SCIENCE CURRICULUM FRAMEWORK

Developed 2015-2016
Implemented 2016-2017

Mountain Brook Schools
32 Vine Street
Mountain Brook, AL 35213

SCIENCE CURRICULUM FRAMEWORK

Mountain Brook Schools Board of Education

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INTRODUCTION

In response to our nation's declining competitiveness in the science, technology, engineering, and mathematics (STEM) fields, the National Research Council (NRC) published a research-based report on teaching and learning science in a 2012 document titled *A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas*. This document proposes a new approach to K-12 science education through the integration of engineering design and engineering practices within the context of science content instruction. Supported by the NRC framework and our state's College- and Career-Readiness (CCR) Anchor Standards for Reading and for Writing (Appendix A), the goal of Mountain Brook's K-12 science education standards is scientific and engineering literacy for all Mountain Brook students. The 2016 Science Curriculum Framework defines the required content that students should master to achieve this goal.

Since the present goal of Mountain Brook's science education curriculum includes engineering literacy, it is important to define what is meant by the terms science, technology, and engineering. Science is the process of building a structured body of knowledge about the natural world delineated in the three traditional domains of physical, life, and earth and space sciences. Technology is defined as any modification of the natural world made to fulfill human needs or desires, thus expanding the interpretation of technology far beyond computers and electronic devices to include simple machines, steam engines, and musical instruments. Engineering, in a broad sense, involves engagement in a systematic practice of design in order to solve problems and generate products rising from human needs and wants. A major conceptual shift in K-12 science and engineering education includes a limited number of disciplinary core ideas in four domains that students explore with increasing rigor and depth over multiple years and the integration of such knowledge with the practices needed to engage in scientific inquiry and engineering design.

Scientific and engineering literacy enables students to become critical thinkers and informed decision makers in an increasingly technological society. While providing students with foundational knowledge of the core ideas of physical, life, and earth and space sciences, the 2016 Science Curriculum Framework will also help students develop proficiency in a specific set of engineering practices they can apply in everyday problem-solving situations. Developmentally appropriate engineering projects, beginning in kindergarten, provide a meaningful and relevant context in which students' knowledge and skills can be applied. Engineering projects should include all components of the engineering design process, including specific criteria for success and constraints on materials, time, and cost.

The structure of the Science Curriculum Framework in science reflects the approach outlined by NRC's framework. The 2016 Mountain Brook Science Curriculum Framework incorporates the three dimensions around which K-12 science and engineering education are built. These dimensions are scientific and engineering practices; crosscutting concepts that unify the study of science through their common application across all domains of science and engineering; and disciplinary core ideas in the physical, life, and earth and space sciences, and in engineering, technology, and applications of science.

Mountain Brook's K-12 science program places emphasis on the importance of teaching science to every student in every grade. This document provides foundational knowledge and learning progressions that are coherent, vertically aligned, and increasingly rigorous in preparing scientifically literate citizens with the ability to evaluate the quality of science information and make informed personal choices, to gain an appreciation of science as a way of knowing about the world, and to be savvy science consumers. Effective implementation of the 2016 Science Curriculum Framework will help develop confident and capable graduates, the key to Alabama's economic productivity and our nation's competitiveness in the global marketplace.

