; identifies, describes and models characteristics of properties within physical and mechanical systems (e.g. magnetism, motion, heat, light, and mixtures)

		<ul style="list-style-type: none"> • Land and Water • RB: (pp32-35) • TG: L02-16 (pp11-182)
BENCHMARK	4.GLE.3.	<p>Identifies attributes of living (biotic) things and non-living (abiotic) objects, including classification based on similarities and differences in instinctual, inherited, and learned behaviors; basic structure and function, and life cycle processes including energy needs of each system.</p> <ul style="list-style-type: none"> • Ecosystems • RB: (pp31-34) • TG: L01-2 (pp3-24), L03.Exts (p29), L05-6 (pp53-74), L17 (pp169-171)
CONTENT STANDARD	MT.4.GLE.	Science - Grade Level Expectations
BENCHMARK	4.GLE.4.	<p>Identifies and accurately illustrates Earth's features, locating several observable changes of those features (e.g. erosion, weathering). Observes and records changes in weather (e.g. water cycle). Identifies patterns of movement of stars, moon, sun, and planets. Investigates and makes inferences from fossils.</p>
GRADE LEVEL EXPECTATION	4.GLE.4.a.	<p>Identifies interactions among technology, science, and society; recognizes Montana American Indian contributions.</p> <ul style="list-style-type: none"> • Land and Water • RB: (pp07-09)
BENCHMARK	4.GLE.5.	<p>Lists the occupations that historically use science, (i.e. doctor, veterinarian, pharmacist, ethno botanist) including Montana American Indian examples. Identifies their impact on societies.</p> <ul style="list-style-type: none"> • Land and Water • RB: (pp07-09)

Grade 5

CONTENT STANDARD	MT.1.	Students, through the inquiry process, demonstrate the ability to design, conduct, evaluate, and communicate the results and form reasonable conclusions of scientific investigations.
BENCHMARK	5.1.1.	<p>Students will identify a question, determine relevant variables and a control, formulate a testable hypothesis, plan and predict the outcome of an investigation, safely conduct scientific investigation, and compare and analyze data.</p> <ul style="list-style-type: none"> • Bubble Festival • TG: Act01-12 (pp54-124) • Building Blocks of Science: Understanding Cells and DNA • TG: Act 01-06 (pp 21-79), Ext 02 (p 32), Ext 04 (p 58), Ext 06 (p 78) • Life Through Time • TG: Ses01-07 (pp13-269) • 3-5 Space Science • TG: Ses 1.1-4.5 (pp 28-423)
BENCHMARK	5.1.2.	<p>Students will select and use appropriate tools including technology to make measurements (in metric units), gather, process and analyze data from scientific investigations.</p> <ul style="list-style-type: none"> • Bubble Festival • TG: Act01-12 (pp54-124) • Building Blocks of Science: Understanding Cells and DNA • TG: Act 02 (pp 27-33), Act 05-6 (pp 65-79)

		<ul style="list-style-type: none"> • Life Through Time • TG: Ses01-07 (pp13-269) • 3-5 Space Science • TG: Ses 1.1-4.5 (pp 28-423)
BENCHMARK	5.1.3.	<ul style="list-style-type: none"> • Students will review, communicate and defend results of investigations, including considering alternative explanations. • 3-5 Space Science • TG: Ses 2.1 (pp 172-181), Ses 2.2 (pp 182-201)
BENCHMARK	5.1.4.	<p>Students will create models to illustrate scientific concepts and use the model to predict change (e.g., computer simulation, stream table, graphic representation)</p> <ul style="list-style-type: none"> • Building Blocks of Science: Understanding Cells and DNA • TG: Act 04 (pp 51-63), Act 06 (pp 75-79) • 3-5 Space Science • TG: Ses 1.1-4.5 (pp 28-423)
CONTENT STANDARD	MT.2.	Students, through the inquiry process, demonstrate knowledge of properties, forms, changes and interactions of physical and chemical systems.
BENCHMARK	5.2.2.	<p>Students will examine, describe, compare and classify objects and substances based on common physical properties and simple chemical properties.</p> <ul style="list-style-type: none"> • Building Blocks of Science: Understanding Cells and DNA • TG: Act 01-04 (pp 21-63), Act 06 (pp 75-79) • 3-5 Space Science • TG: Ses 1.5-1.7 (pp 86-135)
BENCHMARK	5.2.3.	<ul style="list-style-type: none"> • Students will describe energy and compare and contrast the energy transformations and the characteristic of light, heat, motion, magnetism, electricity, sound and mechanical waves. • 3-5 Space Science • TG: Ses 1.1 (pp 28-45), Ses 2.1-2.6 (pp 172-281)
BENCHMARK	5.2.5.	<ul style="list-style-type: none"> • Students will describe and explain the motion of an object in terms of its position, direction, & speed as well as the forces acting upon it. • 3-5 Space Science • TG: Ses 1.1 (pp 28-45), Ses 2.1-2.6 (pp 172-281)
BENCHMARK	5.2.6.	<p>Students will identify, build, describe, measure, and analyze mechanical systems (e.g., simple and complex compound machines) and describe the forces acting within those systems.</p> <ul style="list-style-type: none"> • Building Blocks of Science: Understanding Cells and DNA • TG: Act 04 (pp 51-63), Act 06 (pp 75-79)
CONTENT STANDARD	MT.3.	Students, through the inquiry process, demonstrate knowledge of characteristics, structures and function of living things, the process and diversity of life, and how living organisms interact with each other and their environment.
BENCHMARK	5.3.1.	<p>Students will compare the structure and function of prokaryotic cells (bacteria) and eukaryotic cells (plant, animal, etc.) including the levels of organization of the structure and function, particularly with humans.</p> <ul style="list-style-type: none"> • Building Blocks of Science: Understanding Cells and DNA

