

**GOOGLE BASICS / GOOGLE APPLICATIONS**  
**COURSE CODES: 2704 / 5007**  
Academic Standards and Indicators (Alignment Reference)

**ENGLISH AND LANGUAGE ARTS**

**SC Standard A1. Reading: Literary Text**

**Reading-Literary Text: Principles of Reading (P)**

Standard 1: Demonstrate understanding of the organization and basic features of print.

Standard 2: Demonstrate understanding of spoken words, syllables, and sounds.

Standard 3: Know and apply grade-level phonics and word analysis skills when decoding words. Standard 4: Read with sufficient accuracy and fluency to support comprehension.

**Reading-Literary Text: Meaning and Context (MC)**

Standard 5: Determine meaning and develop logical interpretations by making predictions, inferring, drawing conclusions, analyzing, synthesizing, providing evidence, and investigating multiple interpretations.

Standard 6: Summarize key details and ideas to support analysis of thematic development.

Standard 7: Analyze the relationship among ideas, themes, or topics in multiple media and formats, and in visual, auditory, and kinesthetic modalities.

Standard 8: Analyze characters, settings, events, and ideas as they develop and interact within a particular context.

**Reading-Literary Text: Language, Craft, and Structure (LCS)**

Standard 9: Interpret and analyze the author's use of words, phrases, and conventions, and how their relationships shape meaning and tone in print and multimedia texts.

Standard 10: Apply a range of strategies to determine and deepen the meaning of known, unknown, and multiple-meaning words, phrases, and jargon; acquire and use general academic and domain-specific vocabulary.

Standard 11: Analyze and provide evidence of how the author's choice of point of view, perspective, or purpose shapes content, meaning, and style.

Standard 12: Analyze and critique how the author uses structures in print and multimedia texts to shape meaning and impact the reader.

**Reading-Literary Text: Range and Complexity (RC)**

Standard 13: Read independently and comprehend a variety of texts for the purposes of reading for enjoyment, acquiring new learning, and building stamina; reflect and respond to increasingly complex text over time.

**SC Standard A2. Reading: Informational Text (RI) Reading-Informational Text:**

**Principles of Reading (P)**

Standard 1: Demonstrate understanding of the organization and basic features of print.

Standard 2: Demonstrate understanding of spoken words, syllables, and sounds.

Standard 3: Know and apply grade-level phonics and word analysis skills when decoding words. Standard 4: Read with sufficient accuracy and fluency to support comprehension.

**Reading-Informational Text: Meaning and Context (MC)**

Standard 5: Determine meaning and develop logical interpretations by making predictions, inferring, drawing conclusions, analyzing, synthesizing, providing evidence, and investigating multiple interpretations.

Standard 6: Summarize key details and ideas to support analysis of central ideas.

**Reading-Informational Language, Craft, and Structure (LCS)**

Standard 9: Apply a range of strategies to determine and deepen the meaning of known, unknown, and multiple-meaning words, phrases, and jargon; acquire and use general academic and domain-specific vocabulary.

Standard 10: Analyze and provide evidence of how the author's choice of purpose and perspective shapes content, meaning, and style.

Standard 11: Analyze and critique how the author uses structures in print and multimedia texts to craft informational and argument writing.

**Reading-Informational Text: Range and Complexity (RC)**

Standard 12: Read independently and comprehend a variety of texts for the purposes of reading for enjoyment, acquiring new learning, and building stamina; reflect and respond to increasingly complex text over time.

**SC Standard A3. Reading: Building Vocabulary****Reading-Informational Text: Principles of Reading (P)**

Standard 2: Demonstrate understanding of spoken words, syllables, and sounds

Standard 3: Know and apply grade-level phonics and word analysis skills when decoding words.

**SC Standard A4. Writing: Developing Written Communications (W)****Writing: Meaning, Context, and Craft (MCC)**

Standard 1: Write arguments to support claims with clear reasons and relevant evidence.

Standard 2: Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.

**SC Standard A5. Writing: Producing Written Communications in a Variety of Forms****Writing: Meaning, Context, and Craft (MCC)**

Standard 3: Write narratives to develop real or imagined experiences or events using effective techniques, well-chosen details, and well-structured event sequences.