K-12 SCIENCE CURRICULUM
CONCEPTUAL FRAMEWORK

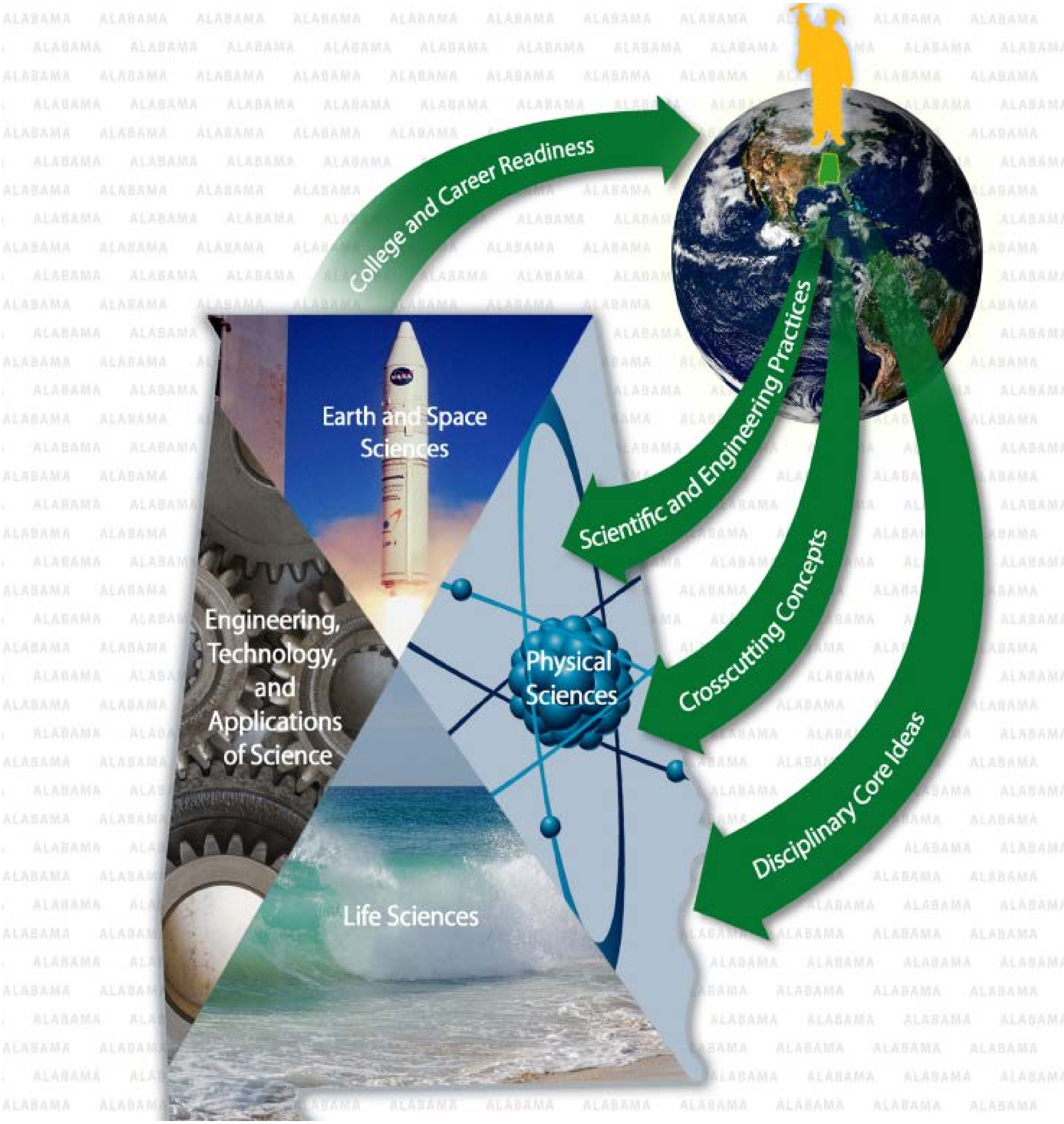
The goal of Mountain Brook's K-12 science standards is the achievement of scientific and engineering literacy by all students. A scientifically literate person is one who has a foundation in scientific knowledge, a technological understanding of problem solving, and the ability to design scientific solutions. The correlation among these aspects of scientific literacy is depicted in the conceptual framework, which illustrates the three basic dimensions for establishing scientific and engineering literacy—scientific and engineering practices, crosscutting concepts, and disciplinary core ideas.

