

WCFS

Fourth – Fifth Grade

Course Objectives

Fourth – Fifth Grade: English Language Arts

Objectives

Teaching Methods

Indicators

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<p>Reading Students will be able to:</p> <ul style="list-style-type: none"> • Use a variety of phonetic skills to read and decipher unfamiliar words. • Read orally at an appropriate rate – with accuracy, pacing, intonation and expression appropriate for grade level and the reading material. • Develop and apply vocabulary through exposure to a variety of reading materials. • Develop a conceptual understanding of new words. • Understand, acquire and use new vocabulary. • Use strategies to prepare for reading to facilitate a greater understanding of what will be read. • Use strategies to make meaning from materials during reading • Use strategies to demonstrate understanding of the text after reading. 	<p>Choose a grade level approved English Language Arts curriculum such as:</p> <ul style="list-style-type: none"> • Abeka • Bob Jones • Sonlight or Veritas <p>By fourth grade most children can read independently – and are reading to learn.</p> <ul style="list-style-type: none"> • Choose books that complement your social studies program to maximize interest in both reading and social studies. • Read aloud with your child daily – children at this age still enjoy side by side reading with mom or dad. • Read with expression as you read aloud and encourage your child to do the same. • Don't be too quick to explain new or unfamiliar words to your child – help him decipher words based on the surrounding text or storyline • Keep a dictionary handy for words that truly stump your child – have her look up those words. • Consider making a word wall or keeping an index card box with new words. On a word wall you can visually group words that have the same phonetic patterns or meanings. If you choose the index 	<p>By the end of fifth grade children will be able to:</p> <ul style="list-style-type: none"> • Read aloud with accuracy and age appropriate pacing and expression. • Demonstrate an increasing vocabulary gained through reading and reflected in daily speech. • Decipher words based on the surrounding text and storyline. • Use a dictionary to find the meaning of unfamiliar words. • Group words with similar meanings, roots or patterns together. • Identify words that sound alike but have different meanings – homonyms. • Identify words that have similar meanings – synonyms. • Identify words that are opposite in meaning – antonyms. • Read independently with increased understanding.

