Cumberland County Schools

Parent Curriculum Guide

North Carolina Standard Course of Study

Eighth Grade
ENGLISH LANGUAGE ARTS

In eighth grade, students build on all they have learned in earlier years and begin to study complex psychological, philosophical, and moral themes in literature. Through class discussion, close reading, and writing, and through continued study of etymology, students deepen their understanding of literary works and concepts contained therein. By the end of eighth grade, students should have a rich background in literature and literary nonfiction, with a grasp of the historical context and many nuances of the works they have read.

During implementation of the writing component of the curriculum, students use graphic organizers to plan their writing. In their reports, research essays, and oral presentations, students draw on multiple sources, including literary, informational, and multimedia texts. In class discussions and literary responses, they pay close attention to figurative language and its effects.

The following grade-specific standards define what students should understand and be able to do by the end of the year to progress towards college and career readiness in each major area.

### Reading: Literature

#### Key Ideas and Details
1. Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.
2. Determine a theme or central idea of a text and analyze its development over the course of the text, including its relationship to the characters, setting, and plot; provide an objective summary of the text.
3. Analyze how particular lines of dialogue or incidents in a story or drama propel the action, reveal aspects of a character, or provoke a decision.

#### Craft and Structure
4. Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts.
5. Compare and contrast the structure of two or more texts and analyze how the differing structure of each text contributes to its meaning and style.
6. Analyze how differences in the points of view of the characters and the audience or reader (e.g., created through the use of dramatic irony) create such effects as suspense or humor.

#### Integration of Knowledge and Ideas
7. Analyze the extent to which a filmed or live production of a story or drama stays faithful to or departs from the text or script, evaluating the choices made by the director or actors.
8. (Not applicable to literature)
9. Analyze how a modern work of fiction draws on themes, patterns of events, or character types from myths, traditional stories, or religious works such as the Bible, including describing how the material is rendered new.

#### Range of Reading and Level of Text Complexity
10. By the end of the year, read and comprehend literature, including stories, dramas, and poems, at the high end of grades 6–8 text complexity band independently and proficiently.

### Reading: Informational Text

#### Key Ideas and Details
1. Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.
2. Determine a central idea of a text and analyze its development over the course of the text, including its relationship to supporting ideas; provide an objective summary of the text.
3. Analyze how a text makes connections among and distinctions between individuals, ideas, or events (e.g., through comparisons, analogies, or categories).

#### Craft and Structure
4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts.
5. Analyze in detail the structure of a specific paragraph in a text, including the role of particular sentences in developing and refining a key concept.
6. Determine an author’s point of view or purpose in a text and analyze how the author acknowledges and responds to conflicting evidence or viewpoints.
Reading: Informational Text (Continued)

Integration of Knowledge and Ideas
7. Evaluate the advantages and disadvantages of using different mediums (e.g., print or digital text, video, multimedia) to present a particular topic or idea.
8. Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient; recognize when irrelevant evidence is introduced.
9. Analyze a case in which two or more texts provide conflicting information on the same topic and identify where the texts disagree on matters of fact or interpretation.

Range of Reading and Level of Text Complexity
10. By the end of the year, read and comprehend literary nonfiction at the high end of the grades 6–8 text complexity band independently and proficiently.

Writing

Text Types and Purposes
1. Write arguments to support claims with clear reasons and relevant evidence.
   a. Introduce claim(s), acknowledge and distinguish the claim(s) from alternate or opposing claims, and organize the reasons and evidence logically.
   b. Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text
   c. Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), counterclaims, reasons, and evidence.
   d. Establish and maintain a formal style.
   e. Provide a concluding statement or section that follows from and supports the argument presented.
2. Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.
   a. Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.
   b. Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples.
   c. Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts.
   d. Use precise language and domain-specific vocabulary to inform about or explain the topic.
   e. Establish and maintain a formal style.
   f. Provide a concluding statement or section related to the information or explanation presented.
3. Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.
   a. Engage and orient the reader by establishing a context and point of view and introducing a narrator and/or characters; organize an event sequence that unfolds naturally and logically.
   b. Use narrative techniques, such as dialogue, pacing, description, and reflection, to develop experiences, events, and/or characters.
   c. Use a variety of transition words, phrases, and clauses to convey sequence, signal shifts from one time frame or setting to another, and show the relationships among experiences and events.
   d. Use precise words and phrases, relevant descriptive details, and sensory language to capture the action and convey experiences and events.
   e. Provide a conclusion that follows from and reflects on the narrated experiences or events.
Writing (Continued)

Production and Distribution of Writing
4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3.)
5. With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed.
6. Use technology, including the internet, to produce and publish writing and present the relationships between information and ideas efficiently as well as to interact and collaborate with others.