To face the many challenges of a universal society, Mountain Brook students should be provided every opportunity to achieve scientific and engineering literacy from a global perspective. The infusion of a global science perspective into Mountain Brook's curriculum is accomplished through a study of the three dimensions of science—scientific and engineering practices, crosscutting concepts, and disciplinary core ideas. Scientific and engineering practices are a set of skills and tools used by students to investigate, construct models, design and build systems, and develop theories about the world in which they live. Crosscutting concepts are unifying themes that link scientific and engineering ideas across all domains of science. Disciplinary core ideas in the four domains of Physical Sciences; Life Sciences; Earth and Space Sciences; and Engineering Technology, and Applications of Science are broad concepts that provide students with foundational knowledge.

Mountain Brook students, having completed the K-12 science program of study, are informed science citizens and prepared college- and career-ready graduates. Having met the goal of attaining scientific and engineering literacy, these students will be able to achieve success in the global society of the twenty-first century and make meaningful contributions to a dynamic world.

2016 Science Curriculum Framework

Mountain Brook Schools



POSITION STATEMENTS

Assessment

Assessment refers to the processes used to measure student progress and achievement by identifying patterns of qualitative and quantitative learning driven by instruction and feedback. Assessments provide evidence of students' prior knowledge, thinking, or learning in order to evaluate what students understand and how they are thinking at a given point for the purpose of promoting student learning. Consequently, science instruction should be informed by assessment, and instructional strategies should be adjusted based on feedback to meet the individual needs of all students. Assessment is aligned with curriculum and instruction and supports conceptual understanding with a focus on proficiency. Because no single assessment method provides a complete picture of what a student knows and can do, a variety of assessment methods is imperative. Ongoing formative assessments provide diagnostic feedback to teachers and students before, during, and after instruction. Formative assessment information should be used as feedback to modify teaching and learning activities. Summative assessments are used in classrooms, schools, and districts to determine student achievement at the end of a unit, course, or time period. Designers of assessments should consider the diverse backgrounds and different learning styles of students when planning for academic success in the classroom. Assessment tasks must integrate the three dimensions of science and engineering practices, crosscutting concepts, and disciplinary core ideas and provide opportunities for students to demonstrate conceptual understanding of science phenomena during inquiry. The primary goal of assessment is to measure with accuracy and validity what a student knows and can do and what a student still needs to learn based on Alabama's College- and Career-Readiness Standards.

Classroom Environment

Effective science classroom environments are those in which teachers and students work collaboratively. These student-centered environments shift the focus from the teacher to the learner, providing opportunities for creative scientific exploration and engineering design that allow students to connect the classroom to the outside world. Thus, stimulating the learner's interest in science through investigation encourages a lifelong pursuit for exploration and knowledge. The science classroom is any place where scientific inquiry occurs, whether it is the traditional laboratory or classroom, a playground, a science museum, an amusement park, a forest, or a beach. In the student-centered classroom, emphasis is placed upon active and cooperative learning environments where students work together to manipulate variables, make observations, and use prior knowledge to construct reasonable explanations while solving problems under conditions that assure both positive interdependence and individual accountability. Teachers guide and facilitate investigations by immersing students in scientific practices using inquiry, correct and appropriate manipulative techniques, and safe and humane laboratory practices. Students may be observed engaging in interpreting scientific data collected to construct and evaluate evidence-based arguments of phenomena during scientific inquiry or engaging in argument from evidence acquired during research of a phenomenon. Quality science instruction emphasizes critical thinking and investigative processes that reveal consistencies, relationships, and patterns. The classroom should be flexible, yet structured, intellectually challenging, positive and nonthreatening, stimulating, and adaptable to a variety of learning styles.

Cultural Diversity

Cultural diversity is an asset in the classroom. Educators should actively encourage students of various backgrounds to share their experiences in relation to science. Recognizing multicultural diversity in the classroom as a valuable resource contributes in positive ways to collaboration and participation in science learning.