<p>Reading Comprehension Students will be able to:</p> <ul style="list-style-type: none"> • Develop and apply comprehension skills by reading a variety of informational and literary texts – including electronic media. • Identify and use text features to facilitate the understanding of informational and literary texts. • Develop and apply knowledge of organizational structure of a text to understand what is read. • Determine and analyze important ideas and messages in informational and literary texts. • Identify and explain the author’s use of language. • Read critically to evaluate literary and informational texts. 	<p>card method – your child can also write the definition of the word.</p> <ul style="list-style-type: none"> • Ask questions before, during and after reading. “Based on what we read yesterday, what do you think will happen today? What happened to the main character? Were you happy with the end of that story? What would you change?” <p>In addition to a comprehensive language arts curriculum some students benefit from reading comprehension books:</p> <ul style="list-style-type: none"> • Scholastic, Carson Dellosa and Evan-Moor all publish inexpensive comprehension books with a variety of activities for building comprehension. • Have your child read a variety of texts – the Bible, fiction, nonfiction, poetry, plays, articles, reference materials, flyers, menus, pamphlets, food packaging ... Truly anywhere is a great place to read and gain information from that text. • Be available to guide your child, but have him try to assess the text first. • Show your child the various “tools” that writers use to organize 	<ul style="list-style-type: none"> • Paraphrase what they have read with accuracy for someone else to understand. • Identify various types of text and understand/explain why a particular format was used (for example: Posters must be easy to read quickly and have only the important information displayed while a story can have multiple characters and details and smaller plots within the main storyline.) • Recognize a variety of visual devices that are used to help people comprehend written texts. • Understand and explain the difference between fiction, nonfiction, informative and reference materials, drama and poetry.
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<ul style="list-style-type: none"> Analyze elements of narrative, poetry and drama to facilitate understanding and interpretation. Determine important ideas and messages in literary texts. <p>Writing Students will be able to:</p> <ul style="list-style-type: none"> Compose various types of texts using prewriting and drafting strategies for effective writing. Compose texts using revising and editing strategies for effective writing. Compose oral, written and visual presentations that express personal ideas, inform and persuade. Identify (and apply) how language choices in writing and speaking affect thoughts and feelings. 	<p>and visually format their text: chapters, bold text, subtitles and subheadings, indexes, table of contents, charts, tables, illustrations, photos ... Teach your child how to use these visual aids to further understand what she's reading.</p> <ul style="list-style-type: none"> Help your child learn to recognize the author's goal in writing that particular text. Does this inform, entertain, explain, amuse, present data, create emotion ... Ask your child if he thinks the author achieved his goal. <p>In addition to or instead of a comprehensive language arts curriculum the following writing programs are recommended:</p> <ul style="list-style-type: none"> IEW Writers in Residence (Apologia) Write On! (Newell) Have your child practice writing a variety of compositions: short stories, reports, science lab reports, newspaper articles for a family reunion, summaries and book reports, poems, short plays, lists, menus of family favorites, step by step instructions. 	<ul style="list-style-type: none"> Understand and explain literary devices such as rhyme, alliteration, repetition, onomatopoeia, and similes. Identify the main idea of a text and how the writer supports and develops that idea. Identify the main characters in a story and their motives, growth and traits based on the story. Use prewriting strategies to develop more polished final compositions. Use editing and proofreading techniques to rewrite a first draft and create a final draft. Write a variety of compositions that report, inform, persuade and entertain. Apply newly acquired vocabulary in their writing. Use a variety of language patterns and literary elements in writing.
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<ul style="list-style-type: none"> • Assess the effectiveness of choice of details, organizational patterns, word choice, syntax, rhetorical devices and use of figurative language in the student’s compositions. • Explain how textual changes in a work clarify meaning, address an audience or fulfill a purpose. • Locate, retrieve and use various sources to accomplish a purpose . <p>Language and Grammar Students will be able to:</p> <ul style="list-style-type: none"> • Recognize elements of grammar in personal and academic reading. • Recognize examples of conventional language usage in personal and academic reading. 	<ul style="list-style-type: none"> • This is a great age to teach your child how to take notes for a research project. Use notecards and have him write only one or two things on each card – notecards are easy to organize. • Use other forms of graphic organizers for prewriting – outlines, webs, pyramids, clusters – there are many available with a quick internet search. • Have your child write a 2 word sentence then add descriptive words and phrases to expand that: Squirrels scurry – becomes – Fuzzy gray squirrels quickly scurry up and down oak trees storing acorns for the winter. <p>In addition to or instead of a comprehensive language arts curriculum you may wish to use a grammar or spelling curriculum such as:</p> <ul style="list-style-type: none"> • Easy Grammar/Daily Grams • Shurley Grammar • Red Hot Root Words • Greek and Latin Root Words 	<ul style="list-style-type: none"> • Use standard English grammar at a grade appropriate level in sentence structure and overall writing and spoken language. • Recognize grammatical mistakes and correct them (grade appropriate) in grammar exercises and proofreading. • Use proper punctuation in personal writing.
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<ul style="list-style-type: none">• Comprehend and apply standard English usage in oral and written language.• Explain and justify the purpose of mechanics to make and clarify meaning in academic and personal reading and writing.• Properly use standard English punctuation in written language.• Use English mechanics in editorial processes.• Recognize standard English spelling in personal and academic reading and writing.• Apply standard English spelling in written language.• Maintain a personal list of words to use in editing original writing.• Produce writing that is legible to the reader.	<ul style="list-style-type: none">• Practice, practice, practice! Good spelling and grammar are not automatically learned by most students.• Practice spelling and vocabulary all week. Monday – use a dictionary to look up and write definitions for weekly spelling lists; Tuesday – use spelling words in sentences; Wednesday & Thursday – oral quizzing and worksheets (either mom-created or curriculum generated) crosswords or word searches; Friday – spelling test.• 10 words per week is the optimum number of words your child can master – remember the goal is mastery.• Copy-work is still a great tool to master spelling and grammar.• Sometimes simply reading a sentence aloud can show your child that it’s grammatically incorrect.• Always strive to use correct grammar and word choices in conversation. Our children learn grammar skills conversationally.	<ul style="list-style-type: none">• Recognize misspelled words in written texts.• Show measurable improvement and growth in spelling and vocabulary acquisition.• Show improvement in hand writing and cursive skills.
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<p>Listening and Speaking Students will be able to:</p> <ul style="list-style-type: none"> • Demonstrate active listening strategies. • Comprehend and analyze what is heard. • Use organization and delivery strategies at an appropriate age and grade level. • Make oral presentations. 	<p>This where Christian children may be at an advantage over their peers.</p> <ul style="list-style-type: none"> • Provide a variety of listening opportunities for your child. • Older children can listen to younger children read from their phonics readers. • Read aloud to your child daily! We read aloud all the way through high school. • Have your child take notes during the sermon at church. • Use long car rides as an opportunity to listen to old radio programs such as: Your Story Hour or Adventures in Odyssey. • Listen to books on CDs. • Have your child imitate the audio book by reading the same material using tone and inflection. • Use every opportunity to ask follow up questions after a listening opportunity or activity. • Use every opportunity to have your child make a mini oral report or presentation. These can made to family members, neighbors, Sunday school classes. 	<ul style="list-style-type: none"> • Listen attentively for longer periods of time. • Summarize what they have just heard and retell it to another. • Voice an opinion or assessment of what they have heard. • Orally present a written work or project of their own and give any necessary explanations. • Read another author’s material with proper speed, volume, inflection and emotion. • Become more comfortable speaking in front of an “audience.”
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	<ul style="list-style-type: none">• A valuable presentation to work on at any age is always a brief Gospel or testimony presentation.• Have your child read a variety of texts aloud – articles, stories, poems, jokes, plays and even charts and data collections.	
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<p>Algebra, Patterns and Functions Students will be able to:</p> <ul style="list-style-type: none"> • Identify, describe, extend and create numeric patterns and functions. • Write and identify numeric expressions. • Identify, write, solve and apply equations and inequalities. • Locate points on a number line and in a coordinate grid. 	<p>Choose a grade level math curriculum such as:</p> <ul style="list-style-type: none"> • Bob Jones • Abeka • Saxon • Teaching Textbooks <p>In addition to your math textbook you can still do a lot of hands on and practical things to teach 4th and 5th grade math. Remember that some students still need visuals and modified manipulatives in these grades as well.</p> <ul style="list-style-type: none"> • Use an upcoming event like a party or cookout to create practical function tables. Each time you get an RSVP you can enter the new number of guests to your table and determine how much (food, beverage, plates) you'll need. • Continue to use fact families and have your child determine the function and inverse function based on the 3 numbers. 8, 72, 9 – would represent multiplication and division. Have your child write the 4 math sentences to make that hand-brain connection. • To introduce the concept of variables in math take away one number in a fact family in the 4 equations: $8 \times y = 72$ 	<p>By the end of 5th grade: Children will be able to:</p> <ul style="list-style-type: none"> • Complete and write a rule for a one-operation (+, -, x, ÷) function table. Ex. Using multiplication a function table would display the cost of an input number of candy bars if each bar was \$.75 – number of candy bars x \$.75 = output. • Use and create one-function operations to solve word problems. • Apply a given 2 operation-rule for a pattern. Ex. To determine the next number in a pattern – multiply the current number by 5 and subtract 1. • Solve simple one function algebraic equations. Ex. Solve for y if $y - 5 = 5$ • Use parenthesis in algebraic equations and solve within the parenthesis first. • Use relational symbols in equations and inequalities (>, <, =). • Represent whole numbers, decimals and mixed numbers on a number line. • Use a coordinate plane to create a graph.