**Writing: Language (L)**

Standard 4: Demonstrate command of the conventions of standard English grammar and usage when writing and speaking.

Standard 5: Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

**Writing: Range and Complexity (RC)**

Standard 6: Write independently, legibly, and routinely for a variety of tasks, purposes, and audiences over short and extended time frames.

**SC Standard A6. Researching: Applying the Skills of Inquiry and Oral Communication Inquiry-Based Literacy Standards (I)**

Standard 1: Formulate relevant, self-generated questions based on interests and/or needs that can be investigated.

Standard 2: Transact with texts to formulate questions, propose explanations, and consider alternative views and multiple perspectives.

Standard 3: Construct knowledge, applying disciplinary concepts and tools, to build deeper understanding of the world through exploration, collaboration, and analysis.

Standard 4: Synthesize information to share learning and/or take action.

Standard 5: Reflect throughout the inquiry process to assess metacognition, broaden understanding, and guide actions, individually and collaboratively.

### **Reading-Informational Text: Meaning and Context (MC)**

Standard 7: Analyze the relationship among ideas, themes, or topics in multiple media and formats, and in visual, auditory, and kinesthetic modalities.

### **Communication: Meaning and Context (MC)**

Standard 1: Interact with others to explore ideas and concepts, communicate meaning, and develop logical interpretations through collaborative conversations; build upon the ideas of others to clearly express one's own views while respecting diverse perspectives.

Standard 2: Articulate ideas, claims, and perspectives in a logical sequence using information, findings, and credible evidence from sources.

Standard 3: Communicate information through strategic use of multiple modalities and multimedia to enrich understanding when presenting ideas and information.

### **Language, Craft, and Structure (LCS)**

Standard 4: Critique how a speaker addresses content and uses stylistic and structural craft techniques to inform, engage, and impact audiences.

Standard 5: Incorporate craft techniques to engage and impact audience and convey messages.

## **MATHEMATICS ACADEMIC STANDARDS**

### **Elementary Algebra (Algebra 1, Foundations in Algebra, Intermediate algebra, Algebra 2)**

**SC Standard A7.** The student will understand and utilize the mathematical processes of problem solving, reasoning and proof, communication, connections, and representation. (SCEA-1)

### **Arithmetic with Polynomials and Rational Expressions**

AAPR.1\* 1A.AAPRI\* A2.AAPR.1\* Add, subtract, and multiply polynomials and understand that polynomials are closed under these operations.

### **Creating Equations**

A1ACE.1\* FA.ACE.1\* 1A.ACE.1\* Create and solve equations and inequalities in one variable that model real-world problems involving linear, quadratic, simple rational, and exponential relationships. Interpret the solutions and determine whether they are reasonable.

### **Reasoning with Equations and Inequalities**

A1.AREI.4\* IAAREI.4\* A2.AIEI.1\* Solve mathematical and real-world problems involving quadratic equations in one variable.

### **Structure and Expressions**

A1.ASE.1\* FA.ASE.1\* IA.ASE.1\* A2.ASE.1\* Interpret the meanings of coefficients, factors, terms, and expressions based on their real-world contexts. Interpret complicated expressions as being composed of simpler expressions.

### **Interpreting Data**

A1SPID.7\* FA.SPID.7\* Create a linear function to graphically model data from a real-world

problem and interpret the meaning of the slope and intercept(s) in the context of the given problem.

**SC Standard A8.** The student will demonstrate through the mathematical processes an understanding of relationships and functions. **(SCEA-3)**

### **Building Functions**

FBF.1\* Write a function that describes a relationship between two quantities.

- b. Combine functions using the operations addition, subtraction, multiplication, and division to build new functions that describe the relationship between two quantities in mathematical and real-world situations.

### **Interpreting Functions**

FIF.2\* Evaluate functions and interpret the meaning of expressions involving function notation from a mathematical perspective and in terms of the context when the function describes a real-world situation.

## **GEOMETRY**

**SC Standard A9.** The student will understand and utilize the mathematical processes of problem solving, reasoning, and proof, communication, connections, and representation. **(SCG-1)**

- Communicate knowledge of geometric relationship using mathematical terminology appropriately.
- Demonstrate an understanding of how geometry applies in real-world contexts (including architecture, construction, farming, and astronomy).