Research to Build and Present Knowledge
7. Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.
8. Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.
9. Draw evidence from literary or informational texts to support analysis, reflection, and research.
   a. Apply grade 8 Reading standards to literature (e.g., “Analyze how a modern work of fiction draws on themes, patterns of events, or character types from myths, traditional stories, or religious works such as the Bible, including describing how the material is rendered new”).
   b. Apply grade 8 Reading standards to literary nonfiction (e.g., “Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient; recognize when irrelevant evidence is introduced”).

Range of Writing
10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

Speaking and Listening

Comprehension and Collaboration
1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 8 topics, texts, and issues, building on others’ ideas and expressing their own clearly.
   a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.
   b. Follow rules for collegial discussions and decision-making, track progress toward specific goals and deadlines, and define individual roles as needed.
   c. Pose questions that connect the ideas of several speakers and respond to others’ questions and comments with relevant evidence, observations, and ideas.
   d. Acknowledge new information expressed by others, and, when warranted, qualify or justify their own views in light of the evidence presented.

2. Analyze the purpose of information presented in diverse media and formats (e.g., visually, quantitatively, orally) and evaluate the motives (e.g., social, commercial, political) behind its presentation.

3. Delineate a speaker’s argument and specific claims, evaluating the soundness of the reasoning and relevance and sufficiency of the evidence and identifying when irrelevant evidence is introduced.
Speaking and Listening (Continued)

Presentation of Knowledge and Ideas
4. Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound valid reasoning, and well-chosen details; use appropriate eye contact, adequate volume, and clear pronunciation.
5. Integrate multimedia and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest.
6. Adapt speech to a variety of contexts and tasks, demonstrating formal English when indicated or appropriate.

Language

Conventions of Standard English
1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
   a. Explain the function of verbals (gerunds, participles, infinitives) in general and their function in particular sentences.
   b. Form and use verbs in the active and passive voice.
   c. Use verb tense to convey various times, sequences, states, and conditions.
   d. Form and use verbs in the indicative, imperative, interrogative, conditional, and subjunctive mood.
   e. Recognize and correct inappropriate shifts in verb voice and mood
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
   a. Use punctuation (comma, ellipsis, dash) to indicate a pause or break.
   b. Use an ellipsis to indicate an omission.
   c. Spell correctly.

Knowledge of Language
3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.
   a. Use verbs in the active and passive voice and in the conditional and subjunctive mood to achieve particular effects (e.g., emphasizing the actor or the action; expressing uncertainty or describing a state contrary to fact).

Vocabulary Acquisition and Use
4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 8 reading and content, choosing flexibly from a range of strategies.
   a. Use context (e.g., the overall meaning of a sentence or paragraph; a word’s position or function in a sentence) as a clue to the meaning of a word or phrase.
   b. Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., precede, recede, secede).
   c. Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech.
5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
   a. Interpret figurative language (e.g. verbal irony, puns) in context.
   b. Use the relationship between particular words to better understand each of the words.
   c. Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., bullheaded, willful, firm, persistent, resolute).
6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.
This narrative was written to fulfill an assignment in which students were asked to introduce a special person to readers who did not know the person. The students were advised to reveal the personal quality of their relationship with the person presented. The student who wrote this piece borrowed ideas from a fictional piece she had read.

Miss Sadie

Miss Sadie no longer sits in her rocking chair on her porch on summer days. But I still can see her. The old chair squeaking with every sway of her big, brown body. Her summer dresses stained from cooking in her sweet smelling kitchen. I see her gray hair pulled back in that awful, yellow banana clip. Most of all, I hear that voice. So full of character and wisdom.

I used to bring Miss Johnson cookies every summer day of 1988. I miss the days when I would sit on that shabby old porch and listen to her stories. “Melissa!” she would holler. “What ‘chu doin’ here? Come see me and my poor self, have ya?”

She once told me of her grandmother who escaped slavery, back when white men could only do anything, she would say. Her grandma ran for miles without food or water. It wasn’t too long before her master came looking for her and took her home to whip her. I thought of how Blacks are treated today. I sighed. She would sing in her soulful, blaring voice, old Negro hymns passed down from her mother and grandmother. I would sit there in amazement.

Once, Jimmy Taylor came walking by us yelling, “Melissa! Whattaya want with that old, fat, Black lady, anyways?”

Before I could retaliate, Miss Johnson said to me, “Now you musn’t. We must feel sorry for that terrible child. His mother must have done gone and not taught him no manners!” She actually wanted me to bow my head and pray for him. (Even though I went to his house and punched him out the next day.)
My friends would tease me for spending the whole summer with Sadie Johnson, “The Cookoo of Connecticut,” they called her. But I’m so very glad I did. She taught me then to not care what other people thought. I learned that I could be friends with someone generations apart from my own.

My visits became less frequent when school started. I had other things to think about. Boys, clothes, grades. You know, real important stuff.