<p>Geometry Students will be able to:</p> <ul style="list-style-type: none"> Analyze the properties of plane geometric figures. Compare and contrast geometric relationships. Create and draw plane geometric figures. Analyze similar geometric figures. 	<ul style="list-style-type: none"> Do an online search to find math puzzles and games that are appropriate for 4th and 5th graders. Do a You Tube search for math songs that teach more difficult concepts – most children can memorize through song. <p>In addition to a grade level curriculum:</p> <ul style="list-style-type: none"> Children at this age may still enjoy using tangrams and pattern blocks to create geometric designs – how many different geometric shapes can you make with? Make sure your child can name each shape and copy common geometric shapes. Use a geoboard and rubber bands to create polygons (other than simply drawing them) How many different polygons can your child copy or create? Origami is another fun way to “do geometry” – by precisely folding your child creates a series of polygons that create a 3-D figure. Create geometric solids using tagboard planar shapes taped together – 2 circles and a rectangle create a cylinder – this visual helps 	<ul style="list-style-type: none"> Identify and describe relationships of lines and segments in geometric figures or pictures. (straight, curved lines; right, acute, obtuse angles) Identify and name the various polygons. Describe a radius and diameter of a circle. Compare and classify quadrilaterals based on length of sides and types of angles and use the angle symbol $\angle ABC$. Compare triangles by sides and types of angles (right, acute, obtuse). Identify geometric figures that are similar or congruent. Analyze and identify the properties of geometric solids: faces, edges and vertices.
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<p>Measurement Students will be able to:</p> <ul style="list-style-type: none"> • Read customary and metric measurement units. • Measure in customary and metric units. • Measure angles. • Estimate and apply measurement formulas. • Calculate equivalent measurements. 	<p>children understand the connection between both types of shapes.</p> <ul style="list-style-type: none"> • Children often get acute and obtuse angles confused at first. You can help them remember that an acute angle is “a cute little angle” and an obtuse angle is an “obese angle.” • Don’t forget to serve pie on Pi Day – March 14. <p>Measurement is a math process that has many applications – take a hands-on approach to measurement:</p> <ul style="list-style-type: none"> • Put “real math tools” into your child’s hands – get her a quality ruler with inches and centimeters, a good protractor and compass. • Measuring can be applied to cooking especially when you also multiply a recipe. • Children can help with simple construction projects around the home or outside – building with Dad – measure twice and cut once – or determining how big a garden bed should be and how far apart to plant flowers/seeds. • Use a stopwatch feature on a phone to time races, amount of 	<ul style="list-style-type: none"> • Identify the similarities between geometric solids and their planar counterparts. • Identify the number and types of planar shapes it takes to construct a solid – a cylinder = 1 rectangle and 2 circles. • Identify and describe the results of translations, rotations and reflections of geometric figures. <ul style="list-style-type: none"> • Estimate and determine weight and mass. • Estimate and determine capacity. • Select and use appropriate tools and units of measure. • Measure length to the nearest 1/8 inch or centimeter. • Measure angles using a protractor to the nearest degree – from 0° – 180°. • Determine area of a rectangle using a ruler. • Determine the area of other shapes by placing the shape within a grid – counting whole and partially covered grid squares. • Determine start, elapsed and end time to the nearest minute.
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<p>Statistics and Probability Students will be able to:</p> <ul style="list-style-type: none"> • Collect, organize and display data. • Analyze data. • Describe a set of data – mean, median and mode. • Identify possible outcomes. • Determine the probability of one simple event comprised of equally likely outcomes. 	<p>time needed for a chore, or silly contests (who can hop the longest etc) Discuss start, end and elapsed time.</p> <ul style="list-style-type: none"> • Allow your child to decorate his room or a wall in the house – with photos, posters, artwork – make a scale model of the wall on graph paper – have your child create a few designs before he hangs everything up. <p>In addition to a grade level curriculum:</p> <ul style="list-style-type: none"> • Games involving spinners or dice are a great way to demonstrate probability – as you play keep a tally of all the times the spinner lands on each color/number – or all the times certain numbers are rolled using dice. Use a chart to collect your data. • Take the data from your probability experiment and create various graphs to display your data – which works best? • Many computer programs have tools that will create graphs with input data – allow your child to create graphs in this way as well. • Collect data from previous periods of time – snowfall total from the 	<ul style="list-style-type: none"> • Determine equivalent units of measurement such as – 60 seconds = 1 minute or 2 pints = 1 quart. <ul style="list-style-type: none"> • Collect data by conducting surveys or collecting data from another source (such as sorting and counting a collection). • Organize and display data on: stem-and-leaf plots, line graphs, bar graphs and line plots. • Determine and use the appropriate type of graph to effectively display data. • Interpret and compare data in stem and leaf plots, line plots, bar graphs, line graphs and circle graphs. • Apply the range and measures of central tendency to solve a problem or answer a question.
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<p>Arithmetic: Number Relationships and Computation</p> <p>Students will be able to:</p> <ul style="list-style-type: none"> • Apply knowledge of fractions, decimals and place value. • Read, write or represent fractions, mixed numbers, or decimals using symbols, models or words. • Compare and order fractions and decimals. • Apply number relationships: prime and composite numbers. • Identify rules of divisibility, greatest common factor, least common multiple. • Multiply and divide whole numbers – with quotients and remainders as fractions and decimals. • Add and subtract decimals and fractions. • Multiply decimals and divide decimals by whole numbers. 	<p>past 15 years – and create the most appropriate graph to display that information.</p> <p>In addition to you grade level curriculum:</p> <ul style="list-style-type: none"> • Saxon math includes a series of circles to cut that demonstrate whole, halves, fourths, fifths, sixths etc. – each is also labeled with a decimal and percentage value. This is a valuable manipulative that can be used to show equivalencies and comparisons. • Use a hundreds chart (or several) color all prime numbers one color and all composites another color. The same can be done with multiples of 2, 3, 4, 5, etc. The visual is an additional means of memorization. • Write 2 or 3 composite numbers in a column – next to each write all the factors or multiples of the number. This is an easier method to visualize least common multiple and greatest common factor. 	<ul style="list-style-type: none"> • Determine possible outcomes of independent events with a limited amount of possible outcomes. • Make predictions and express the probability as a fraction – $\frac{1}{4} = a$ 1 in 4 chance of the predicted outcome. • Use the rules of divisibility for 2, 3, 5, 9 or 10 with whole numbers (an even number is always divisible by 2; a number that ends in 5 or 0 is always divisible by 5). • Find the greatest common factor and least common multiple for a set of 3 numbers not greater than 20. • Add and subtract fractions that have the same denominator. • Add and subtract fractions with different denominators by finding the LCM – where the original denominators don't exceed 12. • Multiply a 3 digit number by a 2 digit number – whole numbers. • Divide a 4 digit number by a 2 digit number – whole numbers. • Add up to 4 whole numbers or 4 numbers with decimals up to 3 decimal places. • Subtract decimal numbers with up to 3 decimal places.
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<p>Mathematical Processes Students will be able to:</p> <ul style="list-style-type: none"> • Apply a variety of concepts, processes and skills to solve problems. • Justify ideas or solutions with mathematical concepts or proofs • Present mathematical ideas using words, symbols, visual displays or technology. • Relate or apply mathematics within the discipline, to other disciplines and to life. 	<ul style="list-style-type: none"> • Use money to add/subtract decimals. <p>In addition to a grade level math curriculum:</p> <ul style="list-style-type: none"> • Help your child to use various methods of solving math problems – ex. when adding mixed numbers fractions can be represented as circles or squares that are divided and shaded to represent that fraction. • Teach your child to back things up with math – when making an appeal for a special dinner he could create a chart that shows how many children prefer that meal or treat compared to other options. • This is a great time to explain that accurate math is needed for science or cooking – make some adjustments to an experiment or recipe to demonstrate this. 	<ul style="list-style-type: none"> • Demonstrate how to use a decimal in monetary notation. • Multiple numbers with decimals up to 3 decimal places. • Divide a decimal number with no more than 3 decimal places by a single digit number. <ul style="list-style-type: none"> • Identify the question in a problem, determine if there’s enough information to solve and make a plan to solve the problem. • Understand that a problem might have multiple or no solutions. • Use inductive or deductive reasoning. • Make or test generalizations • Express mathematical ideas: orally, in written form and using concrete materials. • Express solutions using pictorial, tabular, graphical or algebraic methods. • Identify how math concepts are used in various areas of math and other subjects also.
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<p>Skills and Processes Students will be able to:</p> <ul style="list-style-type: none"> • Gather and question data from many different forms of scientific investigations. • Seek a scientific explanation (where possible) as to why/how something happens. • Understand that scientists must communicate clearly and demonstrate this in their own scientific “language.” • Develop designs and analyze the product: “Does it work? Could I make it better?” • Investigate a variety of mechanical systems and how the parts work together. 	<p>Choose a grade appropriate, Biblically based science curriculum such as:</p> <ul style="list-style-type: none"> • Apologia • Abeka • Bob Jones • Berean <p>In addition to your science curriculum:</p> <ul style="list-style-type: none"> • 4th and 5th grade children can be taught to use and care for more precise scientific tools. Purchase and borrow quality tools that will help your child conduct more precise experiments and investigations. • Read grade level biographies about scientists who made extraordinary discoveries: the Curies, Pasteur, Edison, Newton. • Before an experiment help your child to verbalize what he/she thinks will happen and why – after the experiment have him/her express thoughtfully if and why their hypothesis was correct. • It’s okay to perform a favorite experiment multiple times! This creates a greater love for science. Consider changing something each time and record the results. • Create models – especially for hard to understand or see concepts. 	<p>By the end of fifth grade children will be able to:</p> <ul style="list-style-type: none"> • Use data from others found in books or articles. • Use appropriate tools in scientific investigations such as: microscopes, hand lenses, rulers, scales, balances, thermometer, graduated cylinders. • Understand that differences in conducting an investigation may lead to different outcomes. • Make a hypothesis concerning a possible outcome before conducting an investigation. • Explain the reasons that a particular outcome occurred using scientific terms. • Use and analyze models, tables, and graphs to summarize and interpret data. • Choose appropriate materials for constructing models. • Demonstrate that models are made of many pieces that contribute to the working of the whole. • Demonstrate that changing the parts of a model affect the way it works.

