

## *Kindergarten - (Stargazers)*

| <b>L/A Writing<br/>Spelling</b>   | <b>Reading</b>   | <b>Mathematics</b>   | <b>Science</b>   | <b>Social Studies</b>  |
|---|--|--|--|--|
| <p>*Letter Awareness</p> <p>*Fine motor preparation for writing</p> <p>*Writing words and short phrases</p> <p>*Vocabulary enrichment</p> <p>*Dictation</p> <p>* Writing sentences, captions, and stories</p> <p>*Write a letter, poetry and play scripts</p> <p>*Writing responses</p> <p>*Writing mechanics</p> <p>*Communication</p> | <p>*Phonemic awareness</p> <p>*Letter sounds</p> <p>*Short phonetic words</p> <p>*Recognition of sight words</p> <p>*Letter blends</p> <p>*Develop book and print awareness</p> <p>*Reading short phonetic books</p> <p>*Understanding parts of a story</p> <p>*Asking questions about text</p> <p>*Making predictions</p> <p>*Identifying sequence of events</p> <p>*Encoding</p> <p>* Connect information in text to experience</p> <p>*Research</p> <p>*Vocabulary building</p> <p>*Building speaking and listening skills</p> <p>* Parts of Speech, Punctuation, Dramatization of literature</p> <p>*Write and produce a play</p> <p>*Phonics, decoding (stretching) unfamiliar words</p> <p>*Word recognition</p> <p>*Reading and comprehending various text (fiction, non-fiction, poetry)</p> <p>*Reading directions</p> <p>*Using books to find information</p> <p>*Interpreting information</p> <p>*Communication</p> | <p>*Numbers 0-100</p> <p>*Number sense, skip counting by 2, 3, 4, 5,&amp;10</p> <p>*Single and multi digit addition and subtraction</p> <p>*Place value</p> <p>*Grouping and ordering strategies</p> <p>*Collect and display data</p> <p>*Create and extend patterns</p> <p>*Basic geometric shapes</p> <p>*Sort and classify</p> <p>*Line plots and tallies</p> <p>*Fractions</p> <p>*Data analysis</p> <p>*Non-standard measurements</p> <p>*Decimal system</p> <p>*Introduction to quantity</p> <p>*Introductions to symbols</p> <p>*Formation of complex numbers</p> <p>*Operations with complex numbers</p> <p>*Plane and Solid Geometry</p> <p>*Time</p> <p>*Money</p> <p>*Fractions</p> | <p>*Develop in the child a greater awareness of his/her self</p> <p>*Gain a respect and sense of responsibility for the Earth</p> <p>*Give the child an understanding of his/her place in the universe</p> <p>* Research and explore our world of plants and animals (Botany and Zoology)</p> <p>*Develop an understanding of our deep connection to the earth by raising awareness for our stewardship of the earth through environmental sciences</p> <p>*Tools used in Scientific Inquiry</p> | <p>*Develop an understanding of self, family, and community</p> <p>*Build knowledge of human needs and how they are satisfied</p> <p>*Gain a respect and sense of responsibility for the cultures of the world</p> <p>*Our Continent, Country, State, and City</p> <p>*World celebrations</p> <p>*North America and South America</p> <p>*Experience the culture of other countries</p> <p>*Asia, Europe, Antarctica</p> <p>*Gain a respect and sense of responsibility for the earth, its elements, history, and people</p> <p>*Study of Africa, Australia</p> <p>*Social curriculum: rules process, consensus vs. majority rules</p> <p>*Individual development and identity</p> <p>*Building community</p> <p>*Cultures and diversity</p> <p>*Geographic relationships</p> <p>*Global connections</p> <p>*Government and active citizenship</p> |

## *1<sup>st</sup>/2<sup>nd</sup> Grade - (Seahorses)*

| <b>L/A Writing<br/>Spelling</b>   | <b>Reading</b>                                   | <b>Mathematics</b>   | <b>Science</b>  | <b>Social Studies</b>  |
|---|--|--|---|--|
| <p>*Writing responses</p> <p>*Writing mechanics</p> <p>*Communication</p> | <p>*Letter sounds</p> <p>*Phonemic awareness</p> | <p>*Number sense</p> <p>*Skip counting by 2 ,3, 4, 5,&amp;10</p> <p>*Place value</p> <p>*Grouping and ordering</p> | <p>*Animal life cycles (esp. Gulf Fritillaries, Black Swallowtails, and Monarchs)</p> <p>*Metamorphosis</p> <p>*Natural disasters</p> | <p>*Social curriculum: rules process, consensus vs. majority rules, individual development and identity, building community</p> <p>*Cultures and diversity</p> |

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| *Writing for readers                       | *Decoding (stretching) unfamiliar words   | strategies  | *Scientific observations/ recording data              | *Geographic relationships  |
| *Stretching and writing words              | *Word recognition   | *Single and multi digit addition and subtraction with regrouping                                      | *Plant/agriculture cycles                             | *Global connections  |