		<ul style="list-style-type: none"> TG: Pre Assessment (pp 17-19), Act 01 (pp 21-26), Act 03-04 (pp 35-63), Ext 01 (p 23), Post Assessment (p 85-91)
BENCHMARK	5.3.2.	Students will explain how organisms and systems of organisms obtain and use energy resources to maintain stable conditions (e.g., food webs, photosynthesis, respiration)
BENCHMARK	5.3.4.	Students will investigate and explain the interdependent nature of populations and communities in the environment and describe how species in these populations adapt by evolving. <ul style="list-style-type: none"> Life Through Time TG: Ses02-07 (pp37-269)
BENCHMARK	5.3.5.	Students will create and use a basic classification scheme to identify plants and animals. <ul style="list-style-type: none"> Building Blocks of Science: Understanding Cells and DNA TG: Act 01-04 (pp 21-63), Act 06 (pp 75-79) Life Through Time TG: Ses03-06 (pp101-234)
CONTENT STANDARD	MT.4.	Students, through the inquiry process, demonstrate knowledge of the composition, structures, processes and interactions of Earth's systems and other objects in space.
BENCHMARK	5.4.3.	Students will use fossils to describe the geological timeline. <ul style="list-style-type: none"> Life Through Time TG: Ses01 (pp13-36), Ses07 (pp235-269)
BENCHMARK	5.4.4.	<ul style="list-style-type: none"> Students will describe the water cycle, the composition and structure of the atmosphere and the impact of oceans on large-scale weather patterns. 3-5 Space Science TG: Ses 1.1-2.6 (pp 28-281)
BENCHMARK	5.4.5.	<ul style="list-style-type: none"> Students will describe and model the motion and tilt of earth in relation to the sun, and explain the concepts of day, night, seasons, year, and climatic changes. 3-5 Space Science TG: Ses 3 Post Assessment (pp 1-2), Ses 3 Pre Assessment (pp 1-2) Ses 3.14.5 (pp 286-423)
BENCHMARK	5.4.6.	<ul style="list-style-type: none"> Students will describe the earth, moon, planets and other objects in space in terms of size, force of gravity, structure, and movement in relation to the sun. 3-5 Space Science TG: Ses 1 Post Assessment (pp 1-2), Ses 1 Pre Assessment (p 1) Ses 1.1-4.5 (pp 28-423)
CONTENT STANDARD	MT.5.	Students, through the inquiry process, understand how scientific knowledge and technological developments impact communities, cultures and societies.
BENCHMARK	5.5.3.	Students will simulate collaborative problem solving and give examples of how scientific knowledge and technology are shared with other scientists and the public. <ul style="list-style-type: none"> Building Blocks of Science: Understanding Cells and DNA TG: Act 01-06 (pp 21-79)

BENCHMARK	5.5.4.	<p>Students will use scientific knowledge to investigate problems and their proposed solutions and evaluate those solutions while considering environmental impacts.</p> <ul style="list-style-type: none"> • Bubble Festival • TG: Act01-12 (pp54-124) • Building Blocks of Science: Understanding Cells and DNA • TG: Act 01-06 (pp 21-79) • Life Through Time • TG: Ses01-07 (pp13-269)
CONTENT STANDARD	MT.6.	Students understand historical developments in science and technology.
BENCHMARK	5.6.1.	<p>Students will give examples of scientific discoveries and describe the interrelationship between technological advances and scientific understanding, including Montana American Indian examples.</p> <ul style="list-style-type: none"> • Building Blocks of Science: Understanding Cells and DNA • TG: Act 02 (pp 27-33)
BENCHMARK	5.6.2.	<p>Students will identify major milestones in science that have impacted science, technology, and society.</p> <ul style="list-style-type: none"> • Building Blocks of Science: Understanding Cells and DNA • TG: Act 02 (pp 27-33)
CONTENT STANDARD	MT.5.GLE.	Science - Grade Level Expectations
BENCHMARK	5.GLE.1.	<p>Identifies a testable question, safely plans and conducts experimental investigations, and communicates results. Recognizes that observation is the key inquiry process for Montana American Indians.</p> <ul style="list-style-type: none"> • Bubble Festival • TG: Act01-12 (pp54-124) • Building Blocks of Science: Understanding Cells and DNA • TG: Act 01-06 (pp 21-79) • Life Through Time • TG: Ses01-07 (pp13-269)
BENCHMARK	5.GLE.2.	<p>Selects and safely uses tools for the simple measurement of each state of matter. Identifies physical interactions involving changes in energy. Identifies, describes, and models characteristics of properties and basic physical, chemical, and mechanical changes (e.g. forces in motion, work, and power).</p> <ul style="list-style-type: none"> • Bubble Festival • TG: Act10 (pp108-113)
BENCHMARK	5.GLE.3.	<p>Applies knowledge, including classification, based on similarities and differences in basic structure and function, and life cycle processes of each system (e.g. photosynthesis, respiration, transpiration, symbiotic relationships, adaptations; ecosystems and food chains).</p> <ul style="list-style-type: none"> • Life Through Time • TG: Ses01-06 (pp13-234)

Grades 6-8

CONTENT STANDARD	MT.1.	Students, through the inquiry process, demonstrate the ability to design, conduct, evaluate, and communicate the results and form reasonable conclusions of scientific investigations.
BENCHMARK	6.1.1.	<p>Students will identify a question, determine relevant variables and a control, formulate a testable hypothesis, plan and predict the outcome of an investigation, safely conduct scientific investigation, and compare and analyze data.</p> <ul style="list-style-type: none"> • Catastrophic Events • SG: L01-25 (pp2-282) • TG: L01-25 (pp3-372) • Energy, Machines, and Motion • SG: L01-22 (pp2-236) • TG: (pp xxxiii - xxxv), L01-22 (pp3-254) • Earth in Space • SG: L01-22 (pp2-343) • TG: (pp xxxiv - xxxvi), L01-22 (pp3-326) • Organisms - From Macro to Micro • SG: L02-20 (pp12-243) • TG: (pp xxxiv-xxxv), L02-20 (pp15-350) • Properties of Matter • SG: L01-26 (pp2-235) • TG: L01-26 (pp3-332)
BENCHMARK	6.1.2.	<p>Students will select and use appropriate tools including technology to make measurements (in metric units), gather, process and analyze data from scientific investigations.</p> <ul style="list-style-type: none"> • Catastrophic Events • SG: L01-25 (pp2-282) • TG: L01-25 (pp3-372) • Energy, Machines, and Motion • SG: L01-22 (pp2-236) • TG: (pp xxxiii - xxxv), L01-22 (pp3-254) • Earth in Space • SG: L01-22 (pp2-343) • TG: (pp xxxiv - xxxvi), L01-22 (pp3-326) • Organisms - From Macro to Micro • SG: L02-20 (pp12-243) • TG: (pp xxxiv-xxxv), L02-20 (pp15-350) • Properties of Matter • SG: L01-26 (pp2-235) • TG: L01-26 (pp3-332)
BENCHMARK	6.1.4.	<p>Students will create models to illustrate scientific concepts and use the model to predict change (e.g., computer simulation, stream table, graphic representation)</p> <ul style="list-style-type: none"> • Catastrophic Events • SG: L02 (pp12-25), L06 (pp68-79), L11 (pp120-133), L12 (pp134-153), L15 (pp170-189), L17 (pp194-197) • L19 (pp210-223), L20 (pp224-231), L24-25 (pp264-282)