<p>Earth & Space Science Students will be able to:</p> <ul style="list-style-type: none"> • Understand how physical weathering and erosion cause changes to the earth’s surface. • Understand processes that cause rapid or slow changes in Earth’s surface. • Understand that fossils provide evidence about the plants and animals that lived in the past. • Understand how rock is formed and weathered. • Identify and describe the variety of objects in the universe using the unaided eye, binoculars, telescopes or videos. • Recognize and describe that each season has different weather conditions. • Understand that the amount of water on the earth continues to stay the same even though it may change from one form to another. 	<p>Make a cake and decorate it like a cell. Use pipe cleaners and beads to construct a strand of DNA. Use Shrinky Dink plastic to create various types of leaves – use for jewelry.</p> <p>To complement your science curriculum:</p> <ul style="list-style-type: none"> • Go on a walking tour of an older town or city – while on a social studies field trip – and take notice of how weather and flooding have left their marks on the landscape and buildings. Harper’s Ferry has extensive displays of how flooding has changed the town many times. • Create “fossils” and imprints using plasticine clay or plaster of Paris. • Make a rock collection – it’s okay to purchase rocks from science museums to create a larger collection. • Draw a picture or create a model of our solar system. Teach your child an acronym to memorize the planets in order. • Read and reread the Creation account from Genesis and list all of the ways that God thoughtfully created Earth to support human, animal and plant life. 	<ul style="list-style-type: none"> • Describe how water, ice and wind can wear down or change the appearance of Earth’s surface. • Describe how tornadoes, hurricanes, earthquakes, volcanic eruptions and floods rapidly change the earth’s surface. • Describe how water, wind and ice produce slower changes to Earth’s surface. • Recognize and explain that fossils are the imprint or remains of an animal or plant – and use a fossil to describe that animal or plant. • Identify and describe the 3 main rock formation: igneous, sedimentary and metamorphic and how they are formed. • Identify the planets in our solar system. • Explain why the Earth is the only planet that can support life. • Describe the Earth’s rotation on its axis and orbit around the sun.
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<p>Life Science Students will be able to:</p> <ul style="list-style-type: none"> • Understand that animals and plants can be grouped according to observable features. • Understand that individuals and groups of organisms interact with each other and their environment. • Understand that animals and plants live best in the environments that best suit their needs. • Understand that individuals of the same kind can differ in characteristics or appearances. • Understand that some living things are as small as a single cell that is microscopic and others are made of many, many cells. 	<ul style="list-style-type: none"> • Have your child imagine what he would need to live on another planet of his choosing. Have him write a story, draw a picture or make a diorama of what living on that planet would be like. • Go to a planetarium or watch the night sky in different seasons. Help your child find the North Star and Big and Little Dippers. • Throw boiling water into the air on a super cold day and watch the “snow” form. <p>To complement your science curriculum:</p> <ul style="list-style-type: none"> • Create charts or tri-fold displays that show one family of animals and several species within the family. (Feline: lions, tigers, panthers, domestic, lynx etc.) Find photos online to print and write descriptions of each. • Watch You Tube videos to learn the biological column in order. • Answers in Genesis has excellent materials that explain how different species adapt to their environments – and that adaptation is not Evolution. • For the creative writer – have her write a story about an animal 	<ul style="list-style-type: none"> • Understand that stars come in a variety of sizes and brightness and that the sun is our nearest star. • Understand that we see a different night sky depending on the season. • Understand and describe the weather changes from season to season through collected data and comparisons. • Describe the hydrological cycle in terms of: condensation, precipitation and evaporation. <ul style="list-style-type: none"> • Classify a variety of animals and plants according to their observable features and characteristics – using pictures and collected data (ex. The feline family includes: domestic cats, tigers, lions, panthers, leopards...). • Describe how plants and animals from the same family groups also have different features and behaviors. • Understand that human, animal and plant traits are passed down from parent to offspring. • Discuss what types of plants and animals live in a particular
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<ul style="list-style-type: none"> • Understand that all living things need food to survive. • Understand that the sun is the main source of energy for Earth and for all living creatures on Earth to survive. 	<p>displaced from its normal environment and the challenges it faces.</p> <ul style="list-style-type: none"> • Plant several sets of seeds – allow them to grow in a sunny spot with adequate water until they reach a desired height. Then change the conditions of various sets: stop watering one, place one in a dark place, place one in a very cold environment – record your findings after 1, 2, 3 and 4 weeks. • The TOPS science book series has an excellent book titled Corn and Beans demonstrates the growing cycle of plants (monocots and dicots) This was a favorite in our home. 	<p>environment and why/how that environment supports them.</p> <ul style="list-style-type: none"> • Explain that plants need water, soil and sunlight to grow and that they produce their own food through photosynthesis. • Explain that humans and animals need food and water to survive. • Explain that the sun is the primary source of energy for all living things – plants make food from sunlight and the food chain starts with plants. • Describe a food chain or simple food web. • Use microscopes and pictures to observe and describe single celled organisms. • Use a microscope and pictures to observe and describe how many cells work together in multi-celled organism.
<p>Chemistry Students will be able to:</p> <ul style="list-style-type: none"> • Understand that matter has observable and measurable properties. • Understand that a whole object is made up of the sum of its parts. • Conduct investigations that demonstrate the processes that can 	<p>To complement your science curriculum:</p> <ul style="list-style-type: none"> • Demonstrate the differences between mixtures and compounds through cooking. Make trail mix or salad dressing (from a packet) – trail mix can be separated into its individual components and salad dressing settles over time and separates. On the other hand, 	<ul style="list-style-type: none"> • Identify examples of matter. • Describe and compare the physical properties of samples of matter: strength, hardness, flexibility, ability to conduct heat or electricity, ability to be attracted to a magnet. • Describe the changes to water that heating and cooling produce –

