

# 4<sup>th</sup> Grade Information for Parents

*This document identifies the Program of Studies (POS) content that aligns to each progress report standard, with noted extensions for students receiving Advanced Academic services. The left-hand column indicates the grade level POS, and the right-hand column notes the intended POS extension. Students receiving advanced math will be instructed at the grade level above POS, which is noted in this document. Health, art, music, physical education, and world languages are instructed using the grade level POS.*

## Language Arts

### Listens and speaks for specific purposes

4th Grade POS	AAP 4 <sup>th</sup> Grade Extensions
Present accurate directions to individuals and small groups	<ul style="list-style-type: none"> <li>Participate in group discussions as a listener and a speaker in seminars</li> <li>Develop listening/oral communication skills</li> </ul>
Contribute to group discussions across content areas	<ul style="list-style-type: none"> <li>Participate in group discussions as a listener and a speaker in seminars</li> <li>Articulate understanding of a reading to a partner</li> <li>State the main ideas or themes of the story</li> <li>Engage in a dialogue about the meaning of a selection</li> <li>Develop listening/oral communication skills</li> </ul>
Seek ideas and opinions of others	<ul style="list-style-type: none"> <li>Ask clarifying questions and take notes when listening to a speaker</li> </ul>
Use evidence to support opinions	<ul style="list-style-type: none"> <li>Develop skills of argument formulation in persuasive communication</li> <li>Support opinions with examples and details</li> </ul>
Use correct language and specific vocabulary to communicate ideas	<ul style="list-style-type: none"> <li>Use specific vocabulary to communicate ideas</li> </ul>
Communicate new ideas to others	<ul style="list-style-type: none"> <li>Make informative and persuasive oral presentations using purposeful structure and visuals</li> <li>Develop listening/oral communication skills</li> </ul>
Demonstrate the ability to collaborate with diverse teams	<ul style="list-style-type: none"> <li>Participate in group discussions as a listener and speaker in seminars</li> </ul>
Demonstrate the ability to work independently	<ul style="list-style-type: none"> <li>Develop skills of argument formulation in persuasive communication</li> <li>Support opinions with examples and details</li> <li>Make informative and persuasive oral presentations using purposeful structure and visuals</li> <li>Use specific vocabulary to communicate ideas</li> </ul>
Use subject-related information and vocabulary	<ul style="list-style-type: none"> <li>Use specific vocabulary to communicate ideas</li> <li>Use reference books to determine meaning, pronunciation and origin of words</li> <li>Know the type of information found in various reference materials including atlases, dictionaries, and websites</li> <li>Select appropriate resources to find answers to questions about a topic</li> </ul>
Listen to and record information	<ul style="list-style-type: none"> <li>Ask clarifying questions and take notes when listening to a speaker</li> <li>Develop listening/oral communication skills</li> </ul>

Organize information for clarity	<ul style="list-style-type: none"> <li>Organize information using charts, diagrams, and timelines</li> </ul>
Use language and style appropriate for audience	<ul style="list-style-type: none"> <li>Use specific vocabulary to communicate ideas</li> </ul>
Differentiate among auditory, visual and written media messages	
Identify the characteristics of various media messages	
<b>Locates and uses information from a variety of sources</b>	
<b>4<sup>th</sup> Grade POS</b>	<b>AAP 4<sup>th</sup> Grade Extensions</b>
Use word reference materials, including the glossary, dictionary, etc	<ul style="list-style-type: none"> <li>Use reference books to determine meaning, pronunciation, and origins of words</li> </ul>
Construct questions about a topic	<ul style="list-style-type: none"> <li>Conduct authentic research by applying skills of questions, information gathering, data analysis and synthesis</li> </ul>
Collect information from multiple resources	<ul style="list-style-type: none"> <li>Conduct authentic research by applying skills of questions, information gathering, data analysis and synthesis</li> <li>Know the type of information found in various reference materials including atlases, dictionaries, and websites</li> <li>Select appropriate resources to find answers to questions about a topic</li> </ul>
Use technology as a tool to organize, evaluate, and communicate	<ul style="list-style-type: none"> <li>Organize information using charts, diagrams, and timelines</li> </ul>
Give credit to sources used in research	<ul style="list-style-type: none"> <li>Conduct authentic research by applying skills of questions, information gathering, data analysis and synthesis</li> </ul>
Understand the difference between plagiarism and using own words	<ul style="list-style-type: none"> <li>Conduct authentic research by applying skills of questions, information gathering, data analysis and synthesis</li> </ul>
<b>Reads with accuracy and fluency</b>	
<b>4<sup>th</sup> Grade POS</b>	<b>AAP 4<sup>th</sup> Grade Extensions</b>
Read with fluency and accuracy	<ul style="list-style-type: none"> <li>Use a variety of word recognition skills</li> <li>Increase number of known words</li> </ul>
<b>Reads with understanding</b>	
<b>4<sup>th</sup> Grade POS</b>	<b>AAP 4<sup>th</sup> Grade Extensions</b>
Use context to clarify meanings of unfamiliar words	<ul style="list-style-type: none"> <li>Use the words around an unknown word to figure out its meaning</li> </ul>
Use knowledge of roots, affixes, synonyms, antonyms, and homophones	<ul style="list-style-type: none"> <li>Use text, word parts, knowledge of stems and word origins to figure out unfamiliar words</li> <li>Increase vocabulary development by applying the knowledge of Greek and Latin stems to the English language</li> </ul>
Develop vocabulary by listening to and reading a variety of texts	
Use vocabulary from other content areas	
Explain the author's purpose	<ul style="list-style-type: none"> <li>Use a variety of strategies including: determining importance, making inferences, drawing conclusions and considering multiple perspectives</li> </ul>