		<ul style="list-style-type: none"> • TG: L02 (pp17-26), L06 (pp69-82), L11 (pp149-162), L12 (pp163-176), L14.Exts (pp193-194), L15 (pp197-218) • L17 (pp233-256) L19 (pp265-278), L20 (pp279-292), L23.Exts (pp325-326), L24-25 (pp329-372) • Energy, Machines, and Motion • SG: L12-13 (pp108-129) • TG: L04 (pp37-46), L12-13 (pp147-166) • Earth in Space • SG: L02-7 (pp12-101), L09 (pp122-127), L11-14 (pp146-215), L18 (pp290-311) • TG: L01.Exts (p10), L02-7 (pp11-96), L08.Exts (pp108-109), L09 (pp121-146), L11-14 (pp159-220), L16.Exts (p256) • L17.Exts (pp275-276), L18 (pp277-286), L20.Exts (p297) • Organisms - From Macro to Micro • SG: L08 (pp96-105), L10 (pp120-131) • TG: L07.Exts (pp118-119), L08 (pp131-150), L10 (pp167-184), L17.Exts (pp287-288), L18.Exts (pp299-300) • Properties of Matter • TG: L07.Exts (p86), L08.Exts (p96), L12.Exts (p140), L14.Exts (p157), L15.Exts (p166)
BENCHMARK	6.1.5.	<p>Students will identify strengths and weakness in an investigation design.</p> <ul style="list-style-type: none"> • Energy, Machines, and Motion • SG: L07 (pp62-71) • TG: L07 (pp75-84) • Properties of Matter • SG: L13 (pp112-115), L15-16 (pp122-139), L23-24 (pp208-223) • TG: L13 (pp143-152), L15-16 (pp161-178), L23-24 (pp275-302)
BENCHMARK	6.1.6.	<p>Students will compare how observations of nature form an essential base of knowledge among the Montana American Indians.</p> <ul style="list-style-type: none"> • Earth in Space • SG: L20 (pp324-333) • TG: L20 (pp293-308)
CONTENT STANDARD	MT.2.	<p>Students, through the inquiry process, demonstrate knowledge of properties, forms, changes and interactions of physical and chemical systems.</p>
BENCHMARK	6.2.1.	<p>Students will classify, describe, and manipulate the physical models of matter in terms of: elements, and compounds, pure substances and mixtures, atoms, and molecules.</p> <ul style="list-style-type: none"> • Properties of Matter • SG: L01 (pp2-13), L11-12 (pp98-111), L14-15 (pp116-129), L17-22 (pp140-207) • TG: L01 (pp3-14), L11-12 (pp125-142), L14-15 (pp153-168), L16.Exts (p178), L17-22 (pp179-274), L23.Exts (p284)
BENCHMARK	6.2.2.	<p>Students will examine, describe, compare and classify objects and substances based on common physical properties and simple chemical properties.</p> <ul style="list-style-type: none"> • Catastrophic Events

		<ul style="list-style-type: none"> • SG: L21 (pp232-239), L23 (pp252-263) • TG: L21 (pp293-302), L23 (pp217-328) • Earth in Space • TG: L12 (pp181-196) • Organisms - From Macro to Micro • SG: L01 (pp2-11), L20 (pp236-243) • TG: L01 (pp3-14), L20 (pp331-350) • Properties of Matter • SG: L11-12 (pp98-111), L21-22 (pp186-207) • TG: L11-12 (pp125-142), TG: L216-22 (pp241-274)
BENCHMARK	6.2.3.	<p>Students will describe energy and compare and contrast the energy transformations and the characteristics of light, heat, motion, magnetism, electricity, sound and mechanical waves.</p> <ul style="list-style-type: none"> • Catastrophic Events • SG: L11-12 (pp120-153), SG: L15 (pp170-189) • TG: L11-12 (pp149-176), L15 (pp197-218) • Energy, Machines, and Motion • SG: L01-22 (pp2-236) • TG: L01-22 (pp3-254) • Earth in Space • SG: L15 (pp216-243) • TG: L15 (pp221-244) • Properties of Matter • SG: L07 (pp64-73) • TG: L07 (pp79-90)
BENCHMARK	6.2.4.	<p>Students will model and explain the states of matter are dependent upon the quantity of energy present in the system and describe what will change and what will remain unchanged at the particulate level when matter experiences an external force or energy change.</p> <ul style="list-style-type: none"> • Properties of Matter • TG: L02.Exts (p21), L07.Exts (p86), L08.Exts (p96), L12.Exts (p140), L14.Exts (p157), L15.Exts (p166)
BENCHMARK	6.2.5.	<p>Students will describe and explain the motion of an object in terms of its position, direction, & speed as well as the forces acting upon it.</p> <ul style="list-style-type: none"> • Catastrophic Events • SG: L11-12 (pp120-153), L15 (pp170-189) • TG: L11-12 (pp149-176), L15 (pp197-218) • Energy, Machines, and Motion • SG: L01-22 (pp2-236) • TG: L01-22 (pp3-254) • Earth in Space • SG: L15 (pp216-243) • TG: L15 (pp221-244)
BENCHMARK	6.2.6.	<p>Students will identify, build, describe, measure, and analyze mechanical systems (e.g., simple and complex compound machines) and describe the forces acting</p>