<p>be used to change materials from one state of matter to another.</p> <ul style="list-style-type: none"> • Understand that when a new material is made by combining two or more materials that its properties are different from the original materials. <p>Physics Students will be able to:</p> <ul style="list-style-type: none"> • Understand that heat can be transferred in different ways. • Understand the effects of static electricity. • Understand that electricity requires a closed loop in order to produce measurable effects. • Understand that forces can act upon objects without touching them. • Describe the motions of objects using distance, time, direction and speed. • Understand that changes in the motion of objects are determined by the mass of the object and the amount of force applied to it. • Understand that energy exists in various forms. 	<p>baking bread or making pancakes creates a chemical reaction that changes the individual ingredients and makes a “compound” that cannot be separated.</p> <ul style="list-style-type: none"> • There is a book (Kitchen Chemistry) that takes a student through the basic chemical processes through various cooking and baking projects. It’s a fun way to learn chemical processes. • The TOPS Science series has both a Magnet and an Electricity experiment book. Students learn the properties of magnets and magnetic fields; and create compasses, magnets and conduct various experiments with magnets. The electricity book explains circuits and guides your child through a variety of electrical experiments and projects. Best of all most materials can be purchased inexpensively online or at superstores. • Purchase a triangular prism to demonstrate how light is refracted and a rainbow is created. Look for rainbows after a storm and discuss how the light spectrum appears in the same order each time. When 	<p>heating water produces vapor (gas), cooling water produces ice (solid), heating ice produces water (liquid).</p> <ul style="list-style-type: none"> • Describe the difference between a mixture and a compound in basic terms. For example, trail mix represents a mixture and baked bread represents a compound. • Explain how heat can be transferred by direct or indirect contact – a spoon in hot water or heat from a flame. • Identify materials that conduct heat and electricity – conductors – and those that don’t – insulators. • Demonstrate how static electricity is created by friction between two sources. • Demonstrate with diagrams or models how electricity travels in a circuit to light a bulb or ring a buzzer. • Demonstrate with a model or diagram how electricity passes through a closed loop and how it is interrupted when there’s a break in the loop.
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<ul style="list-style-type: none"> • Understand that light travels in a straight line until it is reflected or refracted. 	<p>you see spectrums elsewhere help your child to find the “prism” that is refracting the light.</p> <ul style="list-style-type: none"> • We used the following acronym to remember the order of colors in the spectrum Roy G. Biv – red, orange, yellow, green, blue, indigo and violet. • Make a list of all the things in your home, garage, shed and/or barn that use energy of some sort to operate. Categorize them by energy source or output. Have your child choose a few that really interest her and do an online research “project” to find out more. 	<ul style="list-style-type: none"> • Describe and demonstrate how magnets act upon each other – opposite poles attract and like poles repel. • Demonstrate how magnets act upon other objects and how they respond. • Describe how a force creates or stops motion through demonstration. • Identify the difference between and sources of stored (potential) energy and kinetic energy. • Classify materials as opaque, translucent or transparent. • Demonstrate how light is reflected when it reaches a mirror and refracted when it reaches a glass. • Demonstrate and diagram how a prism separates white light into a spectrum.
<p>Environmental Science Students will be able to:</p> <ul style="list-style-type: none"> • Understand how renewable and nonrenewable natural resources are used. • Understand that the use of natural resources may have benefits, drawbacks and unexpected consequences. 	<ul style="list-style-type: none"> • Brainstorm with your child as to what he thinks are renewable and nonrenewable resources – start in your home. Where does our food come from? What are our clothes, furniture and household goods made from? Once you have a list of items, determine what each item is made of and the manufacturing 	<ul style="list-style-type: none"> • Identify renewable and nonrenewable resources: a renewable resource is lumber and a nonrenewable resource is coal. • Create a drawing or presentation that shows how people use renewable resources such as: plants, water, animals.