| *Writing with sight words                  |   | *Collect and display data   | *Friction   | *Government and active citizenship   |
| *Journaling                                | *Reading and comprehending various text (fiction, non-fiction, poetry)                        | *Create and extend patterns   | *Gravity  | *Sports around the world   |
| *Revision, adding details, adding dialogue | *Reading directions   | *Basic geometric shapes   | *Testing bounce                                       | *Setting up and working together to spread responsibility *Becoming a curator                                  |
| *Handwriting practice                      | *Using books to find information  | *Sort and classify  | *Isaac Newton – laws of motion                        | *Children around the world   |
| *Personal narratives                       |   | *Line plots and tallies   | *Weather and seasons                                  | *Maps and Globes   |
| *Capitalization                            | *Interpreting information   | *Fractions  | *Sorting, classification                              | *Geography terms   |
| *Ways to revise                            | *Communication  | *Data analysis  | *Scientific names                                     | *Bodies of land and water  |
| *Guided writing                            |   | *Non-standard measurement   | *Animal classification/taxonomy                       | *South American countries and people   |
| *Answering questions (written)             | *Identifying authors, character, setting, main idea, problem, solution, inference, prediction | *Problem solving  | *Rainforests  | *National flags  |
| *Phonemic awareness in spelling            | *Sight word practice  | *Line graphs, bar graphs, histograms  | *Amazon River   | *Incan tribal history  |
| *Writing mechanics                         | *Shared reading   | *Venn diagrams  | *Andes Mountain Range                                 | *Machu Picchu civilization   |
| *Written communication                     | *Using reference books to locate research   | *Geometry (2-D and 3-D)   | *Life cycles of frogs and toads                       | *Peoples of the Andes mountains  |
| *Writing Responses                         |   | *Measuring distance   | *Amphibians   | *South American arts/customs/trade   |
| *The writing process                       | *Decoding skills  | *Measuring volume and capacity  | *Alpacas, Llamas, Guinea Pigs                         | *Civil Rights leaders and history  |
| *Fiction writing                           | *Spelling   | *Building numbers   | *Similarities of local environment with South America | *US slavery  |
| *Rules of spelling                         | *Vowels   | *Congruency   | *Soil science   | *Underground railroad  |
| *Spelling lists                            | *Plural endings   | *Place value  | *Soil conservation                                    | *Chinese New Year  |
|  | *Digraphs   | *Number line  | *Ecology of garden flora and fauna                    | *Ireland   |
|  | *Phonological and phonemic awareness  | *Estimation   | *Vermicomposting & traditional composting             | *Local soil structure *Climate studies in relation to growing food   |
|  |   | *Fractions  | *Botany (parts of a flower)                           | *Agriculture in the Wilmington, NC area (Native Americans and European settlers) *Georgia O’Keeffe (biography) |
|  |   | *Time   | *Butterfly/moth life cycles                           | *Local artist- Minnie Evans  |
|  |   | *Geometry terms and shapes  | *Gardening for wildlife                               | *Food-related jobs   |
|  |   | *Figures and solids   | *Pollination  | *Food marketing  |
|  |   | *Money and US coin values   | *Photosynthesis                                       | *Consumer behavior and food issues   |
|  |   | *Independent (abstract) number line *Calculator use   | *Nutrition (food pyramid)                             | *Dietary choices   |
|  |   | *Reading thermometers   | *Seed germination and growth                          | *Sustainable agriculture   |
|  |   | *End of 1 <sup>st</sup> grade: all addition and subtraction facts memorized                           | *Seed diversity                                       | *Festivals of Light  |
|  |   | *End of 2 <sup>nd</sup> grade: multiplication facts through 5's memorized with inverse division facts | *Digestive system                                     | *Different cultures  |
|  |   |   | *Exploring the five senses                            | *Children around the world   |
|  |   |   | *Using senses to make observations                    | *Water habitats  |