One day I was thinking, I haven’t seen Miss Sadie in a while. So after school I trotted up to her house amidst the twirling, autumn leaves.

I rang her bell. The door cracked open and the women adjusted her glasses. “May I help you?”

“Miss Sadie, it’s me, Melissa.”


I went home bewildered and my mother told me to stop bothering Miss Sadie. I said I wasn’t bothering her. Mama said, “Miss Johnson has a disease. Alzheimer’s disease. It makes her forget things… people, family even. And so, I don’t want you over there anymore, you hear?”

Then, I didn’t realize or comprehend, how someone so special to you could forget your own existence when you’d shared a summer so special and vivid in your mind.

That Christmas I went to bring Miss Johnson cookies. She wasn’t there. I learned from a family member that she was in the hospital and that she’d die very soon. As the woman, a daughter maybe, spoke, my heart broke.

“Well, you make sure she gets these cookies,” I said, my voice cracking and tears welling in my eyes.

Today, I’ve learned to love old people. For their innocence, for their knowledge. I’ve learned to always treat people with kindness, no matter how cruel they may seem. But mainly I’ve learned, that you must cherish the time spent with a person. And memories are very valuable. Because Miss Sadie no longer sits in her rocking chair on her porch on summer days. I’m glad that I can still see her.
The writer of this piece

- **engages and orients the reader by establishing a context and point of view, and introducing a narrator and characters.**
  - The writer engages the reader by entering immediately into the story line and orients the reader by skillfully backfilling information about the setting (*the old chair squeaking; that shabby old porch*) and the narrator’s experiences with Miss Sadie (bringing Miss Sadie cookies, listening to her stories, listening to her sing *old negro hymns*).

- **organizes an event sequence that unfolds naturally and logically.**
  - The writer begins in the present, when *Miss Sadie no longer sits in her rocking chair*, then creates an image with specific details of Miss Sadie as she was in the past (*every sway of her big brown body . . . her gray hair pulled back in that awful, yellow banana clip*).

- **uses narrative techniques, such as dialogue, pacing, and description, to develop experiences, events, and characters.**
  - Reflection: *My friends would tease me for spending the whole summer with Sadie Johnson, “The cookoo of Connecticut,” they called her. But I’m so very glad I did. She taught me then, to not care what other people thought. I learned that I could be friends with someone generations apart from my own . . . Then, I didn’t realize or comprehend, how someone so special to you could forget your own existence when you’d shared a summer so special and vivid in your mind.*
  - Reporting internal thoughts and reactions: *“Whattaya want with that old, fat, Black lady, anyways?” As the woman, a daughter maybe, spoke, my heart broke.*
  - Tension: *I heard crying. I rang the door again and she screamed, “Please leave!” in a scared, confused voice.*

- **uses a variety of transition words, phrases, and clauses to convey sequence, signal shifts from one time frame or setting to another, and show the relationships among experiences and events.**
  - *no longer . . . still . . . used to . . . I miss the days . . . once . . . then . . . Today . . .*

- **uses precise words and phrases, relevant descriptive details, and sensory language to capture the action and convey experiences and events.**
  - *The old chair squeaking with every sway of her big, brown body. Her summer dresses stained from cooking. I smell her sweet smelling kitchen. . . . her soulful, blaring voice . . . the twirling, autumn leaves. The door cracked open . . . “I–I,” she’d stuttered.*

- **provides a conclusion that follows from and reflects on the narrated experiences or events.**
  - In the conclusion, the writer returns to the image in the beginning of the narrative (*Miss Sadie no longer sits in her rocking chair on her porch on summer days. But I still can see her*) to reflect on the importance of memories (*I’m glad that I can still see her*).

- **demonstrates good command of the conventions of standard written English (with occasional errors that do not interfere materially with the underlying message).**
  - Occasional sentence fragments were likely included for stylistic purposes (e.g., *The old chair squeaking with every sway of her big, brown body; Her summer dresses stained from cooking; Because Miss Sadie no longer sits in her rocking chair on her porch on summer days.*
**MATHEMATICS**

The middle school mathematics curriculum is designed to develop deep understanding of foundational math ideas. In order to allow time for such understanding, each grade level focuses on concepts and skills related to focal points. The scope and sequence of the curriculum allows students to develop understanding of concepts, key ideas, and the structure of mathematics. In grade 8, instructional time should focus on three critical areas: (1) formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear equation, and solving linear equations and systems of linear equations; (2) grasping the concept of a function and using functions to describe quantitative relationships; and (3) analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem. Through this study, students will also develop behaviors of proficient mathematicians. They will learn how to justify their thinking, reason abstractly, use precise language, and notice patterns.