Science and engineering are collaborative social processes that take place in the context of culturally valued knowledge and practices. Throughout history, diverse groups of people from different cultures and races have contributed to the body of scientific knowledge. This knowledge has resulted in remarkable technological advances that benefit all mankind. Today's global scientific community can be enhanced by the diverse perspectives represented by all nations, groups, and races. From a global perspective, engineering offers opportunities for innovation and creativity at the K-12 level. Engineering is a field that is critical to innovation, and exposure to engineering activities such as robotics and invention competitions can spark interest in the study of the science, technology, engineering, and mathematics (STEM) fields. This opportunity is particularly important for students who traditionally have not recognized science as relevant to their lives or future because of the lack of emphasis within the culture.

All students, regardless of gender, ethnicity, or cultural background, should have equal access to learning science and engaging in scientific and engineering practices. Strategies utilized for instruction must recognize and respect differences students bring based on their cultures. These standards provide an opportunity for schools to create environments that cultivate and prepare the minds of all students for greater understanding of the scientific enterprise. An increasing number of scientists and engineers are needed in our state and nation to continue technological advancement in many traditional and emerging scientific and engineering careers.

Instructional Model

Effective instruction results from deliberate and focused instructional design. This involves a shift in focus to the desired learning from which appropriate strategies will follow. As teachers shift the focus from teaching to student learning, they begin to spend most of the time considering what the learner needs in order to accomplish the learning goals instead of what the teacher will do and which materials the teacher will use. Effective instruction ensures that students are actively engaged in the learning process, have opportunities for interaction with the environment, and have time for reflection upon learning. The instructional setting must allow students time for developing the reasoning and critical-thinking skills necessary for constructing meaning and acquiring scientific knowledge. In this setting, teachers facilitate the learning process by guiding students, providing students with a focus, challenging students to excel, and encouraging and supporting student learning at all levels of inquiry. Before quality instruction can occur, there must be a plan for what teachers want students to learn. One process for planning includes the following three steps.

1. Identify desired outcomes found in the standards.
2. Determine acceptable evidence of student learning by designing evaluation activities.
3. Develop activities and learning experiences that will engage all students in exploring, explaining, and expanding their understanding of the scientific and engineering practices, crosscutting concepts, and disciplinary core ideas in the standards.

The use of inquiry-based instructional models such as the following Five E + IA Instructional Model* is supported by Mountain Brook Schools. This model complements the three-step planning process described on the preceding page.

Five E + IA Instructional Model

Engage
Student interest is stimulated and connections are made to prior knowledge and between past and present experiences. Student thinking is focused on learning outcomes as they become mentally engaged in the practices, crosscutting concepts, and core ideas of the unit or lesson.

Explore
Students investigate initial ideas and solutions in a context within which they can identify. Using investigation, research, discourse, text, and media, students actively explore situations and build common experiences that serve as a basis for developing an understanding of the concept within context.

Explain
Students are provided the opportunity to collaborate, communicate, and construct meaning from their experiences based on an analysis of the exploration. This phase emphasizes the importance of students developing evidence-based explanations founded upon their observations and experiences obtained through investigations. Teachers clarify understanding through definitions, labels, and explanations for abilities, concepts, practices, and skills.

Elaborate
Students reflect upon, expand, and apply conceptual understanding of scientific concepts to new and unfamiliar situations in order to cultivate a broader and deeper understanding of concepts through new experiences within new contexts and situations.

Evaluate
Students are assessed on understanding of scientific concepts. Assessment provides opportunities for teachers to evaluate understanding of concepts and practices identified in the standards. This phase helps teachers know if students are learning in order for appropriate next steps to occur.

Intervene or Accelerate
When some students do not learn the first time, intervention strategies may be implemented to further explain and elaborate upon concepts to a greater extent in order to clarify understanding. Students who have demonstrated proficiency may be able to enrich or accelerate learning through more challenging, engaging, and exploratory experiences.