|  |   |   | *Physics of sound and light                           | *Continents and oceans   |
|  |   |   | *Anatomy and physiology of ear and eye                | *Boat building   |
|  |   |   | *Comparing human/animal senses                        | *Famous rivers of the world in comparison/contrast with the Cape Fear River Basin                              |
|  |   |   | *Using our common sense                               | *Cartography   |
|  |   |   | *Earth materials                                      | *GPS technology (longitude and latitude)   |
|  |   |   | *Earth, Sun, Moon, and Space                          |  |
|  |   |   | *Light and Heat                                       |  |
|  |   |   | *Weather and Seasons                                  |  |
|  |   |   | *Rocks and Minerals                                   |  |
|  |   |   | *Sorting/classification                               |  |

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| <ul style="list-style-type: none"> <li>*Comprehension strategies</li> <li>*Fluency monitoring</li> <li>*Reading for research and understanding</li> <li>*Suffixes, prefixes</li> <li>*Alphabetizing</li> <li>*Singing</li> </ul> | <ul style="list-style-type: none"> <li>*Buoyancy</li> <li>*Chemistry of water</li> <li>*Sink and float</li> <li>*Evaporation</li> <li>*Water treatment</li> <li>*Water conservation</li> <li>*Physical properties of water</li> <li>*Surface tension</li> <li>*Water cycle</li> <li>*Stages of matter</li> <li>*Land and water forms</li> <li>*Displacement</li> <li>*River continuum theory</li> <li>*Cape Fear river natural history</li> <li>*River ecology, geology and hydrology: from source to mouth</li> </ul> |
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### *3<sup>rd</sup>/4<sup>th</sup> Grade (Sandpipers)*

| <b>L/A Writing<br/>Spelling</b>  | <b>Reading</b>   | <b>Mathematics</b>   | <b>Science</b>  | <b>Social Studies</b>   |
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| <ul style="list-style-type: none"> <li>*The writing process</li> <li>*Proper capitalization and punctuation</li> <li>*Organizing a paragraph-main idea and supporting details</li> <li>*Prewriting (brainstorming, drawing, planning)</li> <li>*Logical sequencing</li> <li>*Topic sentences</li> <li>*Details</li> <li>*Concluding statement</li> <li>*Expository writing</li> <li>*Dialog</li> <li>*Character development</li> <li>*Point of view</li> <li>*Conflict resolution</li> <li>*Foreshadow, flashback</li> <li>*Descriptive words and phrases</li> <li>*Similes and metaphors</li> <li>*Synonyms, antonyms and homophones</li> <li>*Multiple- meaning words</li> <li>*Researching</li> <li>*Note taking</li> <li>*Paraphrasing</li> <li>*Subject- verb agreement</li> <li>*Verb tense</li> </ul> | <ul style="list-style-type: none"> <li>*Intro to the library</li> <li>*Treatment of books</li> <li>*Genres</li> <li>*Setting a purpose</li> <li>*Choosing a book</li> <li>*Comprehension strategies</li> <li>*Book responses</li> <li>*Themed books</li> <li>*Reading focus</li> <li>*Essential skills (on computer)</li> <li>*Featured author</li> <li>*Explore different genres (legends, folktales, fables), by identifying and interpreting elements of fiction and nonfiction</li> <li>*Main idea and supporting details</li> <li>*Active listening</li> <li>*Response to literature</li> <li>*Analyze literature, character, setting, plot</li> <li>*Literature circles</li> <li>*Nonfiction</li> <li>*Making inferences</li> <li>*Drawing conclusions</li> <li>*Making generalizations, and gathering support from texts</li> </ul> | <ul style="list-style-type: none"> <li>*Fractions</li> <li>*Data collection and probability</li> <li>*Landmark numbers</li> <li>*Number Sense and Numeration (addition, subtraction, multiplication, division, word problems, order of operations, ordering and comparing numbers, rounding, estimating, odd/even)</li> <li>*Place value</li> <li>*Number modeling</li> <li>*Geometry</li> <li>*Patterns</li> <li>*Simple Mathematics Relationships</li> <li>*Measurement</li> <li>*Decimals</li> <li>*Percents</li> </ul> | <ul style="list-style-type: none"> <li>*Plant parts</li> <li>*Growth and adaptations</li> <li>*Soil properties: components</li> <li>*Composting</li> <li>*Interconnection between animals, people, and environment</li> <li>*Medicinal plants</li> <li>*Animal behaviors and adaptations</li> <li>*Boat building (canoes and kayaks)</li> <li>*Food/nutrition</li> <li>*Animal observations</li> <li>*Simple machines</li> <li>*Recreating experiments and conducting investigations</li> <li>*Using the scientific method</li> <li>*Celestial science</li> <li>*Aerodynamics (weight, lift, drag, and thrust)</li> </ul> | <ul style="list-style-type: none"> <li>*Maps</li> <li>*Absolute and relative location</li> <li>*Three regions of North Carolina (coastal, piedmont, mountains)</li> <li>*Culture of the regions (arts, music and crafts)</li> <li>*Movement of people due to environment</li> <li>*NC natives, past and present</li> <li>*Immigration in NC</li> <li>*Differences of groups of people</li> <li>*Influence of Native Americans on culture, customs, and history of NC</li> <li>*Families, communities and homes</li> <li>*Government</li> <li>*Timeline, cultures, food, movement of people, goods and ideas in the past</li> <li>*Similarities and differences of families in different times and places</li> <li>*Famous and diverse explorers and inventors past and present</li> <li>*Migration</li> <li>*Famous pilots, the Wright Brothers</li> <li>*Lighthouses of North Carolina</li> <li>*Light Festivals from different cultures and religions</li> <li>*People who were important to the history of flight</li> </ul> |

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| <ul style="list-style-type: none"> <li>*Contractions</li> <li>*Double negatives</li> <li>*Plural &amp; possessive nouns</li> <li>*Comparative adjectives and adverbs</li> <li>*Introduction to the dictionary</li> <li>*Combining sentences</li> <li>*Prefixes and suffixes</li> <li>*Rules of spelling</li> <li>*Spelling lists</li> </ul> | <ul style="list-style-type: none"> <li>*Verify meaning</li> <li>*Conduct research for assigned and self-selected projects from a variety of sources</li> <li>*Skim/scan strategies</li> <li>*Using reference books/</li> <li>*Repeated patterns</li> <li>*Summarizing</li> <li>*Logical sequencing</li> <li>*Point of view</li> <li>*Foreshadowing, flashbacks</li> <li>*Dialog</li> <li>*Expressing likes and dislikes</li> <li>*Using contents and indexes</li> </ul> | <ul style="list-style-type: none"> <li>*Graphs</li> <li>*Geometry (polygons, solid figures, angles, symmetry</li> <li>congruency, area and perimeter, transformations),</li> <li>*Patterns</li> <li>*Plotting</li> <li>Coordinates</li> <li>*Charts, and tables</li> <li>*End of first semester all multiplication facts memorized with inverse division facts</li> </ul> | <ul style="list-style-type: none"> <li>*Animal adaptation and survival</li> <li>*Bernoulli's principle</li> <li>*Bird anatomy</li> <li>*Human and bird skeletal systems</li> <li>*Light (Refraction, prisms) *Electricity and Circuits</li> <li>*Static Electricity</li> <li>*Magnetism</li> <li>*Plants</li> <li>*Photosynthesis</li> <li>*Asian animal studies</li> <li>*Invasive plants</li> <li>*Solar system (planet size, order, &amp; distance)</li> <li>*Sun</li> <li>*Moon</li> <li>*Stars (including constellations)</li> <li>*Astronomical Units</li> <li>*Carnivorous plants (Venus Fly Trap)</li> </ul> | <ul style="list-style-type: none"> <li>*MLK Jr. and civil rights leaders</li> <li>*The Underground Railroad</li> <li>*Quakerism-inner light</li> <li>*Ben Franklin</li> <li>*Asian studies</li> <li>*Roman and Greek Mythology *Roman Numerals</li> <li>*Slavery (follow the drinking gourd)</li> </ul> |
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### *5<sup>th</sup>/6<sup>th</sup> Grade - (Great Egrets)*

| <b>L/A Writing<br/>Spelling</b>  | <b>Reading</b>   | <b>Mathematics</b>   | <b>Science</b>  | <b>Social Studies</b>  |
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| <ul style="list-style-type: none"> <li>*Introduction to Writing Workshop and Writer's Notebook</li> <li>*Introduction to Word Journal</li> <li>Vocabulary strategies</li> <li>*Handwriting Without Tears</li> <li>*Narrative Writing: Character, Problem, Solution Narratives</li> <li>*Six Stages of the Writing Process</li> <li>*Elaborative details</li> </ul> | <ul style="list-style-type: none"> <li>*Literary Analysis: Examining characters, setting, point of view, conflict, plot, and theme in novels</li> <li>*Responding to literature through book responses</li> <li>*Making predictions using inferences</li> <li>*Making personal connections with texts</li> <li>*Comprehension</li> </ul> | <ul style="list-style-type: none"> <li>*Written, computation strategies</li> <li>*Place value</li> <li>*Compare &amp; order rational numbers</li> <li>*Estimation strategies</li> <li>*Solving problems using calculators</li> <li>*Develop meaning of percent</li> <li>*Compare and order fractions, decimals &amp; percentage</li> <li>*Convert percentage to decimals &amp; fractions</li> <li>*Solve percentage word problems</li> </ul> | <ul style="list-style-type: none"> <li>*Analyze organisms in an ecosystem –producers, consumers &amp; decomposers</li> <li>*Effect of light, temperature &amp; soil</li> <li>*Food webs *Adaptation &amp; natural selection</li> <li>*Human influence *Biomes</li> <li>*The water cycle *Weather patterns *Types of clouds</li> <li>*Global weather patterns</li> <li>*Geography affecting weather &amp; climate</li> <li>*Tectonic plates</li> <li>*Volcanoes</li> <li>*Earthquakes *Interior Earth model</li> </ul> | <ul style="list-style-type: none"> <li>*Forms of Government</li> <li>*The Declaration of Independence</li> <li>*The Constitution, *Bill of Rights</li> <li>*Three Branches of Government</li> <li>*Balance of Power within the US Government</li> <li>*Democracy *Elections</li> <li>*Voting</li> <li>*The Electoral College</li> <li>*Summarizing and presenting current events articles</li> <li>*Lewis and Clark and the Corps of Discovery</li> <li>*Louisiana Purchase</li> <li>*Manifest Destiny *Mapping Skills</li> <li>*Impact of westward expansion on Native American cultures</li> </ul> |

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| <p>*Self editing and peer editing rough drafts *Using editing marks,<br/> *Proofreading checklists<br/> *Attention grabbing beginnings and effective endings<br/> *Publishing final drafts<br/> *Vocabulary Study *Cursive handwriting review<br/> *Review of language conventions: capitalization, punctuation, parts of speech, paragraphing<br/> *Editing and proofreading<br/> *brainstorming, note-taking<br/> *Introduction to homophones<br/> *Prefix, suffix, and root words<br/> *Figurative Language<br/> *Quatrain Poems<br/> *Word choice and sentence structure, *Expository Writing *Research Strategies<br/> *Bibliography<br/> *Composing poetry<br/> *Figurative language<br/> *Sentence building<br/> *Conclusions<br/> * Personal narratives<br/> *Context clues<br/> *Rules of spelling<br/> *Spelling lists</p> | <p>strategies<br/> *Interpreting author's choice of words<br/> *Literature discussions<br/> *Interpreting different types of poetry<br/> *Discussing and responding to a variety of text<br/> *Making connections between text and personal experiences, the outside world, and other sources<br/> *Understanding character's point of view<br/> *Poetry<br/> *Reviewing comprehension strategies<br/> *Responding to independent reading<br/> *Introduction to Literature Circles<br/> *Cause and Effect<br/> *Comparing and contrasting</p> | <p>*Metric &amp; Customary Measurement<br/> *Analyzing &amp; Creating Graphs<br/> *Mean, Median &amp; Mode<br/> *Perimeter, Area &amp; Volume<br/> *Probability<br/> *Coordinates<br/> *Problem Solving<br/> *Algebraic Patterns/Equations<br/> *Symmetry<br/> *Simplifying fractions<br/> *Common denominators<br/> *Improper fractions<br/> *Mixed numerals<br/> *Prime &amp; composite numbers, greatest common factor<br/> *Adding &amp; subtracting fractions<br/> *Multiplying &amp; dividing fractions<br/> *Fraction word problems;<br/> *Negative Numbers<br/> *Angles<br/> *Triangles<br/> *Quadrilateral<br/> *Polygons<br/> *Circles<br/> *Surveys<br/> *Graphs<br/> *Mean, Median &amp; Mode<br/> *Factors<br/> *Multiples<br/> *Exponentials<br/> *Algebraic Patterns<br/> *Equations<br/> *Problem Solving<br/> *Ratios<br/> *Rates of Change</p> | <p>*Rock cycle<br/> *Types of rocks &amp; minerals<br/> *Economic use &amp; value of rocks, minerals, metals &amp; gems<br/> *How forces work *Gravity &amp; moving air<br/> *Motion – force, friction, inertia &amp; momentum<br/> *Simple machines<br/> *Bridge technological designs<br/> *State of the Planet / Ecology / Sustainability /<br/> *Population Dynamics<br/> *Global warming theory: fossil fuels, renewable energy, environmental concerns, environmental solutions<br/> *Inner &amp; outer planets in the solar system<br/> *Sun, moon, comets, asteroids, meteoroids, black holes, galaxies, stars<br/> *History of space travel<br/> *Satellites, &amp; space stations<br/> *Energy: statistics, stored and movement energy, energy changes, energy &amp; the Earth<br/> *Fossil fuels, electricity, nuclear, solar, wind, water, waste, energy efficiency, energy future, economics of energy<br/> *Scientific inquiry process, develop experimental procedures, safety procedures<br/> *Analyze variables, and evidence *Presenting qualitative data results<br/> *Properties of matter: physical &amp; chemical characteristics, atoms, elements, *Decomposers, plant food, photosynthesis, animal &amp; plant growth<br/> *Change in landforms</p> | <p>*Five regions of the U.S.