		<p>within those systems.</p> <ul style="list-style-type: none"> • Catastrophic Events • TG: L23.Exts (pp325-326) • Energy, Machines, and Motion • SG: L01 (pp2-11), L03 (pp20-25), L07-8 (pp62-81). L11-16 (pp100-161), L22 (pp226-236) • TG: L01 (pp3-22), L03 (pp31-36), L07-8 (pp75-98). L11-17 (pp131-216), L18.Exts (p224), L19.Exts (p234), L21.Exts (p245), L22 (pp247-254) • Earth in Space • SG: L21 (pp334-339) • TG: L20.Exts (p297), L21 (pp309-310) • Organisms - From Macro to Micro • TG: L05.Exts (pp69-70) • Properties of Matter • SG: L16 (pp130-139) • TG: L10.Exts (p119)
BENCHMARK	6.2.7.	<p>Students will give examples and describe how energy is transferred and conserved (e.g. electric to light and heat [light bulb], chemical to mechanical [fuel to propulsion]).</p> <ul style="list-style-type: none"> • Energy, Machines, and Motion • SG: L02-4 (pp12-35), L09-10 (pp82-97), L17 (pp164-173), L19-20 (pp188-213), L22 (pp226-236) • TG: L01-4 (pp3-46), L09-10 (pp99-130), L17 (pp203-216), L19-22 (pp229-254)
CONTENT STANDARD	MT.3.	<p>Students, through the inquiry process, demonstrate knowledge of characteristics, structures and function of living things, the process and diversity of life, and how living organisms interact with each other and their environment.</p>
BENCHMARK	6.3.1.	<p>Students will compare the structure and function of prokaryotic cells (bacteria) and eukaryotic cells (plant, animal, etc.) including the levels of organization of the structure and function, particularly with humans.</p> <ul style="list-style-type: none"> • Organisms - From Macro to Micro • SG: L01 (pp2-11), L03 (pp28-37), L11 (pp132-145), L14 (pp172-179) • TG: L01 (pp3-14), L02.Exts (p25), L03 (pp33-48), L11 (pp185-200), L14 (pp237-252)
BENCHMARK	6.3.2.	<p>Students will explain how organisms and systems of organisms obtain and use energy resources to maintain stable conditions (e.g., food webs, photosynthesis, respiration)</p> <ul style="list-style-type: none"> • Earth in Space • TG: L07.Exts (pp92-93) • Organisms - From Macro to Micro • SG: L07 (pp82-93), L10 (pp120-131), L17 (pp194-203) • TG: L07 (pp105-130), L10 (pp167-184)
BENCHMARK	6.3.3.	<p>Students will communicate the differences in the reproductive processes of a variety of plants and animals using the principles of genetic modeling (e.g.,</p>

		<p>Punnet squares)</p> <ul style="list-style-type: none"> • Organisms - From Macro to Micro • SG: L03 (pp28-37), L05 (pp46-63), L09 (pp106-119), L12 (pp146-155), L14 (pp172-179), L17-19 (pp194-235) • TG: L03 (pp33-48), .L05 (pp57-72), L09 (pp151-166), L12 (pp201-218), L14 (pp237-252), L17-19 (pp281-330)
BENCHMARK	6.3.4.	<p>Students will investigate and explain the interdependent nature of populations and communities in the environment and describe how species in these populations adapt by evolving.</p> <ul style="list-style-type: none"> • Organisms - From Macro to Micro • SG: L09 (pp106-119), L13 (pp158-171) • TG: L09 (pp151-166), L13 (pp219-236), L18.Exts (pp299-300), L19.Exts (pp317-318)
BENCHMARK	6.3.5.	<p>Students will create and use a basic classification scheme to identify plants and animals.</p> <ul style="list-style-type: none"> • Organisms - From Macro to Micro • SG: L01 (pp2-11), L04-5 (pp38-63), L07 (pp82-93), L16 (pp188-193), L20 (pp236-243) • TG: L01 (pp3-14), L05 (pp57-72), L06.Exts (pp89-91), L07 (pp105-130), L10.Exts (pp175-176), L16 (pp267-280), L20 (pp331-350)
CONTENT STANDARD	MT.4.	<p>Students, through the inquiry process, demonstrate knowledge of the composition, structures, processes and interactions of Earth's systems and other objects in space.</p>
BENCHMARK	6.4.1.	<p>Students will model and explain the internal structure of the earth and describe the formation and composition of earth's external features in terms of the rock cycle and plate tectonics and constructive and destructive forces.</p> <ul style="list-style-type: none"> • Catastrophic Events • SG: L01-25 (pp2-282) • TG: L01-25 (pp3-372) • Earth in Space • SG: L13 (pp174-199) • TG: L13 (pp197-208) • Properties of Matter • SG: L05 (pp38-55)
BENCHMARK	6.4.2.	<p>Students will differentiate between rocks types and minerals types and classify both by how they are formed and the utilization by humans.</p> <ul style="list-style-type: none"> • Catastrophic Events • SG: L21-22 (pp232-251), L25 (pp274-282) • TG: L21-22 (pp293-316), L23.Exts (pp325-326), L25 (pp347-372) • Earth in Space • SG: L18 (pp290-311) • TG: L12.Exts (pp192-193), L18 (pp277-286)

BENCHMARK	6.4.4.	<p>Students will describe the water cycle, the composition and structure of the atmosphere and the impact of oceans on large-scale weather patterns.</p> <ul style="list-style-type: none"> • Catastrophic Events • SG: L01-7 (pp2-95) • TG: L01-7 (pp3-102) • Earth in Space • SG: L17 (pp268-289) • TG: L17 (pp269-276) • Properties of Matter • SG: L01 (pp2-13) • TG: L05.Exts (p56)
BENCHMARK	6.4.5.	<p>Students will describe and model the motion and tilt of earth in relation to the sun, and explain the concepts of day, night, seasons, year, and climatic changes.</p> <ul style="list-style-type: none"> • Catastrophic Events • SG: L03 (pp26-41), L07 (pp80-95) • TG: L01.Exts (pp10-11), L03 (pp27-44), L07 (pp83-102) • Earth in Space • SG: L02-4 (pp12-61), L06 (pp74-87), L08 (pp102-121), L16 (pp244-265) • TG: L02-4 (pp11-52), L06 (pp73-82), L08 (pp97-120), L16 (pp245-268) • Organisms - From Macro to Micro • TG: L10.Exts (pp175-176)
BENCHMARK	6.4.6.	<p>Students will describe the earth, moon, planets and other objects in space in terms of size, force of gravity, structure, and movement in relation to the sun.</p> <ul style="list-style-type: none"> • Energy, Machines, and Motion • TG: L05.Exts (pp53-54) • Earth in Space • SG: L01-17 (pp2-289), L19 (pp312-323) • TG: L01-17 (pp3-276), L19 (pp287-292)
BENCHMARK	6.4.7.	<p>Students will identify scientific theories about the origin and evolution of the earth and solar system.</p> <ul style="list-style-type: none"> • Earth in Space • TG: L01 (pp3-10) • Properties of Matter • SG: L01 (pp2-13) • TG: L01.Exts (p9)
CONTENT STANDARD	MT.5.	Students, through the inquiry process, understand how scientific knowledge and technological developments impact communities, cultures and societies.
BENCHMARK	6.5.1.	<p>Students will describe the specific fields of science and technology as they relate to occupations within those fields.</p> <ul style="list-style-type: none"> • Catastrophic Events • SG: L01 (pp2-11), L04 (pp42-53), L12 (pp134-153), L19 (pp210-223) • TG: L01 (pp3-16), L04 (pp45-56), L12 (pp163-176), L14.Exts (pp193-