*Adapted from Zuiker, Steven J., and J. Reid Whitaker (in preparation). "A Case Study of the STEMscopes 5E+I/A Inquiry Model." Journal of Science Education and Technology.

Interdisciplinary Connections

Academic rigor, critical-thinking skills, and vertically aligned learning progressions are common elements among Mountain Brook's core academic standards. Diverse texts and media should be infused to create a rich science learning environment where students use real-world experiences and historical facts and events to discuss and create hypotheses and explain theories. Being able to read, write, and understand various media and texts in context are important skills to develop for both in and out of the classroom. Students write, speak, and create multimedia presentations based upon laboratory experiences and knowledge they obtained from published resources. The scientific and engineering practices allow students to utilize reading and writing skills (Appendix A). What is learned in English language arts classes is also learned and practiced in science when students construct explanations from evidence; engage in argument from evidence through debate to defend a claim; or obtain, evaluate, and communicate information from media, texts, and specifically through case studies. In both mathematics and science classes, students use computational thinking and mathematical representations to comprehend and communicate scientific findings. Students learn to develop and use models derived from data analyzed statistically to explain or describe phenomena. The creative element of science is found not only in discovery and invention, but is also realized in the artistic, scientific, and engineering designs developed by students. Science comes alive as students explore the natural world through the use of the five senses and produce sketches as a response to the observed environment while others write fiction and nonfiction to describe surroundings. At the same time, students may discover artifacts and native specimens which lead to discussions of history and geography of the area. High school students studying the disciplinary core idea, Heredity: Inheritance and Variation of Traits, may learn in science and world history about the important role hemophilia has played in Europe's history and communicate their findings orally or through writing. Students should also be able to develop an understanding of historical figures and events that have helped shape our world in the realm of science. Thus, it is essential for teachers to demonstrate how knowledge is interrelated and model strategies to recognize these connections.

Laboratory Safety

Active hands-on learning increases the potential for injuries or accidents. Safety is a primary concern for everyone in kindergarten through Grade 12, including students, teachers, support personnel, and administrators. Before allowing students to participate in scientific investigations, teachers should recognize any potential for harm in order to prevent possible injuries or accidents or to minimize the impact of injuries or accidents if prevention is not successful.

Safety must be given a priority in the storage, use, and care of equipment, specimens, and materials in the science classroom. It is recommended that science teachers adhere to national regulatory agencies such as the American Chemical Society (ACS) and the Occupational Safety and Health Administration's (OSHA) revised Hazard Communication Standard (HCS), now aligned with the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals, as well as local and state regulatory agencies that have established safety guidelines. In addition, Mountain Brook teachers work to ensure that science safety guidelines are implemented.

Teachers must be certain that students receive adequate instruction for participating safely in all science investigations, no matter the location. As part of the safety guidelines, consideration must be given to adequate and safe space for scientific collaboration and investigation. To address this safety issue, professional organizations of science teachers recommend that science laboratory classes not exceed 24 students.

A written science safety plan, developed by a team, is part of the school science program. Teachers should be aware of the state safety goggle law found in the *Code of Alabama*, 1975, §16-1-7. This law requires local boards of education to provide American National Standard Institute (ANSI) Z87 or Z87.1 coded safety goggles to every student engaged in science experiments. Teachers are encouraged to obtain and keep readily available the safety references, *Science and*

Safety—Making the Connection for secondary classrooms and the *Science and Safety: It's Elementary!* calendar and flip chart. These publications are available to download free of charge from the Council of State Science Supervisors (CSSS) at http://csss-science.org/safety.shtml.

Nature of Science

Throughout history, humans have attempted to explain the natural world in which they live. Current scientific knowledge and engineering practices are the result of humankind's ongoing pursuit for answers to questions about natural phenomena. All scientists share the assumptions that the universe has order, consistency, and mathematically interpreted patterns. While there is no single pathway to discovering new scientific knowledge, all scientific models, theories, and laws are based on empirical evidence. Specifically, scientific theories can be defined as inferred explanations of observable events or phenomena. Scientific laws are statements of measurable relationships among observable events or phenomena. All scientific knowledge is open to revision in light of new evidence.