### The Number System

**Know that there are numbers that are not rational, and approximate them by rational numbers.**

1. Understand informally that every number has a decimal expansion; the rational numbers are those with decimal expansions that terminate in 0s or eventually repeat. Know that other numbers are called irrational.
2. Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions.

### Expressions and Equations

**Work with radicals and integer exponents.**

1. Know and apply the properties of integer exponents to generate equivalent numerical expressions.
2. Use square root and cube root symbols to represent solutions to equations of the form \( x^2 = p \) and \( x^3 = p \), where \( p \) is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that \( \sqrt{2} \) is irrational.
3. Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other.
4. Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.

**Understand the connections between proportional relationships, lines, and linear equations.**

5. Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways.
6. Use similar triangles to explain why the slope \( m \) is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation \( y = mx \) for a line through the origin and the equation \( y = mx + b \) for a line intercepting the vertical axis at \( b \).

**Analyze and solve linear equations and pairs of simultaneous linear equations.**

7. Solve linear equations in one variable.
   a. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form \( x = a \), \( a = a \), or \( a = b \) results (where \( a \) and \( b \) are different numbers).
   b. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.
8. Analyze and solve pairs of simultaneous linear equations.
   a. Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.
   b. Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection.
   c. Solve real-world and mathematical problems leading to two linear equations in two variables.

### Functions

**Define, evaluate, and compare functions.**

1. Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.

2. Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear.

3. Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions).

**Use functions to model relationships between quantities.**

4. Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two $(x, y)$ values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.

5. Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.

### Geometry

**Understand congruence and similarity using physical models, transparencies, or geometry software.**

1. Verify experimentally the properties of rotations, reflections, and translations:
   a. Lines are taken to lines, and line segments to line segments of the same length.
   b. Angles are taken to angles of the same measure.
   c. Parallel lines are taken to parallel lines.

2. Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.

3. Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.

4. Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.

5. Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles.
### Statistics and Probability
Investigate patterns of association in bivariate data.

<table>
<thead>
<tr>
<th>1. Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.</th>
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<tr>
<td>2. Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.</td>
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<tr>
<td>3. Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept.</td>
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<tr>
<td>4. Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables.</td>
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**Science**

Eighth grade will focus on traditional laboratory experiences and provide opportunities to demonstrate how science is constant, historic, probabilistic, and replicable. Although there are no fixed steps that all scientists follow, scientific investigations usually involve collections of relevant evidence, the use of logical reasoning, the application of imagination to devise hypotheses, and explanations to make sense of collected evidence. Student engagement in scientific investigation provides background for understanding the nature of scientific inquiry. In addition, the science process skills necessary for inquiry are acquired through active experience. The process skills support development of reasoning and problem-solving ability and are the core of scientific methodologies.
Physical Science

Matter: Properties and Change
Understand the properties of matter and changes that occur when matter interacts in an open and closed container.

1. Classify matter as elements, compounds, or mixtures based on how the atoms are packed together in arrangements.
2. Explain how the physical properties of elements and their reactivity have been used to produce the current model of the Periodic Table of elements.
3. Compare physical changes such as size, shape, and state to chemical changes that are the result of a chemical reaction to include changes in temperature, color, formation of a gas, or precipitate.
4. Explain how the idea of atoms and a balanced chemical equation support the law of conservation of mass.

Energy: Conservation and Transfer
Explain the environmental implications associated with the various methods of obtaining, managing, and using energy resources.

1. Explain the environmental consequences of the various methods of obtaining, transforming, and distributing energy.
2. Explain the implications of the depletion of renewable and nonrenewable energy resources and the importance of conservation.

Earth Science

Earth Systems, Structures, and Processes
Understand the hydrosphere and the impact of humans on local systems and the effects of the hydrosphere on humans.

1. Explain the structure of the hydrosphere including:
   - Water distribution on earth
   - Local river basins and water availability
2. Summarize evidence that Earth's oceans are a reservoir of nutrients, minerals, dissolved gases, and life forms:
   - Estuaries
   - Marine ecosystems
   - Upwelling
   - Behavior of gases in the marine environment
   - Deep ocean technology and understandings gained
3. Predict the safety and potability of water supplies in North Carolina based on physical and biological factors, including:
   - Temperature
   - Dissolved oxygen
   - pH
   - Nitrates and phosphates
   - Turbidity
   - Bio-indicators
4. Conclude that the good health of humans requires:
   - Monitoring of the hydrosphere
   - Water quality standards
   - Methods of water treatment
   - Maintaining safe water quality
   - Stewardship
Earth History

Understand the history of Earth and its life forms based on evidence of change recorded in fossil records and landforms.

1. Infer the age of Earth and relative age of rocks and fossils from index fossils and ordering of rock layers (relative dating and radioactive dating).
2. Explain the use of fossils, ice cores, composition of sedimentary rocks, faults, and igneous rock formations found in rock layers as evidence of the history of the Earth and its changing life forms.