Describe how the language, setting, etc. contribute to purpose	
Identify the main idea	<ul style="list-style-type: none"> <li>• Use a variety of strategies including: determining importance, making inferences, drawing conclusions and considering multiple perspectives</li> </ul>
Summarize supporting details	<ul style="list-style-type: none"> <li>• Provide a sequence of events, procedures, and/or activities that occur in the text.</li> </ul>
Identify the problem and solution	<ul style="list-style-type: none"> <li>• Use a variety of strategies including determining importance, making inferences, drawing conclusions and considering multiple perspectives</li> <li>• Develop analytical and interpretive skills in literature</li> </ul>
Describe the relationship between text and previously read materials	
Identify sensory words	
Draw conclusions/make inferences about text	<ul style="list-style-type: none"> <li>• Use a variety of strategies including: determining importance, making inferences, drawing conclusions and considering multiple perspectives</li> <li>• Draw consequences and implications from text for application in the real world</li> <li>• Create generalizations about the story/text based on categories</li> <li>• Develop analytical and interpretive skills in literature</li> </ul>
Make, confirm, or revise predictions	
Identify cause and effect relationships	<ul style="list-style-type: none"> <li>• Understand cause and effect and its relationship to consequences and implications within a text</li> <li>• Develop analytical and interpretive skills in literature</li> </ul>
Use reading strategies to monitor comprehension	<ul style="list-style-type: none"> <li>• Monitor reading and know what to do when understanding is not occurring</li> </ul>
Use text structures to predict and categorize information	<ul style="list-style-type: none"> <li>• Identify and use text features such as headings, formats, charts, and diagrams</li> </ul>
Formulate questions that might be answered in the selection	<ul style="list-style-type: none"> <li>• Create and answer questions about a topic</li> </ul>
Explain the author's purpose	<ul style="list-style-type: none"> <li>• Use a variety of strategies including: determining importance, making inferences, drawing conclusions and considering multiple perspectives</li> </ul>
Identify the main idea	<ul style="list-style-type: none"> <li>• Use a variety of strategies including: determining importance, making inferences, drawing conclusions and considering multiple perspectives</li> <li>• Develop analytical and interpretive skills in literature</li> </ul>
Summarize supporting details	<ul style="list-style-type: none"> <li>• Understand classification of details to make generalizations within text</li> <li>• Provide details, examples and illustrations from written text</li> <li>• State the setting or context for the story by place and time</li> </ul>

Draw conclusions and make simple inferences using text as support	<ul style="list-style-type: none"> <li>• Use a variety of strategies including: determining importance, making inferences, drawing conclusions and considering multiple perspectives</li> <li>• Draw consequences and implications from text for application in the real world</li> <li>• Create generalizations about the story/text based on categories</li> <li>• Develop analytical and interpretive skills in literature</li> <li>• Understand the concept of change in the language arts</li> <li>• Develop reasoning skills in the language arts</li> </ul>
Distinguish between cause and effect	<ul style="list-style-type: none"> <li>• Understand cause and effect and its relationship to consequences and implications within a text</li> </ul>
Distinguish between fact and opinion	<ul style="list-style-type: none"> <li>• Use a variety of strategies including: determining importance, making inferences, drawing conclusions and considering multiple perspectives</li> <li>• Understand classification of details to make generalizations within text</li> </ul>
Use prior knowledge and build additional background knowledge	<ul style="list-style-type: none"> <li>• Understand the concept of change to analyze literature</li> </ul>
Identify new information gained from reading	<ul style="list-style-type: none"> <li>• Understand the concept of change to analyze literature</li> </ul>
Use reading strategies to monitor comprehension	<ul style="list-style-type: none"> <li>• Monitor reading and know what to do when understanding is not occurring</li> <li>• Use a variety of strategies including: determining importance, making inferences, drawing conclusions and considering multiple perspectives</li> </ul>
<b>Writes with purpose, clarity, and expression</b>	
<b>4<sup>th</sup> Grade POS</b>	<b>AAP 4<sup>th</sup> Grade Extensions</b>
Identify intended audience	<ul style="list-style-type: none"> <li>• Select a topic and develop a plan for writing for a variety of purposes and audiences</li> </ul>
Focus on one aspect of a topic	<ul style="list-style-type: none"> <li>• Focus, organize, and elaborate to create an effective message</li> </ul>
Use a variety of prewriting strategies	<ul style="list-style-type: none"> <li>• Focus, organize, and elaborate to create an effective message</li> </ul>
Organize writing to convey a central idea	<ul style="list-style-type: none"> <li>• Focus, organize, and elaborate to create an effective message</li> <li>• Use description, details, and examples</li> <li>• Reflect individuality through word choice and style</li> <li>• Develop persuasive writing skills</li> </ul>
Recognize different modes of writing have different organization	<ul style="list-style-type: none"> <li>• Synthesize author techniques to improve or create a new piece of writing</li> </ul>