All scientific discourse is centered on common values of logical thinking, open-mindedness, objectivity, skepticism, reliability of research results, and honest reporting of findings. Science is fundamentally a human endeavor constrained by the progressing human capacity, technology, and social and economic contexts.

The 2012 National Research Council (NRC) publication, *A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas*, recognizes the importance of the nature of science by stating what an educated citizen should comprehend about the scientific enterprise. As indicated in the publication, there is strong agreement that students should understand and be able to distinguish among observations, hypotheses, inferences, models, and theories or unsubstantiated claims.

Science, Engineering, Technology, and Society

Advances in science and engineering have profound effects on human society, including agriculture, health care, transportation, and communication. At the same time, economic, political, and cultural factors influence the goals and funding for science and engineering research. The work of science is essential in addressing global issues such as the demand for energy, clean water, and food for Earth's growing population. On the other hand, science and engineering are needed to resolve problems created by human activity that draws on natural resources. A goal of science and engineering education is to equip students with the knowledge, skills, and dispositions that will help them grow into responsible consumers and wise managers of Earth's resources. Students should be able to contribute and engage in society as educated, literate science citizens who make responsible and informed decisions about what is appropriate in situations involving science and technology.

Two specific important ideas relate science, technology, and society. The first is that scientific inquiry, engineering design, and technological development are interdependent. Scientific discoveries allow engineers to perform their work, and engineering accomplishments enable the work of scientists. For example, discoveries of electricity made it possible for engineers to create power grids to illuminate cities and allow for communications. The Hubble Space Telescope and certain light sensors created by engineers expanded our understanding of the universe beyond existing astronomical knowledge. The second important idea is that scientific discoveries and technological decisions affect society and the natural environment. People make decisions that ultimately guide the work of scientists and engineers. The infusion of the engineering, technology, and applications of science domain to the science standards should serve as a vehicle for providing reliable sources of scientific and technological information to be used in the process of decision making.

Scientific Writing

Written communication in science is essential for conveying data and results from investigations, explaining evidence and findings from research, and affirming and defending claims and arguments based on evidence and reasoning. College- and career-ready writers should be able to utilize the most current technology and media to create, refine, and collaborate through writing. Writing as indicated in the Literacy Standards for Grades 6-12: History/Social Studies, Science, and Technical Subjects (Appendix A), should be emphasized across the curriculum. Students should be given opportunities to demonstrate writing skills to explain and document results of inquiries of scientific phenomena and concepts. Clear and coherent writing, developmentally appropriate for each grade level and reflecting knowledge and understanding through the use of accurate science academic language, is expected.

Writing activities such as scientific journals and laboratory reports should be introduced in the primary grades. During the middle and high school years, students should expand writing to completion of short or more extended inquiry or research projects using appropriate terminology, available technology, and suitable units of measurements. Students should be transitioning to the use of words and phrases with subject-specific meanings that differ from meanings used in everyday life. Discipline-specific discourse through oral or written language provides ways to communicate science core ideas. In addition, open-ended essays are an excellent way to assess student understanding of scientific concepts, principles and laws, scientific and engineering practices, crosscutting concepts, and disciplinary core ideas. As learning progresses, students should develop more sophisticated methods of gathering information, evaluating sources, citing materials, and reporting findings from research. Students should devote significant time and effort to writing for a range of science tasks, purposes, and audiences.

LEARNING PROGRESSIONS

Content standards in the 2016 Mountain Brook Science Curriculum Framework follow a logical learning progression that addresses the same disciplinary core ideas across multiple grade levels. While every core idea is not addressed in every consecutive grade, the core idea is taught through developmentally appropriate approaches with increasing rigor and sophistication in a continuous and progressive manner.