<br/> *5 themes of Geography *Researching natural resources, climate, population, size<br/> *Business and industry<br/> *American History from early 1600's to mid 1700's<br/> *The Thirteen Colonies<br/> *Relationships between colonists and Native Americans<br/> *Examining primary documents<br/> *The role of Quakers in Colonial History<br/> *Jamestown, Colonial Williamsburg<br/> *The Revolutionary War<br/> *Slavery, the Underground Railroad and abolitionists<br/> *Civil War<br/> *Note-taking strategies<br/> *Current Events<br/> *Examining the lives of African Americans in the South after the Civil War<br/> *Jim Crow Laws and their impact<br/> *Timeline of events that led to the Civil Rights Movement in the South<br/> *Major Court Cases: Plessy vs. Ferguson and Brown vs. Board of Ed<br/> *People and events that influenced the Civil Rights Movement from 1954- 1968<br/> *Non-violent direct action<br/> *Peaceful protests, and civil disobedience<br/> *Geographic perspective<br/> *Maps with Spatial Correlations<br/> *Maps of South America<br/> *Culture of South America<br/> *Ancient civilizations and the development of culture<br/> *Egypt, Mesopotamia, India, China, Greece, Rome, Maya</p> |
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|  |  |  | *Water cycle, erosion, deltas & flood plains, flow of water, human influence, models, maps & photographs of landforms |  |
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**7<sup>th</sup>/8<sup>th</sup> Grade - (Ospreys)**

| Literature Spelling  | Pre-Algebra   | Algebra  | Science   | Social Studies   |
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| <b>Reading</b><br><b>Parables</b><br>Major themes, symbolism<br><b>Naturalist Literature</b><br>Survival themes<br><b>Play Characteristics</b><br><b>Short stories</b><br>(including "The Lottery", "Gift of the Magi")<br><b>Novels</b><br><i>*Huckleberry Finn</i><br><i>*Tom Sawyer</i><br><i>*Animal Manifesto</i><br><i>*The 100 Most Influential People Who Never Lived</i><br><i>*Second Nature</i> <i>*Savage Nation</i><br><i>*Book of the Lion</i><br><b>Vocabulary:</b><br>Context clues, words from class readings, SAT word lists, test-taking skills<br>Greek and Latin word parts | <b>First Quarter</b><br>*Using Variables *Writing Algebraic Expressions<br>*Solving One Step Equations (all operations)<br>*Solving Simple Inequalities<br>*Combining Like Terms<br>*Graphing Ordered Pairs<br>*Interpreting Graphs and Tables<br>*All Operations with Integers<br>*Solving Equations and Inequalities containing Integers<br>*Properties of Exponents and Scientific Notation<br>*All Operations with Rational Numbers<br>*Adding and Subtracting Rational Numbers with Unlike Denominators<br>*Solving Equations and Inequalities with Rational Numbers<br>*Squares and Square Roots<br>*The Real Numbers<br><b>Second Quarter</b><br>*Organizing Data; Samples and Surveys<br>*Measures of Central Tendency and Variability<br>*Displaying Data; Scatter Plots<br>*Misleading Graphs and Statistics<br>*Points, Lines, Planes and Angles | <b>First Quarter</b><br>*Identifying Patterns Using Differences<br>*Variables, Expressions and Equations<br>*The Algebraic Order of Operations<br>*Graphing With Coordinates<br>*Representing Linear Patterns<br>*Scatter Plots and Lines of Best Fit<br>*The Real Numbers and Absolute Value<br>*Real Numbers: Computations with all Operations<br>*Properties and Mental Computation<br>*Algebraic Expressions: Adding and Subtracting, Multiplying and Dividing<br>*Solving Equations by Adding and Subtracting<br>*Solving Equations by Multiplying and Dividing<br>*Solving Two-Step Equations and Multi-step Equations<br>*Using the Distributive Property<br>*Using Formulas and Literal Equations<br>*Using Proportional Reasoning and Percent Problems<br>*Probability<br>*Measures of Central Tendency<br>*Graphing Data and Other Data Displays<br>*Linear Functions and Graphs<br>*Defining Slope, Rate of Change and Direct Variation<br>*The Slope-Intercept Form<br>*The Standard and Point-Slope Forms<br>*Parallel and Perpendicular Lines<br><b>Second Quarter</b><br>*Solving Inequalities and Multi-step | *Human Body Systems – anatomy (structure) & physiology (function)<br>*Interactions between systems (skeletal, muscular, respiratory, circulatory, digestive)<br>*Radiation sickness<br>*Diseases (intro. to microbiology)<br>*Epidemiology (case studies including John Snow and the London cholera map)<br>*Nervous system, Sensory systems (skin, eyes, ears), structure and function<br>*Brain structure and evolutionary development, (the quadrune brain)<br>*Learning styles and personality assessments<br>*Introduction to psychology<br>*Sigmund Freud (ego) | *5 Themes of geography<br>*Using maps comparatively<br>*Physical/Political geography of Europe<br>*Physical geography of North Africa<br>*Connections between WWI and WWII and contemporary issues<br>*Forms of Government<br>*Human rights, Activism<br>*Great Depression<br>*New Deal<br>*Communism and Socialism<br>*Marx and Engels<br>*Communist Manifesto<br>*Bolshevik Revolution<br>*Cold War<br>*Key figures<br>*Role of government in private sector |