Write a clear topic sentence focusing on the main idea	<ul style="list-style-type: none"> <li>Focus, organize, and elaborate to create an effective message</li> <li>Evaluate the effective use of words, sentences, and paragraphs in context</li> </ul>
Write two or more related paragraphs on the same topic	<ul style="list-style-type: none"> <li>Use the elements of reasoning to develop strong, convincing arguments in persuasive writing</li> </ul>
Use transition words for sentence variety	<ul style="list-style-type: none"> <li>Vary sentence type, length and order to maximize the written message</li> <li>Use descriptive details and examples</li> <li>Evaluate the effective use of words, sentences, and paragraphs in context</li> </ul>
Utilize elements of style, including word choice, sentence variation	<ul style="list-style-type: none"> <li>Vary sentence type, length and order to maximize the written message</li> <li>Use descriptive details and examples</li> <li>Reflect individuality through word choice and style</li> <li>Evaluate the effective use of words, sentences, and paragraphs in context</li> </ul>
Revise writing for clarity using specific vocabulary and information	<ul style="list-style-type: none"> <li>Revise based on peer review, teacher feedback and self evaluation by adding, deleting, and changing information to improve writing</li> <li>Synthesize author techniques to improve or create a new piece of writing</li> </ul>
Include supporting details that elaborate the main idea	<ul style="list-style-type: none"> <li>Use the elements of reasoning to develop strong, convincing arguments in persuasive writing</li> </ul>

### Edits for usage and mechanics in own writing

POS	4 <sup>th</sup> Grade POS	AAP 4 <sup>th</sup> Grade Extensions
	Use subject- verb agreement	<ul style="list-style-type: none"> <li>Develop linguistic competency</li> </ul>
	Include prepositional phrase	<ul style="list-style-type: none"> <li>Develop linguistic competency</li> </ul>
	Eliminate double negatives	<ul style="list-style-type: none"> <li>Develop linguistic competency</li> </ul>
	Use noun-pronoun agreement	<ul style="list-style-type: none"> <li>Develop linguistic competency</li> </ul>
	Use commas in series, dates, and addresses	
	Incorporate adjectives and adverbs	<ul style="list-style-type: none"> <li>Develop linguistic competency</li> </ul>
	Use correct spelling for frequently used words	
	Use singular possessives	<ul style="list-style-type: none"> <li>Develop linguistic competency</li> </ul>
	Understand and use the editing process	
	Develop handwriting	

## 4<sup>th</sup> Grade: Social Studies

### Explains how the people and events of the past have influenced the present

4 <sup>th</sup> Grade POS	AAP 4 <sup>th</sup> Grade Extensions
Interpret artifacts & source documents to understand events in history	<ul style="list-style-type: none"> <li>Apply skills of historical analysis and interpretation to primary and secondary sources of information</li> </ul>
Determine cause and effect relationships (as related to history)	<ul style="list-style-type: none"> <li>Apply abstract concepts such as systems, cause and effect and how things change over time to understand the impact of the past on the present</li> </ul>
Compare and contrast historical event	<ul style="list-style-type: none"> <li>Use primary and secondary sources to compare and contrast historical events</li> </ul>
Draw conclusions and make generalizations (as related to	<ul style="list-style-type: none"> <li>Analyze historical issues using elements of reasoning</li> </ul>