		<p>194), L19 (pp265-278)</p> <ul style="list-style-type: none"> • Energy, Machines, and Motion • SG: L17 (pp164-173) • Organisms - From Macro to Micro • SG: L02 (pp12-27), L11 (pp132-145) L09.Exts (p160) • TG: L19.Exts (pp317-318)
BENCHMARK	6.5.2.	<p>Students will apply scientific knowledge and process skills to understand issues and everyday events.</p> <ul style="list-style-type: none"> • Catastrophic Events • SG: L18 (pp200-209) • TG: L18 (pp257-264)
BENCHMARK	6.5.3.	<p>Students will simulate collaborative problem solving and give examples of how scientific knowledge and technology are shared with other scientists and the public.</p> <ul style="list-style-type: none"> • Catastrophic Events • SG: L01-25 (pp2-282) • TG: L01-25 (pp3-372) • Earth in Space • SG: L01 (pp2-11), L05 (pp62-73), L09-11 (pp122-159), L14 (pp200-215), L18-19 (pp290-323), L22 (pp340-343) • TG: L01 (pp3-10), L05 (pp53-72), L09-11 (pp121-180), L13-14 (pp197-220), L18-19 (pp277-292), L20.Exts (p297), L21.Exts (p310) • L22 (pp311-326) • Organisms - From Macro to Micro • TG: L02 (pp15-32)
BENCHMARK	6.5.4.	<p>Students will use scientific knowledge to investigate problems and their proposed solutions and evaluate those solutions while considering environmental impacts.</p> <ul style="list-style-type: none"> • Catastrophic Events • SG: L01-25 (pp2-282) • TG: L01-25 (pp3-372) • Energy, Machines, and Motion • SG: L01-22 (pp2-236) • TG: L01-22 (pp3-254) • Earth in Space • SG: L01 (pp2-11), L04-6 (pp42-87), L09 (pp122-127), L11 (pp146-159), L13-14 (pp174-215), L18 (pp290-311), L20-22 (pp324-343) • TG: L01 (pp3-10), L04-6 (pp37-82), L09-11 (pp121-180), L13-14 (pp197-220), L18-22 (pp277-326) • Organisms - From Macro to Micro • SG: L01-20 (pp2-243) • TG: L01-20 (pp3-350) • Properties of Matter • SG: L01-26 (pp2-235) • TG: L01-26 (pp3-332)
BENCHMARK	6.5.5.	<p>Students will describe how the knowledge of science and technology influences</p>

		<p>the development of the Montana American Indian cultures.</p> <ul style="list-style-type: none"> • Earth in Space • SG: L20-21 (pp324-339) • TG: L20-21 (pp293-310) • Properties of Matter • SG: L18 (pp150-161) • TG: L21.Exts (p251)
CONTENT STANDARD	MT.6.	Students understand historical developments in science and technology.
BENCHMARK	6.6.1.	<p>Students will give examples of scientific discoveries and describe the interrelationship between technological advances and scientific understanding, including Montana American Indian examples.</p> <ul style="list-style-type: none"> • Catastrophic Events • SG: L10 (pp114-119), L14 (pp164-169), L21 (pp232-239) • TG: L10 (pp143-148), L14 (pp187-196), L21 (pp293-302) • Energy, Machines, and Motion • SG: L01 (pp2-11), L02 (pp12-19), L04 (pp26-35), L07 (pp62-71), L11-16 (pp100-161), SG: L22 (pp226-236) • TG: L09.Exts (p105), L14 (pp167-176), L16 (pp185-202), L17.Exts (p208), L22 (pp247-254) • Earth in Space • SG: L10 (pp130-145), L20-21 (pp324-339) • TG: L04 (pp37-52), L10 (pp147-158), L20-21 (pp293-310) • Organisms - From Macro to Micro • SG: L02 (pp12-27), L08 (pp96-105), L13 (pp158-171), L18-19 (pp204-235) • TG: L13 (pp219-236) • Properties of Matter • SG: L01 (pp2-13), L05 (pp38-55), L07 (pp64-73), L09 (pp78-83), L11 (pp98-105), L15 (pp122-129), L19 (pp162-167) • L21-23 (pp186-217), L25 (pp224-229) •
BENCHMARK	6.6.2.	<p>Students will identify major milestones in science that have impacted science, technology, and society.</p> <ul style="list-style-type: none"> • Catastrophic Events • SG: L10 (pp114-119), L14 (pp164-169), L21 (pp232-239) • TG: L10 (pp143-148), L14 (pp187-196), L21 (pp293-302) • Energy, Machines, and Motion • SG: L01 (pp2-11), L02 (pp12-19), L04 (pp26-35), L07 (pp62-71), L11-16 (pp100-161), SG: L22 (pp226-236) • TG: L09.Exts (p105), L14 (pp167-176), L16 (pp185-202), L17.Exts (p208), L22 (pp247-254) • Earth in Space • SG: L10 (pp130-145), L20-21 (pp324-339) • TG: L04 (pp37-52), L10 (pp147-158), L20-21 (pp293-310) • Organisms - From Macro to Micro • SG: L02 (pp12-27), L08 (pp96-105), L13 (pp158-171), L18-19 (pp204-235) • TG: L13 (pp219-236) • Properties of Matter