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| <b>Writing:</b>                                   | *Parallel and Perpendicular Lines                          | Inequalities   | and id, conscious and unconscious, dreams)   | *Geography of Asia and Africa (political/physical/climate)  |
| <b>Summer Quakerism Project</b>                   | *Triangles and other Polygons                              | *Compound Inequalities   |  |   |
| <b>Creation Stories</b>                           | *Coordinate Geometry                                       | *Absolute-Value Functions, Absolute-Value Equations and Inequalities | *Carl Jung (4 dimensions of personality)   | *Imperialism and Africa/Asia (history/effects for present day)  |
| <b>Naturalists on Expedition</b>                  | *Congruence, Transformations, Symmetry                     | *Graphing Systems of Equations                                       |  |   |
| <b>Life Journey project</b>                       | Tessellations  | *Systems of Equations: The Substitution Method                       | *Abraham Maslow (hierarchy of needs)   | *Government structures of African/Asian nations   |
| <b>Short Story Project</b>                        | *Perimeter and Area of Rectangles and Parallelograms       | *Systems of Equations: The Elimination Method                        | *Emotional Literacy  | *Religious traditions of African/Asian nations  |
| <b>Personal Narrative Project</b>                 | *Perimeter and Area of Triangles and Trapezoids            | *Systems of Equations: Consistent and Inconsistent Systems           | *Introduction to Chemistry   | *Current Issues of African/Asian nations (political/cultural/economic)  |
| <b>Documentary Project</b>                        | *The Pythagorean Theorem                                   | *Systems of Inequalities   | *Logic Processes in Science (data collection, analysis, inference, hypothesis formation, experimental testing) | *Civil Wars/Social Justice/Famine/AIDS  |
| <b>Shared five-paragraph essay</b>                | *Circles   | *Classic Puzzles in Two Variables                                    | *The Chemistry of Oxidation (combustion & respiration)   | *Formal research procedure (identifying good sources, MLA citations, taking notes, drafting formal research paper, crafting an argument), |
| <b>Research Process</b>                           | *Drawing Three-Dimensional Figures                         | *Law of Exponents  | *Chemical Processes in Biology (respiration and photosynthesis)  | *Current Events (Summary and Citation format)   |
| topic selection,                                  | *Volume of Prisms and Cylinders, Pyramids and Cones        | *Multiplying and Dividing Monomials                                  |  | *North Carolina physical geography  |
| developing research questions, research,          | Cylinders, Pyramids and Cones                              | *Law of Exponents: Powers and Products                               | *Acid-Base reactions (acidity, alkalinity, pH, salt formation, neutralization)                                 | *Population growth/coastal development and infrastructure   |
| thesis development,                               | *Surface Area of Prisms and Cylinders, Pyramids and Cones  | Negative and Zero Exponents  | *Marine Biology and ocean processes  | *Current issues of growth and sustainability of growth  |
| outline, drafting, and revising                   | *Cylinders, Pyramids and Cones                             | *Scientific Notation and Exponential Functions                       | *Density, temperature, salinity in the Global Ocean  | *Use of public resources for preserving features of coastal regions   |
| <b>Personal essay</b>                             | *Spheres: Volume and Surface Area                          | *Applications of Exponential Functions                               | *Phylogeny of major taxa – evolutionary relationships  | *Importance of tourism and development to coastal NC  |
| <b>Grammar: Sentence Structure and Verb Study</b> | *Ratios and Proportions                                    | *Adding and Subtracting Polynomials                                  | *Ecological  | *Shell Island case study (permitting, rights of   |
| *Rules of spelling                                | <b>Third Quarter</b>                                       | *Modeling Polynomial Multiplication                                  |  |   |