**SC Standard A10.** The student will demonstrate through the mathematical processes an understanding of the properties of basic geometric figures and the relationships between and among them. **(SCG.2)**

## **Chemistry**

**SC Standard A19.** The student will demonstrate an understanding of the types, the causes, and the effects of chemical reactions. **(SC C-1)**

C-PS1-2. Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties.

C-PS1-3. Plan and conduct an investigation to gather evidence to compare the structure of substances at a bulk scale to infer the strength of various forces between particles.

C-PS1-4. Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy.

C-PS1-5. Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs.

C-PS1-6. Refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium.

C-PS1-8. Develop models to illustrate the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay.

**SC Standard A20.** The student will demonstrate an understanding of the structure and behavior of matter. **(SC C-2)**

C-PS2-6. Communicate scientific and technical information about why the molecular structure determines the functioning of designed materials.

**SC Standard A21.** The student will demonstrate an understanding of the conservation of energy and energy transfer. **(SC C-3)**

C-PS3-4. Plan and conduct an investigation to provide evidence that the transfer of thermal energy when two components of different temperatures are combined within a closed system results in a more uniform energy distribution among the components in the system (second law of thermodynamics).

C-PS4-5. Communicate technical information about how some technological devices use the principles of the electromagnetic spectrum to cause matter to transmit and capture information and energy.

## **Physics**

**SC Standard A22.** Students apply scientific and engineering ideas to design, evaluate as well as investigate the relationship between electric current and magnetic fields. **(SC P-1)**

P-PS2-1. Analyze data to support the claim that Newton's second law of motion describes the mathematical relationship among the net force on a macroscopic object, its mass, and its acceleration.

**SC Standards A24.** Students explain and predict interactions between objects and within systems of objects. **(SC P-2)**

P-PS2-3. Apply scientific and engineering ideas to design, evaluate, and refine a device that minimizes the effect of a force on a macroscopic object during a collision.

P-PS2-5. Plan and conduct an investigation to provide evidence that an electric current can produce a magnetic field and that a changing magnetic field can produce an electric current.

P-PS2-6. Communicate scientific and technical information about why the molecular-level structure is important in the functioning of designed materials.

**SC Standards A25.** Students will demonstrate an understanding how energy is transferred and used send and store information. **(SC P-3)**

P-PS3-1. Create a computational model to calculate the change in the energy of one component in a system when the following are known: 1) the change in energy of the other component(s) and 2) the energy flowing in and out of the system.

P-PS3-5. Develop and use a model to illustrate the forces between two objects and the changes in energy of the objects due to their interaction through electric or magnetic fields.

P-PS4-2. Design, evaluate, and refine a solution for improving how digital devices store and transmit information.

P-PS-4-5. Communicate technical information about how some technological devices use the principles of wave behavior and wave interactions with matter to transmit and capture information and energy.

## **Earth and Space Science**

**SC Standard A26.** The student will demonstrate an understanding of earth systems and life change and influence each other. **(SC ESPS-1)**

E-ESS2-2. Analyze data to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth systems.

E-ESS2-3. Develop a model based on evidence of Earth's interior that describes cycling of matter through convection processes.

E-ESS2-4. Use a model to describe how causes of short and long-term variations in the flow of energy into and out of Earth's systems result in changes to climate.

E-ESS2-5. Investigate the ways that water (given its unique physical and chemical properties) impacts various Earth systems.

E-ESS2-7. Communicate scientific information that illustrates how Earth's systems and life on Earth change and influence each other over time.

**SC Standard A27.** The student will demonstrate an understanding of the impact of human activity on natural resources and Earth's systems. **(SC ESPS-2)**

E-ESS3-1. Construct an explanation based on evidence for how the availability of natural resources and occurrence of natural hazards have influenced human activity.

E-ESS3-2. Evaluate competing design solutions that address the impacts of developing, managing, and using Earth's energy and mineral resources.

E-ESS3-3. Use computational representation to illustrate the relationships among the management of Earth's resources, the sustainability of human populations, and biodiversity.

E-ESS3-4. Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.