history)	(purpose, point of view, implications/consequences, evidence/data, inferences, concepts/ideas, assumptions
Make connections between past and present	<ul style="list-style-type: none"> <li>Analyze historical issues using elements of reasoning (purpose, point of view, implications/consequences, evidence/data, inferences, concepts/ideas, assumptions</li> <li>Understand and describes contributions to American history by individuals from diverse backgrounds</li> <li>Understand and appreciates the influence of individual experiences, societal values and traditions on historical perspectives</li> </ul>
Sequence events in Virginia history	
Interpret ideas and events from different historical perspectives	<ul style="list-style-type: none"> <li>Use primary and secondary sources to interpret historical perspectives</li> </ul>
Evaluate and discuss issues orally and in writing (as related to history)	<ul style="list-style-type: none"> <li>Evaluate and discuss issues orally and in writing through seminars and debate</li> <li>Analyze historical situations for cause and effect relationships</li> </ul>
Organize/synthesize information on Virginia history in variety of ways	<ul style="list-style-type: none"> <li>Participate in debates about historical contributions</li> </ul>
Describe how archaeologists found new info at Werowocomoco & Jamestown	
Explain the reasons for English colonization	<ul style="list-style-type: none"> <li>Understand the colonial period in Virginia and Colonial America with emphasis on political, economic and social systems that define the early English settlements</li> </ul>
Identify importance of the arrival of Africans & women to Jamestown	<ul style="list-style-type: none"> <li>Identify key figures in American history and their influence</li> </ul>
Describe hardships Jamestown settlers faced & changes for survival	<ul style="list-style-type: none"> <li>Identify importance of Jamestown</li> <li>Analyze historical situations for cause and effect relationships</li> </ul>
Describe interactions between the English settlers & native peoples	<ul style="list-style-type: none"> <li>Compare and contrast the settlers and Native Americans' interactions with the environment</li> </ul>
Describe the influence of prominent English people	<ul style="list-style-type: none"> <li>Analyze historical situations for cause and effect relationships</li> </ul>
Describe how Colonial Virginia reflected the cultures of all residents	<ul style="list-style-type: none"> <li>Understand the colonial period in Virginia and Colonial America with emphasis on political, economic and social systems that define the early English settlements</li> </ul>
Identify the various roles of Virginians in the Revolutionary War Era	<ul style="list-style-type: none"> <li>Analyze the causes and circumstances surrounding the growing hostility between Virginia and Great Britain</li> </ul>
Identify key events in Virginia during the American Revolution	<ul style="list-style-type: none"> <li>Explain the cause and effect relationship of key events during the American Revolution</li> </ul>
Explain phrases referring to George Washington and James Madison	
Identify events and differences between Northern and Southern states	<ul style="list-style-type: none"> <li>Explain the cause and effect relationship of key events during the Civil War era</li> </ul>
Describe Virginia's role in the Civil War including the major battles	<ul style="list-style-type: none"> <li>Evaluate the cause and effect relationship from the major battles from the Civil War</li> </ul>

Describe the varied roles played by Virginians during the Civil War	<ul style="list-style-type: none"> <li>Identify key figures in American history and their influence</li> </ul>
Identify the impact of Virginians - Woodrow Wilson & George Marshall	<ul style="list-style-type: none"> <li>Identify key figures in American history and their influence</li> </ul>
Identify VA citizens who made political/social/economic contributions	<ul style="list-style-type: none"> <li>Identify key figures in American history and their influence</li> </ul>
Describe the history of the people of Fairfax County	<ul style="list-style-type: none"> <li>Describe how human systems change over time based on the needs, resources, and circumstances</li> </ul>
<b>Reads maps and understands the impact of geography on culture</b>	
<b>4<sup>th</sup> Grade POS</b>	<b>AAP 4<sup>th</sup> Grade Extensions</b>
Analyze & interpret maps to explain relationships to historical events	
Locate Virginia and its bordering states on maps of the U.S.	
Locate and describe Virginia's five regions	
Locate/identify water features important to early history of Virginia	<ul style="list-style-type: none"> <li>Develop an understanding of how physical and human characteristics defined daily life in early Virginia history</li> </ul>
Locate three American Indian language groups on a map of Virginia	
Describe how American Indians adapted to their climate and environment	<ul style="list-style-type: none"> <li>Investigate Native Americans' interactions with the environment</li> </ul>
Identify and locate the current state-recognized tribes	
Describe how geography influenced the decision to settle at Jamestown	<ul style="list-style-type: none"> <li>Describe how survival is influenced by adaptations from the environment</li> </ul>
Explain reasons for the relocation of Virginia's capital	
Explain the influence of geography on the migration of Virginians	<ul style="list-style-type: none"> <li>Develop an understanding of how physical and human characteristics define migration for Virginians</li> </ul>
Describe and locate past events in the history of Fairfax County	
<b>Recognizes the structure of government and the relationship between rules, laws and becoming a good citizen</b>	
<b>4<sup>th</sup> Grade POS</b>	<b>AAP 4<sup>th</sup> Grade Extensions</b>
Determine cause and effect relationships (as related to civics)	<ul style="list-style-type: none"> <li>Develop an understanding of the concept of systems and of structure, function, and pattern as key system elements</li> </ul>
Draw conclusions and make generalizations (as related to civics)	
Evaluate and discuss issues orally and in writing (as related to civics)	
Identify importance of the Charters of the Virginia Company of London	
Identify importance of the General Assembly (1619)	
Identify reasons why colonies went to war with Great Britain	
Identify the ideas of George Mason and Thomas Jefferson	<ul style="list-style-type: none"> <li>Identify the implications of the ideas of George Mason and Thomas Jefferson</li> </ul>
Identify the effects of segregation and "Jim Crow" on life in Virginia	
Identify the events linked to desegregation and massive	