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	<p>process. How were renewable materials used? Where were nonrenewable materials used? Could other materials be used to make this item?</p> <ul style="list-style-type: none">• Read Exodus to learn how the Tent of Meeting and all its furnishings were made. What resources did the Israelites have? Make a list of the materials and where they might have come from.• Compare the Tent of Meeting to your church. What resources and materials were used to construct your church? How are these similar or different from the materials the Israelites had?	<ul style="list-style-type: none">• Create a drawing, presentation or report that shows how people use nonrenewable resources such as: oil, metals or coal.• Explain how humans can have a positive and negative effect on the environment through our choices.
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Fourth – Fifth Grade: Social Studies
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<p>** Note – 4th grade is usually devoted to the study of the state of Maryland. Students in 5th grade typically study Colonial America.</p> <p>Political Science Students will be able to</p> <ul style="list-style-type: none"> • Trace how the political structure in early Maryland/Colonial America developed. • Read and analyze the historic events, documents and democratic ideas that developed in Colonial Maryland/America. • Examine the early foundations, functions and purposes of government. • Understand (at a grade appropriate level) the role of government regarding public policy and issues in Colonial Maryland/America. • Analyze how individuals and groups contributed to and shaped the political system in Maryland and Colonial America. • Describe rights and responsibilities of being a Maryland/American citizen. • Understand the importance of civic participation in Maryland and America. 	<p>Choose an appropriate grade level social studies curriculum such as:</p> <ul style="list-style-type: none"> • Abeka • Bob Jones • Sonlight • Veritas <p>** Caveat: Try to enjoy learning about early Maryland and American government and realize that 4th and 5th grades lay a foundation for future learning. Children at this age will not memorize all aspects of state and federal government – nor should they.</p> <p>In addition to using a social studies curriculum:</p> <ul style="list-style-type: none"> • Field trips – there are so many places to see in this area – Washington DC, Colonial Williamsburg, Yorktown, Fort McHenry, Annapolis – history and government are more exciting when we “participate.” • Take a tour of your state capitol – tour the Governor’s mansion, the 	<p>By the end of 5th grade children will:</p> <ul style="list-style-type: none"> • Describe through writing, projects or testing mechanisms how Colonial Maryland and America were established and governed. • Describe how explorers and settlers interacted with Native Americans. • Explain the importance of the Office of Governor and the Court of Appeals. • Describe the 3 main branches of government and checks and balances: Executive, Legislative, Judicial. • Have a basic knowledge of: The Declaration of Independence, Preamble, US Constitution, Bill of Rights. • Have a basic understanding of the role of state senators and delegates. • Describe through writing, projects or testing how Colonial law influenced Maryland and