E-ESS3-5. Analyze data and the results from global climate models to make an evidence-based forecast of the current rate of regional or global climate change and associated future impacts to Earth's systems.

E-ESS3-6. Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.

E-ESS3-7. Create an argument, based on evidence that describes how changes in climate on Earth have affected human activity.

## **SOCIAL STUDIES ACADEMIC STANDARDS**

### **Economics and Personal Finance**

**SC Standard A28.** The student will demonstrate an understanding of fundamental economic concepts at an individual, business, and governmental level. **(SC ECON-1)**

EPF.1.ER Examine how scarcity of time and resources necessitates decision-making.

EPF.1.IN Research and utilize evidence to explain how various economic systems address the basic economic questions regarding distribution of resources.

EFP.1.IP Evaluate how short-term goals allow individuals and institutions to make rational decisions using marginal analysis.

**SC Standard A29.** The student will demonstrate an understanding of how scarcity and choice influence individual financial decisions. **(SC ECON-2)**

EPF.2.ER Research and analyze the factors that impact personal income and long-term earning potential.

EPF.2.IN Identify and explain the functions of different types of financial institutions and how they assist individuals in achieving short- and long-term financial goals.

EPF.2.CC Determine financially responsible ways that individuals acquire and use credit.

EPF.2.IP Develop a personal finance strategy for investing, protecting, purchasing, and saving resources.

**SC Standard A30.** The student will demonstrate an understanding of basic microeconomic principles. **(SC ECON-3)**

EPF.3.ER Apply the laws of supply and demand to determine how changes in market conditions affect prices.

EPF.3.IN Compare and contrast how the organization of various market structures affects decisions and outcomes of individuals and firms.

EPF.3.CC Illustrate market equilibrium and the impact of shifts in supply and demand, different elasticities, and price controls on market output and price.

EPF.3.IP Research and evaluate geopolitical influences on employment trends and issues at the state and national level.

## **Human Geography**

**SC Standard A32.** The student will demonstrate an understanding of the characteristics, distribution, and migration of human populations on Earth's surface. **(HG-1)**

HG.1.1HS Identify and analyze the spatial distributions and patterns of human population using maps and geographic models and representations.

HG.1.2. PR Explain the cultural, economic, environmental, and political conditions and connections that contribute to human migration patterns.

HG 1.3.HS Analyze historical population and migration maps and models through time to predict future trends and patterns.

HG.1.4.HS Analyze and evaluate population and migration issues and policies from the local to the global scale using geographic models and representations.

HG.1.5.HS Evaluate the cultural, economic, environmental, and political impacts of human migration on human settlements in various regions.

HG.1.6.AG Gather evidence of human population and migration, construct a map to explain

**SC Standard A34.** The student will demonstrate an understanding of the characteristics of culture and cultural patterns and processes across Earth's surface. **(HG-3)**

HG.3.1.HS Identify the characteristics of popular and folk culture, and explain the factors that influence the location and spatial distribution of these types of culture at the local and global scales using maps and geographic models and representations.

HG.3.2.HS Identify and analyze the spatial distribution, patterns, and diffusion of ethnic, linguistic, and religious cultural characteristics using maps and other geographic representations.

HG.3.3.PR Analyze and explain the conditions and connections that create ethnic, linguistic, and religious patterns at varying scales.

HG.3.4.HS Investigate and evaluate the cultural conditions in different regions that play a role in cooperation and conflict over time.

HG.3.5.PR Compare and contrast cultural landscapes in various regions, and analyze the human imprint on different landscapes.

HG.3.6.AG Gather evidence of cultural patterns and processes, construct a map to explain current or future development issues at different scales, and communicate findings.

**SC Standard A36.** The student will demonstrate an understanding of the distribution, function, patterns, and processes of human settlement across Earth’s surface. **(HG-5)**

HG.5.1.PR Identify and explain the conditions and connections that influence the characteristics, forms, and functions of cities and their spatial distribution.

HG.5.2.PR Analyze and compare the arrangement of land used in human settlements in different regions using maps, models, and representations.

HG.5.3.ER Identify and evaluate how the conditions and connections of settlements in various regions can create economic, environmental, political, social, and sustainability challenges at various scales.

HG.5.4.HS Explain and analyze how distribution and patterns of urban size and hierarchy shapes the design, planning, and structure of other human settlements.