Life Science

Structures and Functions of Living Organisms

Understand the hazards caused by agents of diseases that affect living organisms.

1. Summarize the basic characteristics of viruses, bacteria, fungi, and parasites relating to the spread, treatment, and prevention of disease.
2. Explain the difference between epidemic and pandemic as it relates to the spread, treatment, and prevention of disease.

Understand how biotechnology is used to affect living organisms.

1. Summarize aspects of biotechnology including specific genetic information available, careers, economic benefits to North Carolina, ethical issues, and implications for agriculture.

Ecosystems

Understand how organisms interact with and respond to the biotic and abiotic components of their environment.

1. Explain how factors such as food, water, shelter, and space affect populations in an ecosystem.
2. Summarize the relationships among producers, consumers, and decomposers, including the positive and negative consequences of such interactions including coexistence and cooperation, competition (predator/prey), parasitism, and mutualism.
3. Explain how the flow of energy within food webs is interconnected with the cycling of matter (including water, nitrogen, carbon dioxide, and oxygen).

Evolution and Genetics

Understand the evolution of organisms and landforms based on evidence, theories, and processes that impact the Earth over time.

1. Summarize the use of evidence drawn from geology, fossils, and comparative anatomy to form the basis for biological classification systems and the theory of evolution.
2. Explain the relationship between genetic variation and an organism’s ability to adapt to its environment.

Molecular Biology

Understand the composition of various substances as it relates to their ability to serve as a source of energy and building materials for growth and repair of organisms.

1. Summarize how food provides the energy and the molecules required for building materials, growth, and survival of all organisms (to include plants).
2. Explain the relationship among a healthy diet, exercise, and the general health of the body (emphasis on the relationship between respiration and digestion).
SOCIAL STUDIES

Historical study connects students to the enduring themes and issues of our past and equips them to meet the challenges they will face as citizens in a state, nation, and an interdependent world. The new essential standards for eighth grade will integrate United States history with the study of North Carolina history. This integrated study helps students understand and appreciate the legacy of our democratic republic and to develop skills needed to engage responsibly and intelligently as North Carolinians. This course will serve as a stepping stone for more intensive study in high school. Students in eighth grade will continue to build on introductions to North Carolina and the United States by embarking on a more rigorous study of the historical foundations and democratic principles that continue to shape our state and nation. Students will begin with a review of the major ideas and events preceding the foundation of North Carolina and the United States. The main focus of the course will be the critical events, personalities, issues, and developments in the state and nation from the Revolutionary Era to contemporary times. Inherent in this study is an analysis of the relationship of geography, events, and people to the political, economic, technological, and cultural developments that shaped our existence in North Carolina and the United States over time. Although the major focus is state and national history, efforts should also be made to include a study of local history.

History

Apply historical thinking to understand the creation and development of North Carolina and the United States.
1. Construct charts, graphs, and historical narratives to explain particular events or issues.
2. Summarize the literal meaning of historical documents in order to establish context.
3. Use primary and secondary sources to interpret various historical perspectives.
4. Use historical inquiry to evaluate the validity of sources used to construct historical narratives (e.g., formulate historical questions, gather data from a variety of sources, evaluate and interpret data, and support interpretations with historical evidence).
5. Analyze the relationship between historical context and decision-making.

Understand the ways in which conflict, compromise, and negotiation have shaped North Carolina and the United States.
1. Explain the impact of economic, political, social, and military conflicts (e.g., war, slavery, states’ rights and citizenship, and immigration policies) on the development of North Carolina and the United States.
2. Summarize how leadership and citizen actions (e.g., the founding fathers, the Regulators, the Greensboro Four, and participants of the Wilmington Race Riots, 1898) influenced the outcome of key conflicts in North Carolina and the United States.
3. Summarize the role of debate, compromise, and negotiation during significant periods in the history of North Carolina and the United States.

Understand the factors that contribute to change and continuity in North Carolina and the United States.
1. Explain how migration and immigration contributed to the development of North Carolina and the United States from colonization to contemporary times (e.g., westward movement, African slavery, Trail of Tears, the Great Migration, and Ellis and Angel islands).
2. Explain how changes brought about by technology and other innovations affected individuals and groups in North Carolina and the United States (e.g., advancements in transportation, communication networks, and business practices).
3. Explain how individuals and groups have influenced economic, political, and social change in North Carolina and the United States.
4. Compare historical and contemporary issues to understand continuity and change in the development of North Carolina and the United States.
Geography and Environmental Literacy

Understand the geographic factors that influenced North Carolina and the United States.
1. Explain how location and place have presented opportunities and challenges for the movement of people, goods, and ideas in North Carolina and the United States.
2. Understand the human and physical characteristics of regions in North Carolina and the United States (e.g., physical features, culture, political organization, and ethnic make-up).
3. Explain how human and environmental interaction affected quality of life and settlement patterns in North Carolina and the United States (e.g., environmental disasters, infrastructure development, coastal restoration, and alternative sources of energy).