resistance	
Identify the three branches of Virginia government & function of each	<ul style="list-style-type: none"> <li>Analyze the three branches of Virginia government and the function of each</li> </ul>
Analyze economic and governmental features of Fairfax County	
<b>Understands economic concepts and the impact of economics on culture</b>	
<b>4<sup>th</sup> Grade POS</b>	<b>AAP 4<sup>th</sup> Grade Extensions</b>
Explain the importance of agriculture and its influence on slavery	
Describe how money, barter and credit were used in the Virginia colony	<ul style="list-style-type: none"> <li>Describe how producers have used natural, human and capital resources in the past and present</li> </ul>
Describe everyday life in colonial Virginia	
Identify the effects of reconstruction on life in Virginia	<ul style="list-style-type: none"> <li>Explain the cause and effect relationship of reconstruction</li> </ul>
Describe importance of railroads, new industries & growth of cities	
Describe the economic/social transition from a rural society to urban	
Describe the major products & industries of Virginia's five regions	
Explain advances in transportation, communications and technology	<ul style="list-style-type: none"> <li>Describe how economic need can lead to the advancement in transportation and communication systems</li> </ul>
Analyze economic and governmental features of Fairfax County	

## Mathematics

### Extensions in Mathematics:

- Build new mathematical knowledge through problem solving
- Solve problems that arise in mathematics and in other contexts
- Apply and adapt a variety of appropriate strategies to solve problems
- Monitor and reflect on the process of mathematics problem solving
- Make and investigate mathematical conjectures
- Develop and evaluate mathematical arguments
- Organize and consolidate mathematical thinking through communication
- Communicate mathematical thinking coherently to teachers and peers
- Analyze and evaluate the mathematical thinking and strategies of others
- Use the language of mathematics to express mathematical ideas precisely
- Recognize and use connections among mathematical ideas
- Recognize and apply mathematics in contexts outside of mathematics
- Create and use representations to organize, record, and communicate mathematical ideas
- Select, apply, and translate among mathematical representations to solve problems
- Use representations to model and interpret mathematical phenomena

### **Represents numbers accurately and demonstrates an understanding of number relationships**

#### **4<sup>th</sup> Grade AAP POS**

- Round decimals to nearest whole number, tenth, or hundredth
- Recognize/name fractions in equivalent decimal form and vice versa
- Compare and order a given set of decimals and fractions
- Identify and describe characteristics of prime and composite numbers



Identify and describe characteristics of even and odd numbers	
<b>Computes numbers with fluency and makes reasonable estimates</b>	
<b>4<sup>th</sup> Grade AAP POS</b>	
Create and solve problems involving operations with whole numbers	
Find sum/difference/product/quotient involving decimals	
Create & solve practical problems involving decimals	
Solve problems with addition/subtraction of fractions/mixed numbers	
Evaluate whole number expressions using order of operations	
<b>Measures with accuracy and makes reasonable estimates of measurements</b>	
<b>4<sup>th</sup> Grade AAP POS</b>	
Find perimeter, area, and volume in standard units of measure	
Differentiate among perimeter, area, and volume	
Identify equivalent measurements within the metric system	
Estimate and then measure to solve problems	
Choose an appropriate unit of measure for a given situation	
Identify & describe diameter/radius/chord/circumference of a circle	
Determine an amount of elapsed time in hours and minutes	
Measure right, acute, obtuse, and straight angles	
<b>Analyzes characteristics and properties of geometric figures and demonstrates an understanding of spatial relationships</b>	
<b>4<sup>th</sup> Grade AAP POS</b>	
Classify angles as right, acute, obtuse, or straight	
Classify triangles by angles and by sides	
Develop definitions of specified plane figures	
Investigate/describe results of combining/subdividing plane figures	
<b>Uses data to describe, interpret, and predict events</b>	
<b>4<sup>th</sup> Grade AAP POS</b>	
Predict the likelihood of an outcome of a simple event	
Represent probability as a number between 0 and 1, inclusive	
Collect, organize, display, and interpret data	
Describe mean as fair share	
Find the mean, median, mode, and range of a set of data	
Describe the range of a set of data as a measure of variation	
<b>Represents situations and mathematical relationships using algebraic symbols</b>	
<b>4<sup>th</sup> Grade AAP POS</b>	
Describe/express the relationship found in a number pattern	
Investigate and describe the concept of variable	
Write an open sentence to represent a mathematical relationship	
Model one-step linear equations in one variable	
Create a problem situation based on a given open sentence	
Investigate and recognize the distributive property	
<b>4<sup>th</sup> Grade: Science</b>	
<b>Investigates &amp; demonstrates understanding of the natural world in a systematic way like a scientist &amp; applies these skills &amp; knowledge to solve problems.</b>	
<b>4<sup>th</sup> Grade POS</b>	<b>AAP 4<sup>th</sup> Grade Extensions</b>