Learning progressions of content standards within Grades K-12 ensure that science concepts are not taught in isolation, but rather in the context of disciplinary core ideas that are introduced in earlier grades and are built upon in subsequent grades leading to the goal of scientific and engineering literacy.

See Appendix C for links to learning progressions.

Examples from Physical Sciences

Motion and Stability: Forces and Interactions			
K-2	**3-5**	**6-8**	**9-12**
K.1. Investigate the resulting motion of objects when forces of different strengths and directions act upon them.	**3.1.** Plan and carry out an experiment to determine the effects of balanced and unbalanced forces on the motion of an object using one variable at a time, including number, size, direction, speed, position, friction, or air resistance, and communicate these findings graphically.	**8.9.** Use Newton's second law to demonstrate and explain how changes in an object's motion depend on the sum of the forces on the object and the mass of the object.	**Physical Science.8.** Apply Newton's laws to predict the resulting motion of a system by constructing force diagrams that identify the forces acting on the system, including friction. **Physics.2.** Identify forces in a system and apply Newton's laws graphically by using models such as free-body diagrams to explain how the motion of an object is affected, ranging from simple to complex, and including circular motion.

Examples from Life Sciences

Ecosystems: Interactions, Energy, and Dynamics			
K-2	**3-5**	**6-8**	**9-12**
K.3. Distinguish between living and nonliving things and verify what living things need to survive.	**5.11.** Create a model to illustrate the transfer of matter among producers; consumers, including scavengers and decomposers; and the environment.	**7.5.** Examine the cycling of matter between abiotic and biotic parts of ecosystems to explain the flow of energy and conservation of matter.	**Biology.8.** Develop and use models to describe the cycling of matter and flow of energy between abiotic and biotic factors in ecosystems.

Examples from Earth and Space Sciences

Earth's Systems			
K-2	**3-5**	**6-8**	**9-12**
2.8. Make observations from media to obtain information about Earth events that happen over a short per	**4.12.** Construct explanations by citing evidence found in patterns of rock formations and fossils in rock layers that Earth changes over time through both slow and rapid processes.	**6.5.** Use evidence to explain how different geologic processes shape Earth's history over widely varying scales of space and time.	**Earth and Space Science.9.** Obtain, evaluate, and communicate information to explain how constructive and destructive processes shape Earth's land features and sea features.

STRUCTURE OF THE STANDARDS

Each content standard in this document addresses the three scientific dimensions listed below and as described in the 2012 National Research Council (NRC) publication, *A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas*. Standards outline the knowledge and skills of science and engineering that all students should know and be able to do by the end of high school.

DIMENSION 1: SCIENTIFIC AND ENGINEERING PRACTICES

- Asking questions (for science) and defining problems (for engineering)
- Developing and using models
- Planning and carrying out investigations
- Analyzing and interpreting data
- Using mathematics and computational thinking
- Constructing explanations (for science) and designing solutions (for engineering)
- Engaging in argument from evidence
- Obtaining, evaluating, and communicating information

DIMENSION 2: CROSSCUTTING CONCEPTS

- Patterns
- Cause and effect
- Scale, proportion, and quantity
- Systems and system models
- Energy and matter
- Structure and function
- Stability and change

DIMENSION 3: DISCIPLINARY CORE IDEAS

- Physical Sciences
  - Matter and Its Interactions
  - Motion and Stability: Forces and Interactions
  - Energy
  - Waves and Their Applications in Technologies for Information Transfer

- Life Sciences
  - From Molecules to Organisms: Structures and Processes
  - Ecosystems: Interactions, Energy, and Dynamics
  - Heredity: Inheritance and Variation of Traits
  - Unity and Diversity

- Earth and Space Sciences
  - Earth's Place in the Universe
  - Earth's Systems
  - Earth and Human Activity