Economics and Financial Literacy

Understand the economic activities of North Carolina and the United States.
1. Explain how conflict, cooperation, and competition influenced periods of economic growth and decline (e.g., economic depressions and recessions).
2. Use economic indicators (e.g., GDP, inflation, and unemployment) to evaluate the growth and stability of the economy of North Carolina and the United States.
3. Explain how quality of life is impacted by personal financial choices (e.g., credit, savings, investing, borrowing, and giving).

Civics and Governance

Analyze how democratic ideals shaped government in North Carolina and the United States.
1. Summarize democratic ideals expressed in local, state, and national government (e.g., limited government, popular sovereignty, separation of powers, republicanism, federalism, and individual rights).
2. Evaluate the degree to which democratic ideals are evident in historical documents from North Carolina and the United States (e.g., the Mecklenburg Resolves, the Halifax Resolves, the Declaration of Independence, the Articles of Confederation, the Bill of Rights, and the principles outlined in the US Constitution and North Carolina Constitutions of 1776, 1868 and 1971).
3. Analyze differing viewpoints on the scope and power of state and national governments (e.g., Federalists and anti-Federalists, education, immigration, and healthcare).
4. Analyze access to democratic rights and freedoms among various groups in North Carolina and the United States (e.g., enslaved people, women, wage earners, landless farmers, American Indians, African Americans, and other ethnic groups).

Understand the role that citizen participation plays in societal change.
1. Evaluate the effectiveness of various approaches used to effect change in North Carolina and the United States (e.g., picketing, boycotts, sit-ins, voting, marches, holding elected office, and lobbying).
2. Analyze issues pursued through active citizen campaigns for change (e.g., voting rights and access to education, housing, and employment).
3. Explain the impact of human and civil rights issues throughout North Carolina and United States history.
**INFORMATION AND TECHNOLOGY**

The Information and Technology curriculum prepares students to use computer technology for school, work, and personal use; for accessing and applying information; for problem solving; and for communicating ideas and data. Building on skills learned at the elementary level, middle school students will leave each grade level with a greater, more in-depth ability to utilize the tools of technology not only for research but as avenues of reinforcement for learned concepts.

**Sources of Information**

Evaluate information resources based on specified criteria.

1. Evaluate resources for reliability.
2. Evaluate content for relevance to the assigned task.
3. Evaluate resources for point of view, bias, values, or intent of information.

**Technology as a Tool**

Use technology and other resources for assigned tasks.

1. Use appropriate technology tools and other resources to access information.
2. Use appropriate technology tools and other resources to organize information.
3. Use appropriate technology tools and other resources to design products to share information with others.

**Research Process**

Apply a research process to complete project-based activities.

1. Implement a project-based activity collaboratively.
2. Implement a project-based activity independently.

**Safety and Ethical Issues**

Analyze responsible behaviors when using information and technology resources.

1. Analyze ethical behavior when using resources.
2. Analyze safety precautions necessary when using online resources.

**Culture**

_Understand how different cultures influenced North Carolina and the United States._

1. Explain how influences from Africa, Europe, and the Americas impacted North Carolina and the United States (e.g. Columbian exchange, slavery, and the decline of the American Indian populations).
2. Summarize the origin of beliefs, practices, and traditions that represent various groups within North Carolina and the United States (e.g. Moravians, Scots-Irish, Highland Scots, Latino, Hmong, African, and American Indian).
3. Summarize the contributions of particular groups to the development of North Carolina and the United States (e.g. women, religious groups, and ethnic minorities such as American Indians, African Americans, and European immigrants).
**MUSIC**

Music is deeply embedded in our existence, adding depth and dimension to our environment, exalting the human spirit, and contributing in important ways to our quality of life. The processes of creating, performing, and understanding music are the primary goals of the music program. While performance is an important aspect of music study, it does not substitute for students’ development of creative processes and of broader integrated experiences and understandings. Through creating, students are able to be imaginative, think critically, and approach tasks in new or different ways.

### Musical Literacy

Apply the elements of music and musical techniques in order to sing and play music with accuracy and expression.

1. Use characteristic tone and consistent pitch when performing music alone and collaboratively, in small and large ensembles, using a variety of music.
2. Integrate the fundamental techniques (such as posture, playing position, breath control, and bow/stick control) necessary to sing and/or play an instrument.
3. Interpret expressive elements, including dynamics, timbre, blending, accents, attacks, releases, phrasing, and interpretation, while singing and/or playing a varied repertoire of music with technical accuracy.

Interpret the sound and symbol systems of music.

