

# Grade 4 Parent's Guide to Year-Long Learning

During Grade 4, students receive instruction on the concepts and skills described below.

## SCIENCE

Marking Period 1	Marking Period 2
<p>During the marking period, students investigate how energy and information move. They learn energy can be transferred by sound, light, heat and electricity. Students also:</p> <ul style="list-style-type: none"> <li>• Design, test and refine a device that converts energy from one form to another.</li> <li>• Compare how patterns are used to transfer info.</li> </ul>	<p>During the marking period, students investigate how senses send signals to the brain to be processed. Students learn what happens to energy when objects collide. They also:</p> <ul style="list-style-type: none"> <li>• Identify structures of animals support survival, growth, behavior and reproduction.</li> <li>• Model how animals receive different types of info.</li> </ul>
Marking Period 3	Marking Period 4
<p>During the marking period, students investigate when objects collide. Students design and test rubber band cars. Students investigate the effects of erosion. Students also:</p> <ul style="list-style-type: none"> <li>• Relate the speed of an object to its energy.</li> <li>• Explain change using fossils in rock layers.</li> </ul>	<p>During the marking period, students investigate erosion and reducing impacts of resource use and natural hazards. Students engineer a design. Students also:</p> <ul style="list-style-type: none"> <li>• Describe patterns of amplitude and wavelength.</li> <li>• Describe energy and fuels that come from natural resources and their effect on the environment.</li> </ul>

## SOCIAL STUDIES

Marking Period 1	Marking Period 2
<p>During the marking period, students learn about effects of geography on Native Americans before the establishment of the 13 colonies. Students also:</p> <ul style="list-style-type: none"> <li>• Use geographic tools to locate places and describe the human and physical characteristics.</li> <li>• Compare ways Native American societies used the natural environment for food, clothing and shelter.</li> </ul>	<p>During the marking period, students examine the U.S. history through a study of economics today and during the time of European exploration. Students also:</p> <ul style="list-style-type: none"> <li>• Learn that people must make choices because resources are limited.</li> <li>• Describe regional economic specialization in Maryland and the ways people live and work.</li> </ul>
Marking Period 3	Marking Period 4
<p>During the marking period, students study the five European settlements in North America. Students learn about the establishment of slavery in Maryland. Students also:</p> <ul style="list-style-type: none"> <li>• Explain how and why the Maryland colony was established.</li> </ul>	<p>During the marking period, students study the structure of government in Maryland and its Constitution. Students study of colonial America. Students also:</p> <ul style="list-style-type: none"> <li>• Analyze documents and democratic ideas that developed in the Maryland colony.</li> </ul>

## MUSIC

Marking Period 1	Marking Period 2
<p>During the marking period, students contrast and repeat phrases within a given section of music. Students also:</p> <ul style="list-style-type: none"> <li>• Perform rhythmic and melodic ostinati.</li> <li>• Learn vocal skills and technique.</li> </ul>	<p>During the marking period, students perform music with changes in expressive qualities. Students also:</p> <ul style="list-style-type: none"> <li>• Learn major and minor tonality.</li> <li>• Notate rhythmic phrases from dictation.</li> </ul>
Marking Period 3	Marking Period 4
<p>During the marking period, students learn simple vocal improvisations on familiar melodies. Students also:</p> <ul style="list-style-type: none"> <li>• Identify and use musical elements to describe various types of music.</li> </ul>	<p>During the marking period, students compose a simple melody using a given rhythm. Students also:</p> <ul style="list-style-type: none"> <li>• Conduct music with meter in three and four.</li> </ul>

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## ART

Marking Period 1 - 4 CREATING & CONNECTING TO ART	Marking Period 1 - 4 PRESENTING & RESPONDING TO ART
<p>During the marking periods, students engage in artmaking by drawing, painting, printmaking, collage/mixed media and sculpture/ceramics media. Students also:</p> <ul style="list-style-type: none"> <li>• Infer information about the time, place and culture in which artwork is made.</li> <li>• Select and organize art elements and design principles to depict ideas about tradition.</li> <li>• Apply feedback to revise artwork in progress and refine craftsmanship.</li> </ul>	<p>During the marking periods, students will engage in art history, art criticism, aesthetics, and curation. Students develop connection by exploring big ideas relation to tradition. Students also:</p> <ul style="list-style-type: none"> <li>• Select an artwork for display and justify the choice with an artist's statement.</li> <li>• Curate a group exhibition of artworks that communicates a selected theme.</li> <li>• Support personal interpretation with visual evidence from the artwork.</li> </ul>