		<ul style="list-style-type: none"> • SG: L01 (pp2-13), L05 (pp38-55), L07 (pp64-73), L09 (pp78-83), L11 (pp98-105), L15 (pp122-129), L19 (pp162-167) • L21-23 (pp186-217), L25 (pp224-229)
CONTENT STANDARD	MT.6.GLE.	Science - Grade Level Expectations
BENCHMARK	6.GLE.1.	<p>Student safely conducts and evaluates a simple investigation; identifies variables and controls, and communicates results with appropriate data. Identifies that observation is the key inquiry process used by Montana American Indians.</p> <ul style="list-style-type: none"> • Catastrophic Events • SG: L12-13 (pp134-163), L15 (pp170-189), L17 (pp194-197), L25 (pp274-282) • TG: L06.Exts (pp77-78), L12-13 (pp163-186), L15 (pp197-218), L17 (pp233-256), L25 (pp347-372) • Energy, Machines, and Motion • SG: L07 (pp62-71), L10 (pp92-97), L13 (pp120-129), L15 (pp140-147) • TG: L04 (pp37-46), L07 (pp75-84), L10 (pp107-130), L13 (pp157-166), L15-16 (pp177-202) • Earth in Space • SG: L03 (pp22-41), L22 (pp340-343) • TG: L03 (pp21-36), L22 (pp311-326) • Organisms - From Macro to Micro • SG: L15 (pp180-187) • TG: L15 (pp253-266) • Properties of Matter • SG: L03-4 (pp24-37), L08 (pp74-77), L09 (pp78-83), L13-17 (pp112-149), L23 (pp208-217), L24 (pp218-223), L26 (pp230-235) • TG: L03-4 (pp27-48), L08 (pp91-100), L09 (pp101-112), L13-17 (pp143-192), L19 (pp209-226), L23-24 (pp275-302), L26 (pp313-332)
CONTENT STANDARD	MT.7.GLE.	Science - Grade Level Expectations
BENCHMARK	7.GLE.1.	<p>Identifies and communicates testable questions, safely designs and conducts experimental investigations using appropriate tools and metric measurements, identifies dependent and independent variables, controls, and communicates results with appropriate data. Identifies that observation is the key inquiry process use by Montana American Indians.</p> <ul style="list-style-type: none"> • Catastrophic Events • TG: L03.Exts (pp35-36) • Energy, Machines, and Motion • SG: L01-21 (pp2-225) • TG: (pp xxxiii - xxxv), L0121 (pp3-246) • Earth in Space • SG: L01-22 (pp2-343) • TG: (pp xxxiv - xxxvi), L01-22 (pp3-326) • Organisms - From Macro to Micro • SG: L02-20 (pp12-243) • TG: (pp xxxiv-xxxv), L02 -20(pp15-350) • Properties of Matter

		<ul style="list-style-type: none"> • SG: L01-26 (pp2-235) • TG: L01-26 (pp3-332)
CONTENT STANDARD	MT.6.GLE.	Science - Grade Level Expectations
BENCHMARK	6.GLE.2.	Given supporting details, describes the physical world of matter, forces and energy, including physical & mathematical models.
GRADE LEVEL EXPECTATION	6.GLE.2.a.	Identifies matter, and classifies by physical and chemical properties. <ul style="list-style-type: none"> • Catastrophic Events • SG: L20-22 (pp224-251) • TG: L20-22 (pp279-316) • Energy, Machines, and Motion • SG: L02-3 (pp12-25) • TG: L02-3 (pp23-36) • Properties of Matter • SG: L06-7 (pp56-73), L10-11 (pp86-105), L13 (pp112-115), L15 (pp122-129), L18-23 (pp150-217), L25 (pp224-229) • TG: L06-7 (pp65-90), L10-11 (pp113-134), L13 (pp143-152), L15 (pp161-168), L18-23 (pp193-2948), L25 (pp303-312)
GRADE LEVEL EXPECTATION	6.GLE.2.b.	Identifies gravity, motion, and magnetism. <ul style="list-style-type: none"> • Catastrophic Events • SG: L11-2 (pp120-153), L15 (pp170-189) • TG: L11-12 (pp149-176), L15 (pp197-218) • Energy, Machines, and Motion • SG: L01 (pp2-11), L05-22 (pp36-236) • TG: L01 (pp3-22). L05-22 (pp47-254) • Earth in Space • SG: L15 (pp216-243) • TG: L15 (pp221-244)
GRADE LEVEL EXPECTATION	6.GLE.2.c.	Identifies the types and changes of energy, and describes simple machines. <ul style="list-style-type: none"> • Energy, Machines, and Motion • SG: L01-4 (pp2-35), L08-20 (pp72-213), L22 (pp226-236) • TG: L01-4 (pp3-46), L08-22 (pp85-254)
BENCHMARK	6.GLE.3.	Identifies the structures and functions of living things, identifies the diversity of life in both the micro & macro world, and describes the interactions of living organisms with biotic and abiotic factors. <ul style="list-style-type: none"> • Organisms - From Macro to Micro • SG: L01-4 (pp2-45), L11-14 (pp132-179) • TG: L01-3 (pp3-48), L11-14 (pp185-252)
CONTENT STANDARD	MT.6.GLE.	Science - Grade Level Expectations
BENCHMARK	6.GLE.4.	Describes the interactions of the Earth's lithosphere, hydrosphere, and atmosphere; identifies the components of the universe.
GRADE LEVEL EXPECTATION	6.GLE.4.a.	Identifies the structure and processes of the Earth. <ul style="list-style-type: none"> • Catastrophic Events

		<ul style="list-style-type: none"> • SG: L09-10 (pp102-119), L14-18 (pp164-209), L24 (pp264-273) • TG: L09-10 (pp127-148), L14-18 (pp187-264), L19.Exts (pp274-275), L24 (pp329-346) • Earth in Space • SG: L13 (pp174-199) • TG: L13 (pp197-208) • Properties of Matter • SG: L05 (pp38-55)
GRADE LEVEL EXPECTATION	6.GLE.4.b.	<p>Identifies the components of the atmosphere and identifies Montana's weather and climate.</p> <ul style="list-style-type: none"> • Catastrophic Events • SG: L02-4 (pp12-53), L07 (pp80-95) • TG: L02-3 (pp17-44), L04.Exts (p54), L06.Exts (pp77-78), L07 (pp83-102) • Earth in Space • SG: L19 (pp312-323) • TG: L19 (pp287-292)
GRADE LEVEL EXPECTATION	6.GLE.4.c.	<p>Identifies the components of the universe (i.e. solar systems, stars, and galaxies) and identifies different methods of space exploration.</p> <ul style="list-style-type: none"> • Energy, Machines, and Motion • SG: L19 (pp188-199) • TG: L05.Exts (pp53-54) • Earth in Space • SG: L02 (pp12-21), L08-19 (pp102-323) • TG: L01.Exts (p10), L04 (pp37-52), L08-17 (pp97-276), L19 (pp287-292)
CONTENT STANDARD	MT.6.GLE.	Science - Grade Level Expectations
BENCHMARK	6.GLE.5.	Identifies connections and interactions between technology science, and societies.
GRADE LEVEL EXPECTATION	6.GLE.5.b.	<p>Identifies how science and technology have impacted Montana American Indians.</p> <ul style="list-style-type: none"> • Earth in Space • SG: L20-21 (pp324-339) • TG: L20 -21(pp293-310) • Properties of Matter • SG: L18 (pp150-161) • TG: L21.Exts (p251)
BENCHMARK	6.GLE.6.	<p>Identifies examples of how science and technology are the results of human activity throughout history, including Montana American Indian contributions.</p> <ul style="list-style-type: none"> • Earth in Space • SG: L20-21 (pp324-339) • TG: L20-21 (pp293-310) • Organisms - From Macro to Micro • TG: L02.Exts (p25) • Properties of Matter • SG: L20- (pp170-185)