1. Interpret standard musical notation for whole, half, quarter, eighth, sixteenth, and dotted note and rest durations in 2/4, 3/4, 4/4, 6/8, 3/8, and alla breve meter signatures.
2. Interpret, through instrument and/or voice, standard notation symbols in two different clefs, using extended staves.
3. Use standard symbols for pitch, rhythm, dynamics, tempo, articulation, and expression to notate musical ideas.

Create music using a variety of sound and notational sources.

1. Produce simple rhythmic and melodic improvisations on pentatonic or blues scales, pentatonic melodies, and/or melodies in major keys.
2. Construct short pieces within specified guidelines (e.g., a particular style, form, instrumentation, compositional technique), using a variety of traditional and non-traditional sound, notational, and 21st century technological sources.

### Musical Response

Understand the interacting elements to respond to music and music performances.

1. Interpret the gestures of a conductor when singing or playing an instrument.
2. Identify principles of meter, rhythm, tonality, intervals, chords, and harmonic progressions using appropriate music terminology in analyses of music.
3. Evaluate performances, compositions, and musical ideas using a specified set of criteria (such as tone quality, intonation, blend/balance, technique, musical effect, interpretation, and diction).
Visual Arts

From the beginning of time, the compulsion to create a visual vocabulary has been as innate in every society as the desire to acquire a system of spoken symbols. A child discovers objects, those objects take on meaning, and this meaning is denoted and communicated through the various means of expression available to that child. The visual arts program is designed to develop visual literacy by promoting fluency in the various modes of visual communication. Students learn the visual arts by using a wide range of subject matter, media, and means to express their ideas, emotions, and knowledge. Through participation in visual arts, students have the opportunity to recognize and celebrate the creativity and diversity inherent in all of us.

Visual Literacy

Use the language of visual arts to communicate effectively.
1. Use art vocabulary to evaluate art.
2. Apply the Elements of Art and Principles of Design in the planning and creation of personal art.
3. Identify how the Elements of Art and Principles of Design differentiate movements, contemporary styles, and themes in art.
4. Analyze the relationship between the Elements of Art and the Principles of Design in art.

Apply creative and critical thinking skills to artistic expression.
1. Create art that uses the best solutions to identified problems.
2. Apply observation skills and personal experiences to create original art.
3. Create original art that conveys one or more ideas or feelings.

Create art using a variety of tools, media, and processes, safely and appropriately.
1. Apply knowledge of safety and media to maintain and take care of the work space and art.
2. Use a variety of media to create art.
3. Evaluate techniques and processes to select appropriate methods to create art.

Contextual Relevancy

Understand the role of music in North Carolina and the United States in relation to history and geography.

Understand the relationships between music and concepts from other areas.

Understand laws regarding the proper access, use, and protection of music.

Understand the global, historical, societal, and cultural contexts of the visual arts.
1. Understand the role of visual arts in North Carolina and the United States in relation to history and geography.
2. Analyze art from various historical periods in terms of style, subject matter, and movements.
3. Analyze the effect of geographic location and physical environment on the media and subject matter of art from North Carolina and the United States.
The Healthful Living curriculum is a combination of health education and physical education. It includes a planned, sequential K-12 program that integrates information about specific health topics. The mission is to provide students with a program that is capable of enhancing the quality of life, raising the level of health, and favorably influencing the learning process.

**Mental and Emotional Health**

- **Create positive stress management strategies.**
  1. Evaluate stress management strategies based on personal experience.
  2. Design a plan to prevent stressors or manage the effects of stress.
  3. Design effective methods to deal with anxiety.

- **Evaluate how structured thinking (decision making, problem solving, goal setting) benefits emotional well-being.**
  1. Evaluate the uses of defense mechanisms in terms of whether they are healthy or unhealthy.
  2. Critique personal use of structured thinking to enhance emotional well-being (based on appropriateness, effectiveness, and consistency).

- **Apply help-seeking strategies for depression and mental disorders.**
  1. Recognize signs and symptoms of hurting self or others.
  2. Implement a plan for seeking adult help for peers who express symptoms of self-injury or suicidal intent.
Interpersonal Communication and Relationships

Understand healthy and effective interpersonal communication and relationships.
1. Contrast characteristics of healthy and unhealthy relationships for friendships and for dating.
2. Identify the reasons that people engage in violent behaviors (bullying, hazing, dating violence, sexual assault, family violence, verbal abuse) and resources for seeking help.
3. Explain the effects of tolerance and intolerance on individuals and society.
4. Illustrate communication skills that build and maintain healthy relationships.
5. Use decision-making strategies appropriate for responding to unknown people via the Internet, telephone, and face to face.
6. Recognize resources that can be used to deal with unhealthy relationships.