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<ul style="list-style-type: none"> Describe how Maryland and U.S. governments protect the rights of individuals and groups. 	<p>White House or government buildings.</p> <ul style="list-style-type: none"> Visit your local courthouse and sit in on a few traffic cases (if you are able) or arrange a field trip to the courthouse and get a tour. School House Rock videos for Government Rock can be found on You Tube – most children can memorize anything put to song . Abeka’s workbook: My State Notebook is a great tool for studying your state and recording all of your findings in one place. Create timelines that show important events in Colonial US and Maryland history – allow your child to choose the events that he found most interesting. Establish a mini-government in your own home. Decide as a family how laws will be made and judged, who will govern, what are the rights and responsibilities of each family member. What documents did you use? What Biblical principals did you incorporate in your laws? Remember that we have the unique privilege of teaching our children the Christian roots of our nation and how Judeo-Christian laws influence Colonial America 	<p>American citizens during that time.</p> <ul style="list-style-type: none"> Describe the basic democratic principles and values in the Maryland and American Constitutions – representative democracy, states’ rights, limited federal government, limits on power. Describe perspectives and policies in Maryland and US regarding historic and current public issues. Describe through writing or projects the contributions of 17th Century English settlers who influenced the early political structures. Name key men and women who helped establish Maryland and US - the Founding Fathers. Understand that citizens can vote, petition elected officials and volunteer. Understand who can become governor, senator, representative, judge, President and Vice-President. Describe the judicial system in basic terms. Describe how laws are made in basic terms. Understand the rights that Maryland and US citizens have
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<p>Peoples of the Nation and Maryland Students will be able to</p> <ul style="list-style-type: none"> • Describe the various cultures of early societies in Colonial Maryland and America. • Understand how environment played a large role in Colonial populations and communities. • Understand and describe the various cultural characteristics of groups of people in Maryland and Colonial America – how immigration of specific groups of people gave each community a unique character. • Understand how the structure of Colonial society was clearly defined. • Understand that people in the various regions of Maryland live and work according to their environment. 	<p>and the early government documents.</p> <p>In addition to a grade level curriculum:</p> <ul style="list-style-type: none"> • Scholastic has a series of books – If You Lived During; If You Traveled On; If You Lived With... that provide an illustrated account of various periods of American history on a 4th – 5th grade reading level. • The Dear America and My America books give insight to Colonial life . • Make a list of things that are “uniquely Maryland” – what are phrases, foods, activities, places that are unique to Maryland and the people that live here? • Do an online search to find where there are still communities comprised of a specific group of people: Little Italy in Baltimore. • This is another opportunity for field trips and conversations as you travel – How is rural Maryland different from the Eastern Shore or Baltimore? 	<p>such as: freedom of religion, speech, and the press.</p> <ul style="list-style-type: none"> • Have a basic understanding that State and Federal governments balance between providing for the common good and protecting individual rights. • Describe how culture influences people in all periods of history. • Describe social, political and religious characteristics of the Colonial period in Maryland and America. • Compare and contrast Colonial cultures of European settlers, African and Native Americans. • Describe how cultures changed as a result of Native American, African and European interaction in the colonial period. • Describe the differing perspectives that led to conflict between the Patriots and Loyalists. • Describe how environment and location influenced cultures and lifestyles. • Compare and contrast lifestyles of free, enslaved and indentured peoples
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Geography		
<p>Students will be able to</p> <ul style="list-style-type: none"> • Use geographic tools to locate places and describe the human and physical characteristics of Maryland and Colonial America. • Describe similarities and differences of Maryland regions. • Describe the similarities and differences of regions in Colonial America. • Understand population growth, migrations and settlement patterns in Maryland and Colonial America. • Understand how colonial Americans and Marylanders adapt to, modify and impact the natural environment. • Understand population growth, migration and settlement in Colonial America. 	<ul style="list-style-type: none"> • Scholastic has an Interactive 3-D American History Map book that begins with the voyage of Columbus and travels across the continent. • Home School in the Woods has several interactive history programs that come on CD rom and can be easily reproduced. • Create a map project of Maryland then and now. Use a blank pre-printed map of Maryland and mark major settlements, cities and landmarks from Colonial times – you may want to include the groups of settlers and natives and their geographic boundaries. Then use a second map and mark as many cities, towns and landmarks (that you can fit) that show the growth of Maryland in the past 400+ years. Make sure you include major routes and types of transportation on each map. • Make a population map of Colonial America compared to the same states today. Research census data and fill in the map with the number of citizens in Colonial and current times. You may want to add interest by finding life expectancy or male/female ratios. 	<p>Children will be able to:</p> <ul style="list-style-type: none"> • Construct and interpret a variety of maps of Colonial America and Maryland through the years. • Use photographs, maps, charts and atlases to identify and describe geographical characteristics of the Colonies and Maryland. • Identify natural features of Maryland such as the Appalachian Mountains and Atlantic Coastline. • Explain through writing or projects how geographic characteristics influenced settlement patterns in Colonial America and Maryland. • Identify the transportations and communication methods of Colonial America and Maryland. • Identify, compare and contrast colonial settlements such as: Jamestown, Plymouth, Boston, Philadelphia, Charlestown, New York City. • Identify the three Colonial regions: New England, Middle and Southern Colonies