- Engineering, Technology, and Applications of Science
  - Engineering Design
  - Links Among Engineering, Technology, Science, and Society

Science Curriculum Committee
2015-16

Brookwood Forest Elementary

Heather Cates - K
Sammye Davis - K
Tara Smith - K
Diane Waud - K
Colleen Keyes - 1
Stacey Kirkpatrick - 1
Mary Hunter Slaton - 1
Mandy Smith - 1
Cindy Burns - 2
Caroline Peek - 2
Ashley Scott - 2
Eleanor Walker - 2
Lindsey Ehsan - 3
Dawn Elsberry - 3
Jennifer Hunt - 3
Linda Mason - 3
Caroline Strange - 3
Laura Alexander - 4
Susan Dreher - 4
Ann Scott Lee - 4
Lane Robinson - 4
Anna Crabb - 5
Marion Kelley - 6
Amy Sanders - Parent
Christy Christian - Assistant Principal

Cherokee Bend Elementary

Trisha Humphries - K
Alexandra Kamburis - K
Meredith Lusco - K
Lauren Malloch -K
Natalie Akin - 1
Suzy Brown - 1
Robyn Gaut - 1
Heather Brown - 2
Kelley Finley - 2
Alice Goodsell - 2
Lauren Lunceford - 2
Samantha Austin - 3
Lyndsi Kirk - 3
Gina Mize - 3
Shelley Hunt - 4
Sally Till - 4
Elizabeth Walker - 4
Leslie Batts - 5
Stacy Freeman - 6
Christie Dowling - Parent
Jennifer Galloway - Assistant Principal

Crestline Elementary

Sarah Duff - K
Jayne Euwer - K
Phyllis Farrah - K
Beth Mooney - K
Rachel Anderson - 1
Tracey Barringer - 1
Greer Black - 1
Marlyss Corriher - 1
Melanie Hennessy - 1
Deborah Holder - 1
Lori Mutert - 1
Mary Dorough - 2
Kay Haley - 2
Teresa Howell - 2
Jennifer Mueller - 2
Susan Norville - 2
Anne Spurlock - 2
Allison Davis - 3
Tara Davis - 3
Laura Ferguson - 3
Amanda Johnson - 3
Kelly Mitchell - 3
Amy Anderson - 4
Scott McKerley - 4
Bradley O'Neill - 4
Heather Phillips - 4
Kristen Swindle - 5
Nancy Singleton - 5

Crestline Elementary cont'd
Elizabeth Studinka - 6
Britt Redden - Parent
Catherine Waters - Assistant Principal
Josh Watkins - Assistant Principal

Mountain Brook Elementary

Tanya Anastasia - K
Jennifer Jinnette - K
Kelly Kidd - K
Julie Summers - K
Julie Cox - 1
Connie Liddle - 1
Courtney Macurdy - 1
Paige Slaughter - 1
Allyson Martin - 2
Bethany McCandless - 2
Julie Tuck - 2
Katherine Brown - 3
Judy Dyess - 3
Mitchell Nelson - 3
Cindy Peavy - 3
Ashley Adger - 4
Jennifer Wilson - 4
Suzanne Andrews - 5
Bethany Tompkins - 6
John Woolard - Math Coach
Hill Weathers – Parent
Liz Holley – Parent
Ashley McCombs - Assistant Principal

Mountain Brook Junior High School

Maryia Breaux
Marisa Burns
Greg Fisher
Susan Haggard
Bruce Henricks
Karen Long
Tessa Magnuson
Daniel Sipes
Pearle Smith
Debbie Stump
Jill Clark - Parent
Brook Gibbons - Assistant Principal

Mountain Brook High School
Sue Davis
Rebekah Dirks
Lynn Faulk
Toula Froemelt
Misty King
Michael McGovern
Holly Mussell
Dana Page
Lisa Robbins
Bryan Rosenstiel
Melissa Scott
Trina Feig - Parent
Ben Hudson - Assistant Principal

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