Understand observations, conclusions, inferences and predictions	<ul style="list-style-type: none"> <li>Analyze experimental data as appropriate</li> <li>Transfer knowledge to make predictions about similar problems</li> <li>Provide evidence and data to support a claim/issue</li> <li>Formulate multiple perspectives about a given issue</li> <li>Make inferences based on evidence</li> </ul>
Classify and arrange objects/events according to characteristics	
Select appropriate instruments to measure length, volume, mass, and temperature	<ul style="list-style-type: none"> <li>Collect, record, and report data using appropriate metric measures</li> </ul>
Select and use appropriate instruments to measure elapsed time	
Make predictions and inferences & draw conclusions based on data	<ul style="list-style-type: none"> <li>Make predictions using data from picture, bar, and basic line graphs</li> <li>Analyze experimental data as appropriate</li> <li>Provide evidence and data to support a claim issue</li> <li>Predict the impact of multiple solutions to the given problem within each system</li> </ul>
Identify independent and dependent variables	
Identify constants in an experimental situation	<ul style="list-style-type: none"> <li>Define which variables must be held constant in an experiment</li> </ul>
Develop hypotheses based on cause and effect relationships	<ul style="list-style-type: none"> <li>Formulate multiple perspectives about a given issue</li> <li>Make inferences based on evidence</li> </ul>
Collect, record, analyze & display data using bar & basic line graphs	<ul style="list-style-type: none"> <li>Make predictions using data from picture, bar, and basic line graphs</li> <li>Analyze experimental data as appropriate</li> <li>Draw implications for action based on the available data</li> </ul>
Recognize contradictory/unusual numerical data in experimental results	<ul style="list-style-type: none"> <li>Draw implications for action based on the available data</li> </ul>
Communicate data with graphs, pictures, written statements, numbers	<ul style="list-style-type: none"> <li>Articulate enhanced understanding of the scientific area to others</li> </ul>
Construct models to clarify, demonstrate, and solve	
Use current applications to reinforce science concepts	<ul style="list-style-type: none"> <li>Transfer knowledge to make predictions about similar problems</li> <li>Draw implications for action based on the available data</li> <li>Describe how scientists study and track hurricanes</li> </ul>

**Demonstrates understanding of the concepts of physical science including matter, force, motion, & energy.\***

**The overarching extension for the physical science unit is to acquire significant content knowledge through the course of solving an interdisciplinary, real-world problem.**

4 <sup>th</sup> Grade POS	AAP 4 <sup>th</sup> Grade Extensions
Understand that motion is described by an object's direction and speed	
Understand that changes in motion are related to force and mass	
Understand that friction is a force that opposes motion	
Understand that moving objects have kinetic energy	
Investigate and understand conductors and insulators	