		<ul style="list-style-type: none"> TG: L04.Exts (p45), L20.Exts (p235), L21.Exts (p251)
CONTENT STANDARD	MT.7.GLE.	Science - Grade Level Expectations
BENCHMARK	7.GLE.2.	Given supporting details, describes the physical world of matter, forces and energy, including physical, conceptual and simple mathematical models.
GRADE LEVEL EXPECTATION	7-8.GLE.2.a.	<p>Classifies matter, and describes simple chemical reactions, and chemical formulas.</p> <ul style="list-style-type: none"> Catastrophic Events TG: L19.Exts (pp274-275) Properties of Matter SG: L06-7 (pp56-73), L10-13 (pp86-115), L20 (pp170-185), L22-26 (pp198-235) TG: L06-7(pp65-90), L10-13 (pp113-152), L15 (pp161-168), L16.Exts (p178), L20 (pp227-240), L22-26 (pp263-332)
GRADE LEVEL EXPECTATION	7-8.GLE.2.b.	<p>Describes gravity, motion, magnetism, and Newton's Laws of Motion.</p> <ul style="list-style-type: none"> Catastrophic Events SG: L11-12 (pp120-153), L15 (pp170-189) TG: L11-12 (pp149-176), L15 (pp197-218) Energy, Machines, and Motion SG: L01 (pp2-11), L05-22 (pp36-236) TG: L01 (pp3-22), L05-22 (pp47-254) Earth in Space SG: L15 (pp216-243) TG: L15-16 (pp221-268)
GRADE LEVEL EXPECTATION	7-8.GLE.2.c.	<p>Classifies the types of energy, transformation and conservation of energy, and analyzes simple and complex machines.</p> <ul style="list-style-type: none"> Energy, Machines, and Motion SG: L01 (pp2-11), L08 (pp72-81), L11-16 (pp100-161) TG: L01 (pp3-22), L07.Exts (p83), L08 (pp85-98), L11-17 (pp131-216), L19 (pp229-234), L21.Exts (p245), L22 (pp247-254) Properties of Matter TG: L10.Exts (p119)
BENCHMARK	7.GLE.3.	<p>Identifies and communicates the structures & functions of living things, describes the processes and diversity of life in both the micro and macro world, and explains the interactions of living organisms with biotic and abiotic factors.</p> <ul style="list-style-type: none"> Organisms - From Macro to Micro SG: L01-4 (pp2-46), L11-12 (pp132-179) TG: L01-3 (pp3-48), L11-14 (pp185-252)
CONTENT STANDARD	MT.7.GLE.	Science - Grade Level Expectations
BENCHMARK	7.GLE.4.	Describes and explains the interactions of the Earth's lithosphere, hydrosphere, and atmosphere; describes the components of the universe.
GRADE LEVEL EXPECTATION	7-8.GLE.4.a.	<p>Describes and explains the structure and processes of the Earth.</p> <ul style="list-style-type: none"> Catastrophic Events SG: L09 (pp102-112), L10 (pp114-119), L14-18 (pp164-209), L24 (pp264-273)

		<ul style="list-style-type: none"> • TG: L09 (pp127-142), L10 (pp143-148), L14-18 (pp187-264), L19.Exts (pp274-275), L24 (pp329-346) • Earth in Space • SG: L13 (pp174-199) • TG: L13 (pp197-208) • Properties of Matter • SG: L05 (pp38-55)
GRADE LEVEL EXPECTATION	7-8.GLE.4.b.	<p>Describes and explains the components of the atmosphere and how they interact to create weather & climate.</p> <ul style="list-style-type: none"> • Catastrophic Events • SG: L01-5 (pp2-67) • TG: L01-5 (pp3-68), L06.Exts (pp77-78) • Earth in Space • SG: L17 (pp268-289) • TG: L17 (pp269-276) • Properties of Matter • TG: L05.Exts (p56)
GRADE LEVEL EXPECTATION	7-8.GLE.4.c.	<p>Describes and explains components of the universe (i.e. solar systems, stars, and galaxies) and how they have been discovered.</p> <ul style="list-style-type: none"> • Earth in Space • SG: L02 (pp12-21) • TG: L04 (pp37-52)
CONTENT STANDARD	MT.7.GLE.	Science - Grade Level Expectations
BENCHMARK	7.GLE.5.	Describes connections and interactions among technology science, and society, by applying scientific inquiry.
GRADE LEVEL EXPECTATION	7-8.GLE.5.b.	<p>Describes and explains how science and technology have impacted Montana American Indians.</p> <ul style="list-style-type: none"> • Catastrophic Events • SG: L09 (pp102-112) • TG: L09 (pp127-142) • Earth in Space • SG: L10 (pp130-145), L20-21 (pp324-339) • TG: L10 (pp147-158), L20-21 (pp293-310) • Properties of Matter • SG: L18 (pp150-161) • TG: L21.Exts (p251)
BENCHMARK	7.GLE.6.	<p>Independently identifies and describes examples of how science and technology are the results of human activity throughout history, and with direction, seeks new information that connects past to present, including Montana American Indian contributions.</p> <ul style="list-style-type: none"> • Earth in Space • SG: L20-21 (pp324-339) • TG: L20-21 (pp293-310) • Organisms - From Macro to Micro • TG: L02.Exts (p25)