HG.5.5.PR Analyze and evaluate the connections between rural and urban regions and their impact on globalization at different scales.

HG.5.6.AG Gather evidence on human settlements, construct a map to explain processes, patterns and functions in various regions, and communicate findings.

### **United States History and Constitution**

**SC Standard A37.** The student will demonstrate the impact of America’s global leadership on technological advancements, the transition to a post-industrial society, and ongoing debates over identity in the period 1945–present. **(USHC-1)**

USHC.5.CX Contextualize domestic economic development and American national identity within global politics.

### **United States Government**

**SC Standard A38.** The student will demonstrate an understanding of the structure and functions of government at all levels in the United States. **(USG-2)**

USG.2.ER Explain the authority, organization, purposes, and responsibilities of the three branches of government as enumerated in Articles I–III in the Constitution.

USG.2.IN Analyze how power and responsibility are distributed, shared, and limited in the American constitutional government.

USG.2.CC Explain how governments in South Carolina are organized and how they function in the American constitutional government.

USG.2.IP Synthesize why the rule of law has a central place in American society and the impact it has on the American political system.

**SC Standard A39.** The student will demonstrate an understanding of the political process in determining and shaping public policy and the political climate in the United States. **(USG-3)**

USG.3.ER Describe the policy making process in the American constitutional government.

USG.3.IN Interpret how American political beliefs are shaped by the founding principles, core values, and changing demographics of America, and how those beliefs led to the creation of ideological trends which affect public policy over time.

USG.3.CC Investigate the role of linkage institutions (i.e. media, interest groups, political parties),



and explain how they shape public agenda and opinion.

## **TECHNOLOGY STANDARDS**

### **Empowered Learner**

**SC Standard A41.** Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences. **(ISTE-1)**

- Articulate and set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes.
- Build networks and customize their learning environments in ways that support the learning process.
- Use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.
- Understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.

### **Digital Citizen**

**SC Standard A42.** Students recognize the rights, responsibilities, and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical. **(ISTE-2)**

- Cultivate and manage their digital identity and reputation and are aware of the permanence of their actions in the digital world.
- Engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.
- Demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.
- Manage their personal data to maintain digital privacy and security and are aware of data-collection technology used to track their navigation online.

### **Knowledge Constructor**

**SC Standard A43.** Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts and make meaningful learning experiences for themselves and others. **(ISTE-3)**

- Plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.
- Evaluate the accuracy, perspective, credibility and relevance of information, media, data or other resources.
- Curate information from digital resources using a variety of tools and methods to create collections of artifacts that demonstrate meaningful connections or conclusions.
- Build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.

### **Innovative Designer**

**SC Standards A44.** Students develop and employ strategies for understanding and solving

problems in ways that leverage the power of technological methods to develop and test solutions.  
**(ISTE-4)**

- Know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems.
- Select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.
- Develop, test, and refine prototypes as part of a cyclical design process.
- Exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems.

### **Computational Thinker**

**SC Standard A45.** Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions. (ISTE-5)

- Formulate problem definitions suited for technology-assisted methods such as data analysis, abstract models and algorithmic thinking in exploring and finding solutions.
- Collect data or identify relevant data sets, use digital tools to analyze them, and represent data in various ways to facilitate problem-solving and decision-making.
- Break problems into component parts, extract key information, and develop descriptive models to understand complex systems to facilitate problem-solving.
- Understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.

### **Creative Communicator**

**SC Standard A46.** Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats, and digital media appropriate to their goals. (ISTE-6)

- Choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication.
- Create original works or responsibly repurpose or remix digital resources into new creations.
- Communicate complete ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models, or simulations.
- Publish or present content that customizes the message and medium for their intended audiences.

### **Global Collaborator**

**SC Standard A47.** Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally. (ISTE-7)

- Use digital tools to connect with learners from a variety of backgrounds and cultures, engaging with them in ways that broaden mutual understanding and learning.
- Use collaborative technologies to work with others, including peers, experts, or community members, to examine issues and problems from multiple viewpoints.
- Contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal.
- Explore local and global issues and use collaborative technologies to work with others to investigate solutions.

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