Investigate and understand basic circuits (open/closed, parallel/series)	<ul style="list-style-type: none"> <li>Investigate the behavior of electrical circuits and the nature of electricity and its generation</li> <li>Describe the flow of electricity in circuit</li> <li>Read and create simple circuit designs</li> <li>Determine whether a circuit is complete or incomplete, either by reading a diagram or by devising a method by which to test the circuit directly</li> </ul>
Investigate and understand static electricity	
Understand that electrical energy can be transformed into light and motion, and to produce heat	
Investigate and understand simple electromagnets and magnetism	
Describe historical contributions in understanding electricity	
<b>Demonstrates understanding of the concepts of life science including life processes and living systems</b>	
<b>4<sup>th</sup> Grade POS</b>	<b>AAP 4<sup>th</sup> Grade Extensions</b>
Understand the structures of typical plants and the function of each structure	
Understand processes and structures involved with plant reproduction	
Investigate and understand photosynthesis	
Understand that adaptations allow plants to meet life needs and respond to environment	
Investigate and understand plant and animal adaptations	
Understand the organization of populations, communities, and ecosystems	<ul style="list-style-type: none"> <li>Demonstrate how given systems interact with each other</li> <li>Assess how systems change over time based on needs, resources, and circumstances</li> <li>Analyze the interactions of various system components with each other and the input into the system</li> </ul>
Investigate and understand the flow of energy through food webs	<ul style="list-style-type: none"> <li>Analyze a problem system and certain related systems</li> </ul>
Investigate and understand habitats and niches	<ul style="list-style-type: none"> <li>Analyze a problem system and certain related systems</li> <li>Assess how systems change over time based on needs, resources, and circumstances</li> <li>Analyze the interactions of various system components with each other and the input into the system</li> </ul>
Understand changes in an organism's niche at stages in the life cycles	
Understand the influence of human activity on ecosystems	<ul style="list-style-type: none"> <li>Analyze a problem system and certain related systems</li> <li>Demonstrate how given systems interact with each other</li> <li>Assess how systems change over time based on needs, resources, and circumstances</li> <li>Analyze the interactions of various system components with each other and the input into the system</li> </ul>
Understand that Virginia has a great variety of animals and	

plants	
<b>Demonstrates understanding of Earth's patterns, cycles, changes, &amp; Earth/Space systems</b>	
<b>4<sup>th</sup> Grade POS</b>	<b>AAP 4<sup>th</sup> Grade Extensions</b>
Investigate and understand weather phenomena	
Understand weather measurements and meteorological tools	<ul style="list-style-type: none"> <li>Collect and interpret weather data in the community</li> </ul>
Understand use of weather measurements/phenomena to make predictions	<ul style="list-style-type: none"> <li>Investigate how global patterns of atmospheric movement influence weather</li> </ul>
Investigate and understand the planets in the solar system	<ul style="list-style-type: none"> <li>Understand the dynamic system of earth and space</li> </ul>
Understand the order of the planets in the solar system	
Understand the relative sizes of the planets	
Understand the motions of the Earth, moon and sun	<ul style="list-style-type: none"> <li>Investigate the interdependent nature of the Earth, moon and sun</li> </ul>
Understand the causes for the Earth's seasons	<ul style="list-style-type: none"> <li>Investigate the cyclical nature of seasons</li> </ul>
Understand the causes for the phases of the moon	<ul style="list-style-type: none"> <li>Understand the dynamic system of earth and space</li> </ul>
Understand characteristics of the Earth, moon and sun	<ul style="list-style-type: none"> <li>Understand how energy gets from the sun to the Earth</li> <li>Explain the effect of erosion on the environment</li> <li>Describe events that occur during the process of erosion</li> </ul>
Understand historical contributions to the Earth-Moon-Sun system	<ul style="list-style-type: none"> <li>Recognize human contributions to Earth's resources</li> <li>Recognize the difference between greenhouse effect and global warming</li> </ul>
Understand that Virginia has many watersheds and water resources	
Understand that Virginia has minerals, rocks, ores and energy sources	
Recognize that Virginia has a great variety of forests, soil and land	

## 4<sup>th</sup> Grade: Health

### Demonstrates an understanding of concepts and behaviors that reduce health risks and enhance health

#### 4<sup>th</sup> Grade POS

Identify the nutrients needed for proper brain functioning

Identify the importance of balance, variety, and moderation in a meal plan.

Identify and describe the effects of malnutrition.

Describe the impact of nutrients on growth and development.

Describe the impact of fats, carbohydrates, and proteins on physical performance.

Identify and demonstrate development of refusal skills

Identify the importance of reporting and describe characteristics of bullying and aggressive behaviors.

Identify and describe the importance of developing coping skills.

Describe the characteristics of harmful or abusive relationships.

Explain the importance of practicing self-control.

Explain the impact of alcohol, inhalants, tobacco, and drug use on self, family, and community

Describe the short-term and long-term consequences of drug use

Identify reasons why acts of violence and the use of weapons can be related to use of alcohol and other drugs.

Identify and describe laws related to illegal alcohol and tobacco use.

identify how the body defends itself against illness and disease

Identify types of germs, and describe how they are spread to include; viruses, bacteria, and fungi

Explain the differences between communicable and non-communicable diseases.

Identify the importance of early detection of health problems.

Explain the role of regular physical activity, good nutrition, and healthy choices.

**\* Human Growth and Development Unit -Students are not graded in this unit. Parents/guardians may opt their student(s) out of any or all Family Life Education (FLE) lessons, including Human Growth and Development.**

Recognize the physical changes that occur during puberty and relate these changes to the increased need for personal hygiene.