		<ul style="list-style-type: none"> • Properties of Matter • SG: L20 (pp170-185) • TG: L04.Exts (p45), L20.Exts (p235), L21.Exts (p251)
CONTENT STANDARD	MT.8.GLE.	Science - Grade Level Expectations
BENCHMARK	8.GLE.1.	<p>Identifies and communicates testable questions, safely designs and conducts experimental investigations using appropriate tools and metric measurements, identifies dependent and independent variables, controls, and communicates results with appropriate data. Identifies that observation is the key inquiry process use by Montana American Indians.</p> <ul style="list-style-type: none"> • Catastrophic Events • TG: L03.Exts (pp35-36) • Energy, Machines, and Motion • SG: L01-21 (pp2-225) • TG: (pp xxxiii - xxxv), TG: L01-21 (pp3-246) • Earth in Space • SG: L01-22 (pp2-343) • TG: (pp xxxiv - xxxvi), TG: L01-22 (pp3-326) • Organisms - From Macro to Micro • SG: L02-20 (pp12-243) • TG: (pp xxxiv-xxxv), TG: L02-20 (pp15-350) • Properties of Matter • SG: L01-26 (pp2-235) • TG: L01-26 (pp3-332)
CONTENT STANDARD	MT.8.GLE.	Science - Grade Level Expectations
BENCHMARK	8.GLE.2.	Given supporting details, describes the physical world of matter, forces and energy, including physical, conceptual and simple mathematical models.
GRADE LEVEL EXPECTATION	7-8.GLE.2.a.	<p>Classifies matter, and describes simple chemical reactions, and chemical formulas.</p> <ul style="list-style-type: none"> • Catastrophic Events • TG: L19.Exts (pp274-275) • Properties of Matter • SG: L06 (pp56-63), L07 (pp64-73), L10-13 (pp86-115), L20 (pp170-185), L22-26 (pp198-235) • TG: L06 (pp65-78), L07 (pp79-90), L10-13 (pp113-152), L15 (pp161-168), L16.Exts (p178) • L20 (pp227-240), L22-26 (pp263-332)
GRADE LEVEL EXPECTATION	7-8.GLE.2.b.	<p>Describes gravity, motion, magnetism, and Newton's Laws of Motion.</p> <ul style="list-style-type: none"> • Catastrophic Events • SG: L11-12 (pp120-153), L15 (pp170-189) • TG: L11-12 (pp149-176), TG: L15 (pp197-218) • Energy, Machines, and Motion • SG: L01 (pp2-11), L05-22 (pp36-236) • TG: L01-22 (pp3-254) • Earth in Space • SG: L15 (pp216-243) • TG: L15-16 (pp221-268)
GRADE LEVEL	7-8.GLE.2.c.	Classifies the types of energy, transformation and conservation of energy, and analyzes

EXPECTATION		<p>simple and complex machines.</p> <ul style="list-style-type: none"> • Energy, Machines, and Motion • SG: L01 (pp2-11), L08 (pp72-81), L11-16 (pp100-161), L19 (pp188-199), L22 (pp226-236) • TG: L01 (pp3-22), L07.Exts (p836, L08 (pp85-98), L11-22 (pp131-254) • Properties of Matter • TG: L10.Exts (p119)
BENCHMARK	8.GLE.3.	<p>Identifies and communicates the structures & functions of living things, describes the processes and diversity of life in both the micro and macro world, and explains the interactions of living organisms with biotic and abiotic factors.</p> <ul style="list-style-type: none"> • Organisms - From Macro to Micro • SG: L01-4 (pp2-45), L11-14 (pp132-179) • TG: L01 (pp3-14), L02.Exts (p25), L03 (pp33-48), L11-14 (pp185-252)
CONTENT STANDARD	MT.8.GLE.	Science - Grade Level Expectations
BENCHMARK	8.GLE.4.	Describes and explains the interactions of the Earth's lithosphere, hydrosphere, and atmosphere; describes the components of the universe.
GRADE LEVEL EXPECTATION	7-8.GLE.4.a.	<p>Describes and explains the structure and processes of the Earth.</p> <ul style="list-style-type: none"> • Catastrophic Events • SG: L09-10 (pp102-119), L14-18 (pp164-209), L24 (pp264-273) • TG: L09-10 (pp127-148), L14-18 (pp187-264), L19.Exts (pp274-275), L24 (pp329-346) • Earth in Space • SG: L13 (pp174-199) • TG: L13 (pp197-208) • Properties of Matter • SG: L05 (pp38-55)
GRADE LEVEL EXPECTATION	7-8.GLE.4.b.	<p>Describes and explains the components of the atmosphere and how they interact to create weather & climate.</p> <ul style="list-style-type: none"> • Catastrophic Events • SG: L01-5 (pp2-67) • TG: L01-5 (pp3-68), L06.Exts (pp77-78) • Earth in Space • SG: L17 (pp268-289) • TG: L17 (pp269-276) • Properties of Matter • TG: L05.Exts (p56)
GRADE LEVEL EXPECTATION	7-8.GLE.4.c.	<p>Describes and explains components of the universe (i.e. solar systems, stars, and galaxies) and how they have been discovered.</p> <ul style="list-style-type: none"> • Earth in Space • SG: L02 (pp12-21) • TG: L04 (pp37-52)
CONTENT STANDARD	MT.8.GLE.	Science - Grade Level Expectations

BENCHMARK	8.GLE.5.	Describes connections and interactions among technology science, and society, by applying scientific inquiry.
GRADE LEVEL EXPECTATION	7-8.GLE.5.b.	<p>Describes and explains how science and technology have impacted Montana American Indians.</p> <ul style="list-style-type: none"> • Catastrophic Events • SG: L09 (pp102-112) • TG: L09 (pp127-142) • Earth in Space • SG: L10 (pp130-145), L20-21 (pp324-339) • TG: L10 (pp147-158), L20-21 (pp293-310) • Properties of Matter • SG: L18 (pp150-161) • TG: L21.Exts (p251)
BENCHMARK	8.GLE.6.	<p>Independently identifies and describes examples of how science and technology are the results of human activity throughout history, and with direction, seeks new information that connects past to present, including Montana American Indian contributions.</p> <ul style="list-style-type: none"> • Earth in Space • SG: L20-21 (pp324-339) • TG: L20-21 (pp293-310) • Organisms - From Macro to Micro • TG: L02.Exts (p25) • Properties of Matter • SG: L20 (pp170-185) • TG: L04.Exts (p45), L20.Exts (p235), L21.Exts (p251)