Remember that abstinence from sexual activity outside of marriage means a positive choice for young people.
1. Recall abstinence as voluntarily refraining from intimate sexual behavior that could lead to unintended pregnancy and disease.
2. Recall skills and strategies for abstaining from sexual activity outside of marriage.

Analyze strategies that develop and maintain reproductive and sexual health.
1. Explain the health, legal, financial, and social consequences of adolescent and unintended pregnancy and the advantages of delaying parenthood.
2. Evaluate methods of FDA-approved contraceptives in terms of their safety and their effectiveness in preventing unintended pregnancy.
3. Select family, school, and community resources for the prevention of sexual risk-taking through abstinence and safer sex practices.
4. Summarize ways to avoid being a victim or perpetrator of sexual abuse via digital media (including social network sites, texting, and cell phone).
Nutrition and Physical Activity

Apply tools (Body Mass Index, Dietary Guidelines) to plan healthy nutrition and fitness.
1. Interpret the Body Mass Index in terms of body composition and healthy weight, underweight, overweight, and obesity.
2. Summarize the benefit of consuming adequate amounts of vitamins A, E, and C, magnesium, calcium, iron, fiber, folate, and water in a variety of foods.
3. Implement meal plans that are consistent with the Dietary Guidelines.

Create strategies to consume a variety of nutrient-dense foods and beverages in moderation.
1. Plan healthy personal eating strategies with attention to caloric intake and expenditure.
2. Generate a healthful eating plan incorporating food choices inside and outside the home setting.

Analyze the relationship of nutrition, fitness, and healthy weight management to the prevention of diseases such as diabetes, obesity, cardiovascular diseases, and eating disorders.
1. Identify media and peer pressures that result in unhealthy weight control (eating disorders, fad dieting, excessive exercise, smoking).
2. Differentiate the signs, symptoms, and consequences of common eating disorders from more healthy eating behaviors.
3. Use strategies to advocate for those who are at risk for eating disorders or poor nutrition.

Analyze plans for lifelong nutrition and health-related fitness to enhance quality of life.
1. Outline strategies that can be used to overcome barriers to healthy eating.
2. Differentiate methods of food preparation in terms of their health and safety.
3. Summarize the benefits of regular physical activity.

Alcohol, Tobacco, and Other Drugs

Analyze influences related to alcohol, tobacco, and other drug use and avoidance.
1. Analyze policies and laws related to the sale and use of tobacco products in terms of their purposes and benefits.
2. Predict the potential effect of anti-tobacco messages on the use of tobacco by youth and adults.

Understand the health risks associated with alcohol, tobacco, and other drug use.
1. Explain the impact of alcohol and other drug use on vehicle crashes, injuries, violence, and risky sexual behavior.
2. Evaluate the magnitude and likelihood of the risks associated with the use of performance-enhancing drugs.

Apply risk reduction behaviors to protect self and others from alcohol, tobacco, and other drug use.
1. Use strategies to avoid riding in a car with someone impaired by alcohol or drugs.
2. Identify positive alternatives to the use of alcohol and drugs.
3. Use advocacy skills to promote the avoidance of alcohol, tobacco, and drugs by others.
Physical Education

Motor Skill Development

Apply competent motor skills and movement patterns needed to perform a variety of physical activities.
1. Execute proficiency in some complex combinations of movement specific to game, sport, or physical activity settings in at least two of the following activities or compositions: aquatics, team sports, individual sports, dual sports, outdoor pursuits, self-defense, dance, and gymnastics.
2. Analyze fundamental motor skills and specialized skills that contribute to movement proficiency in small sided game situations.
3. Apply basic strategy and tactics that contribute to successful participation.
4. Use movement combinations in rhythmic activities with an emphasis on keeping to the beat of the music.

Movement Concepts

Understand concepts, principles, strategies, and tactics that apply to the learning and performance of movement.
1. Integrate increasingly complex discipline-specific knowledge, such as biomechanics, with movement skills.
2. Compare movement concepts and principles and critical elements of activity of performances representing different levels of skill.
3. Integrate strategies and tactics within game play.
4. Generate complex movement concepts that can be used to refine learned skills and to acquire new advanced skills.

Health-Related Fitness

Understand the importance of achieving and maintaining a health-enhancing level of physical fitness.
1. Evaluate progress toward achieving health-related fitness standards, using the results to make improvements.
2. Summarize the potential short- and long-term physical, social, and emotional impacts of physical activity as a positive lifestyle choice.
3. Use a variety of resources to assess, monitor, and improve personal fitness.

Personal/Social Responsibility

Use behavioral strategies that are responsible and enhance respect of self and others and value activity.
1. Analyze a variety of settings and situations to determine appropriate safety, ethics, and the form of social interaction.
2. Exemplify well-developed cooperation skills to accomplish group goals in both cooperative and competitive situations.
3. Compare factors in different cultures that influence the choice of physical activity and nutrition.