### **Demonstrates ability to access and evaluate health-related information**

#### **4<sup>th</sup> Grade POS**

Identify opportunities to use health care agencies, printed materials, broadcasts media, internet, and audiovisual materials

Describe the differences between accurate and inaccurate health information

### **Demonstrates knowledge of appropriate health practices/behaviors to promote a safe and healthy community**

#### **4<sup>th</sup> Grade POS**

Describe that it is a personal responsibility to exhibit healthy practices within the school and community setting.

Identify the benefits of volunteerism

Identify obstacles and solutions to communication

Explain the importance of seeking assistance from a trusted adult when in unsafe or uncomfortable situations

**\*Emotional and Social Health Unit – Parents or guardians may choose to opt their child out of any or all lessons in the ESH Unit. Health grades will include these lessons.**

Identify basic emotional, mental, and social needs and develop strategies to meet those needs\*

Identify and explore personal strengths and weaknesses\*

Identify the need to assume greater responsibility for self as an individual, as well as responsibility within family, peer groups, and larger community\*

Identify basic human emotions and effective ways of dealing with them\*

Develop an awareness of individual differences and the importance of respecting others\*

Recognize the values and challenges of friendship\*

## **Art**

### **Engages in the creative process to develop artworks**

Develops ideas for artworks before beginning

Follows appropriate steps in art making

Uses art materials safely and appropriately

Reflects on art and art making by describing and explaining own artwork

### **Uses art media and techniques appropriately to produce artworks**

Uses a variety of art materials to produce artwork

Demonstrates control and craftsmanship with art materials

### **Express meaning in artworks in a variety of ways**

Expresses personally relevant ideas in artworks

Depicts a range of subject matter in artworks

Uses and applies knowledge from other subject areas when creating artwork

### **Applies an understanding of art history, culture, criticism, and aesthetics when making and discussing artwork**

Engages in discussions about artworks from different places and time to inform art making

Responds to own and other's artwork

Uses art vocabulary appropriately to identify and describe artwork

## Physical Education

### Performs movement skills and patterns in physical activities

Performs movement skills in modified games and activities

Moves to a rhythm

Performs movement sequences that combine four or more movements

### Demonstrates knowledge and use of concepts and principles to improve movement skills

Demonstrates knowledge of movement principles and concepts

Demonstrates basic game strategies

Uses movement principles to improve performance and gives feedback to others

### Demonstrates the knowledge and skills necessary for a health-enhancing level of personal fitness

Identifies the components of health-related fitness

Determines personal fitness goals using fitness test data

Applies FITT principle;( Frequency, Intensity, Time, Type) to personal fitness goals

### Demonstrates knowledge and skills that ensure safe participation in physical activity settings

Works productively and respectfully with others

Demonstrates and applies conflict resolution skills

Demonstrates appropriate etiquette, rules, and procedures

Identifies contributions of cultures in sport, dance, and recreation

### Demonstrates knowledge and strategies for living a physically active lifestyle

Identifies opportunities to participate in activities at school, home, and in the community

## Music

### Demonstrates appropriate singing skills

Sings accurately and with proper technique

### Demonstrates appropriate skills playing instruments

Plays instruments accurately and with proper technique

Performs rhythmic patterns, melodies, and accompaniments

### Responds to music with movement

Demonstrates the steady beat

Moves to music in structured/unstructured dances and action songs

### Demonstrates appropriate skills in composing and improvising

Composes rhythmic patterns and melodies using traditional and nontraditional notation

Improvises rhythmic patterns, melodies, and harmonies; instrumentally, vocally, and physically

### Demonstrates appropriate skills in music literacy

Sight-sings intervals and rhythmic patterns

Reads and notates music using traditional symbols

Analyzes music of diverse styles, periods, and cultures

### Applies appropriate listening skills

Recognizes and discusses various musical attributes

Evaluates the quality of own and other's performances

## Band and Strings

### Demonstrates appropriate skills playing selected instruments

Demonstrates correct body and hand positions, finger patterns, articulations, and tone production

Demonstrates appropriate ensemble skills

**Demonstrates creativity in performance**

Demonstrates appropriate phrasing, expression, and artistry

Improvises using teacher-specified parameters

Composes melodies using teacher-specified musical elements

**Demonstrates appropriate skills in music literacy**

Reads and writes music with different rhythmic patterns and meters

Identifies different key signatures

**Applies appropriate listening skills**

Demonstrates the ability to appropriately match tone, intonation, and volume with others

## World Languages

**Communicates in the target language**

Asks and answers questions using simple sentences

Writes phrases and simple sentences

Uses language independently some of the time

**Gains knowledge and understanding of other cultures**

Identifies and compares items and customs used by people in the countries studied to their own culture

**Connects to other disciplines and acquires content information in the target language**

Extends and reinforces material studied in other content areas

Investigates different cultural points of view

Begins to use language as a tool to seek information