| *SAT words  | *Ratios, Proportions *Rates, and Unit Rates                | *Multiplying Binomials   |  |   |
|   | *Analyze Units   | *Polynomial Functions  |  |   |
|   | *Solving Proportions                                       | *Common Factors  |  |   |
|   | *Dilations and Similar Figures                             | *Factoring Special Polynomials                                       |  |   |
|   | *Scale Drawings and Scale Models                           | *Factoring Quadratic Trinomials                                      |  |   |
|   | *Scaling Three-Dimensional Figures                         | *Factoring Quadratic Trinomials                                      |  |   |
|   | *Relating Decimals, Fractions, and Percents                | *Solving Equations by Factoring                                      |  |   |
|   | *Finding Percents  | *Graphing Parabolas  |  |   |
|   | *Finding a Number When the Percent is Known                | *Solving Equations by Using Square Roots                             |  |   |
|   | *Percent Change; Increase and Decrease                     | *Visual Aids for Factoring Trinomials                                |  |   |
|   | *Applications of Percents and Estimating                   | *Completing the Square   |  |   |
|   | *Theoretical and Experimental Probability, Chance and Odds | *Solving Equations of the form $x^2 + bx + c = 0$                    |  |   |
|   | *Use a Simulation  | *The Quadratic Formula   |  |   |
|   | *The Fundamental Counting Principle                        | *Graphing Quadratic Inequalities                                     |  |   |
|   | *Permutations and Combinations                             | <b>Third Quarter</b>   |  |   |
|   | *Independent and Dependent                                 | *Review of Quadratic Equations                                       |  |   |
|   |  | *Rational Functions: *Inverse Variation                              |  |   |
|   |  | *Rational Expressions and Functions                                  |  |   |
|   |  | *Simplifying Rational Expressions                                    |  |   |
|   |  | *Operations with Rational Expressions                                |  |   |
|   |  | *Solving Rational Expressions  |  |   |
|   |  | *Proof in Algebra  |  |   |
|   |  | Operations with Radicals   |  |   |
|   |  | *Square-Root *Functions and Radical Equations                        |  |   |

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| <p>Events</p> <p><b>Fourth Quarter</b></p> <ul style="list-style-type: none"> <li>*Review of Algebraic Problem Solving</li> <li>*Algebraic Concepts</li> <li>*Solving Two-Step Equations and Multi-step Equations</li> <li>*Solving Equations with Variables on Both Sides</li> <li>*Solving Multi-step Inequalities</li> <li>*Solving for a Variable</li> <li>*Systems of Equations</li> <li>*Graphing Linear Equations</li> <li>*Slope of a Line, Using Slopes and Intercepts</li> <li>*Point-Slope Form</li> <li>*Direct Variation</li> <li>*Graphing Inequalities in Two Variables</li> <li>*Lines of Best Fit</li> <li>*Arithmetic Sequences and Geometric Sequences</li> <li>*Other Sequences</li> <li>*Functions</li> <li>*Linear Functions and Exponential Functions</li> <li>*Quadratic Functions</li> <li>*Inverse Variation</li> </ul> | <ul style="list-style-type: none"> <li>*The Pythagorean Theorem</li> <li>*The Distance Formula</li> <li>*Geometric Properties and Triangle Ratios</li> <li>*The Tangent Function</li> <li>*The Sine and Cosine Functions</li> <li>*Matrices</li> </ul> <p><b>Fourth Quarter</b></p> <ul style="list-style-type: none"> <li>*Experimental and Theoretical Probability</li> <li>*Counting the Elements of Sets</li> <li>*The Fundamental Counting Principle</li> <li>*Dependent and Independent Events</li> <li>*Simulations</li> <li>*Graphing Functions and Relations</li> <li>*Translations</li> <li>Stretches and Compressions</li> <li>*Reflections</li> <li>*Combining Transformations</li> <li>*Basic Algebra Skills Review: 10-12 sessions</li> <li>*EOC Review: 8-10 sessions</li> </ul> | <p>relationships – herbivore, carnivore, plankton</p> <ul style="list-style-type: none"> <li>*Ocean processes – physics of sun, wind, water</li> <li>*Coastal processes – wind, water, sand interactions</li> <li>*Barrier island processes</li> <li>*Pollution impacts on coastal systems</li> </ul> | <p>homeowners vs. state, human impact on beaches),</p> <ul style="list-style-type: none"> <li>*Current Events (Political Cartoon Analysis)</li> </ul> |
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