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<p>Economics Students will be able to</p> <ul style="list-style-type: none"> • Explain that people made choices because resources were limited relative to economic wants for goods and services in Colonial America and Maryland. • Analyze and explain how limited economic resources were used to produce goods and satisfy economic wants in Colonial America and Maryland. • Explain how technological changes have affected production and consumption in Maryland over the course of time. • Describe regional economic specialization in Maryland and the ways people live and work. • Describe the role of government in the Maryland economy. • Analyze and explain how technological changes affected production and consumption in Colonial America. • Describe the types of economic systems in Colonial America, and the role of money, trade and barter. • Describe the role of the British government on the Colonial economy. 	<ul style="list-style-type: none"> • Do a little research at the library and/or online and make a list of the furniture and items found in the average Colonial home. Create a presentation, tri-fold display or diorama that displays the items and list the materials they were made from. Discuss the amount of work it took to produce and acquire these items during the early days of America and Maryland. • Create a “store” in your home with items that would represent what Colonial Americans would have been able to purchase prior to the troubles with England. Remove items that became scarce or Colonists refused to buy and assess what’s left. Discuss what your family would do as substitute for those items – what could you live without? • Visit the Baltimore Museum of Industry for an engaging look at Maryland industry through the years. • Create a map of Colonial resources – both natural resources that were abundant to an area and resources that made production or 	<ul style="list-style-type: none"> • Identify and describe the cost of economic decisions, such as whether or not to buy products on which British taxes were imposed. • Describe how scarcity and availability of resources determine what is produced and the effects on consumers. How did Colonists choose which goods and services were necessary? • Describe how changes in technology impacted the lives of the Colonists and people living in Maryland. (advanced methods of farming, harvesting and milling) • Describe how available resources affected specialization and trade in the Colonies and Maryland. How did/do regional resources determine careers and specialization? What are regions that were known for specific goods or careers? • Explain how changing from a British colony to an independent nation affected economic resources, production and wants. • Give examples of businesses and skills that were handed down

<p>History Students will be able to</p> <ul style="list-style-type: none"> Analyze and describe the chronology and significance of key historical events leading to early settlement in Maryland. Analyze and describe the chronology and significance of key historical events during the age of European exploration and expansion. 	<p>transportation more accessible. Discuss why certain regions became well-known for certain goods and services based on the resources available.</p> <ul style="list-style-type: none"> Have your child create a diary from the viewpoint of an apprentice, indentured servant, slave, free-man, woman or child that would discuss their daily work or chores. Get creative and have your child think about goals that person may have in regards to saving, spending and wage fairness. As always, history is an ideal subject to link with literature. Find grade level books that correspond with the Colonial period: <i>American Girl</i>, <i>Dear America</i>, <i>My America</i>, <i>Johnny Tremain</i>, <i>My Brother Sam is Dead</i>, etc. Read aloud books on a higher grade level can also be used. Field trips – Jamestown, Williamsburg and Yorktown aren't 	<p>through families in Colonial America and throughout Maryland history.</p> <ul style="list-style-type: none"> Identify the traditional roles of men and women in the Colonial period and throughout Maryland history. What was the role of apprentices, indentured servants and slaves in the economy? Describe examples of British rule in Colonial America – the Stamp Act and the Tea Act. What was the response of the Colonists? Explain how local and state governments provide services that are paid for by taxes. Describe the difference between trade, barter and money exchange to acquire goods and services. What are the pros and cons of each? Explain how and why the various colonies were established, including political, economic and religious motives for coming to the New World. Describe the origin, destination and goals of North American explorers and settlers. Describe the religious, political and economic motives of
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<ul style="list-style-type: none"> • Analyze the chronology and significance of key historical events leading to early settlements in Colonial America. • Analyze the growth and development of colonial America and Maryland. • Understand how the institutions of slavery impacted individuals, groups, the economy and political structures in Colonial America and Maryland. • Compare the effects of colonization on Native American groups and cultures. • Analyze the causes and effects of the American Revolution. • Explain the political, cultural, economic and social changes in Maryland during the 1800s – including the War of 1812 and the Civil War. 	<p>too far from Maryland and offer home school specials twice a year. In addition all three sites have many interactive activities that bring the Colonial period alive. Philadelphia is home to Independence Hall, the Liberty Bell, Betsy Ross’s home, and a variety of other sites that played key roles in the American Revolution.</p> <ul style="list-style-type: none"> • Maryland is home to Harriet Tubman’s birthplace, Fort McHenry, Antietam Battlefield. • Drive Thru History DVDs by HSLDA have a uniquely Christian perspective of the Revolutionary Era and come with “workbooks” as well. • Create a newspaper of the Revolutionary or Colonial period – or an interesting period of Maryland’s history. Have your child write from the perspective of someone living in that time period. Include political cartoons, “interviews” based on biographies, financial sections, help wanted, obituaries, reviews of businesses or cultural events along with reports of history “as it is happening.” 	<p>individuals who migrated to North America and the difficulties they encountered.</p> <ul style="list-style-type: none"> • Describe the major settlements in Roanoke, St. Augustine, Jamestown, Plymouth, St. Mary’s; Annapolis and Kent Island. • Describe the results of the interactions between European settlers and Native Americans. • Describe the reaction of colonists to changing economic policies from England using events that led to the American Revolutionary War. • Explain and describe the interactions between colonists and the British during the Pre-Revolutionary period. • Describe the different roles of individuals during the French and Indian War and Revolutionary period: men, women, free and enslaved Africans, and Native Americans. • Identify and sequence key events between the French and Indian War and the American Revolution. • Describe the viewpoints of the Patriots and Loyalists. • Describe the importance of changes in industry, transportation, education and rights in Maryland
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	<ul style="list-style-type: none">• Create a game – board or card – that pits the Patriots against the Loyalists. What are key events or viewpoints that could be incorporated? What are the rules? Make sure there is opportunity for either side to win. Similar game themes could incorporate key events, battles, economic, industrial or population growth (similar to Life).• Have your child create a comic strip or graphic novel that retells a period of Colonial or Maryland history that particularly intrigues him or her.	<p>throughout history including: roads, canals, railroads, immigration, public schools, and religious freedoms.</p> <ul style="list-style-type: none">• Describe the growth of the Underground Railroad in Maryland and identify Harriet Tubman.• Explain the events that led to the War of 1812 and Maryland’s role in the battle of Ft. McHenry and the writing of the Star-Spangled Banner.• Describe how and why Maryland was a divided state during the Civil War.
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