## INFORMATION LITERACY

Marking Period 1	Marking Period 2
<p>During the marking period, students locate, select and evaluate sources. Students also:</p> <ul style="list-style-type: none"> <li>• Use an appropriate and accepted citation style to create a source list.</li> <li>• Use safe practices when online.</li> </ul>	<p>During the marking period, students follow an inquiry process. Students determine scope of the info, and formulate and refine questions. Students also:</p> <ul style="list-style-type: none"> <li>• use a variety of formats to prepare the findings/conclusions of the information to share.</li> </ul>
Marking Period 3	Marking Period 4
<p>During the marking period, students formulate and refine questions. Students evaluate sources. Students also:</p> <ul style="list-style-type: none"> <li>• Record data/information in a variety of formats.</li> </ul>	<p>During the marking period, students formulate and refine questions. Students identify and evaluate resources.</p>

## PHYSICAL EDUCATION

Marking Period 1	Marking Period 2
<p>During the marking period, students pass with hands and feet to a moving partner. Students define resting heart rate, target heart rate and maximum heart rate. Students also:</p> <ul style="list-style-type: none"> <li>• Identify activities that develop muscular strength and muscular endurance.</li> <li>• Identify flexibility exercises.</li> </ul>	<p>During the marking period, students throw and catch while moving right or left. Students practice an overhead pass. Students also:</p> <ul style="list-style-type: none"> <li>• Identify and develop a personal physical activity goal that is challenging yet attainable.</li> <li>• Explain why personal activity is an achievable goal.</li> </ul>
Marking Period 3	Marking Period 4
<p>During the marking period, students engage in a tumbling sequence using all characteristics to make a smooth transition. Students also:</p> <ul style="list-style-type: none"> <li>• Practice dance relationships including meeting and parting, unison, contrast and mirror/matching.</li> <li>• Create rules to ensure activities are safe, fair, fun and inclusive.</li> </ul>	<p>During the marking period, students strike a dropped ball with a backhand stroke. Students also:</p> <ul style="list-style-type: none"> <li>• Explain and demonstrate the four components of the FITT Guidelines (frequency, intensity, time and type).</li> </ul>

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## HEALTH EDUCATION

Marking Period 1	Marking Period 2
<p>During the marking period, students use mental and emotional health skills to enhance one's self concept and one's relationship with others. Students also:</p> <ul style="list-style-type: none"> <li>Practice using good decision-making skills with use and misuse of medication, drugs, and alcohol.</li> <li>Study the impact of the abuse of medications, drugs and alcohol.</li> </ul>	<p>During the marking period, students use consumer knowledge, skills and strategies to develop sound personal health practices involving the use of health care products, services and community resources. Students also:</p> <ul style="list-style-type: none"> <li>Learn to apply prevention and intervention knowledge, skills and processes to promote safe living in the home, school, and community.</li> </ul>
Marking Period 3	Marking Period 4
<p>During the marking period, students will demonstrate the ability to use nutrition and fitness knowledge, skills and strategies to promote a healthy lifestyle. Students also:</p> <ul style="list-style-type: none"> <li>Promote positive relationships, healthy growth and development throughout the life cycle.</li> <li>Explore the family unit.</li> </ul>	<p>During the marking period, students demonstrate the ability to apply prevention and treatment knowledge, skills and strategies to reduce susceptibility and manage disease. Students also:</p> <ul style="list-style-type: none"> <li>Identify prevention practices.</li> </ul>

## CURRICULUM 2.0 MATHEMATICS 4/5

Marking Period 1	Marking Period 2
<p>During the marking period, students extend place value understanding to read, write and compare numbers to 1,000,000. Students fluently add and subtract multi-digit numbers using the standard algorithm using place value understanding and properties of operations. Students also:</p> <ul style="list-style-type: none"> <li>Use place value understanding to round numbers.</li> <li>Interpret, represent and solve word problems involving multiplicative comparisons.</li> </ul>	<p>During the marking period, students use place value and properties of operations to multiply and divide multi-digit whole numbers. Students apply area and perimeter formulas. Students also:</p> <ul style="list-style-type: none"> <li>Solve problems involving conversion of measurements from a larger unit to a smaller unit.</li> <li>Use multiplicative reasoning to develop two-column tables of equivalent measurements.</li> </ul>
Marking Period 3	Marking Period 4
<p>During the marking period, students develop an understanding of fraction equivalence and ordering. Students extend these understandings, as well as understanding about addition and subtraction of whole numbers, to add and subtract fractions with like denominators. Students solve a variety of multi-step word problems. Students also:</p> <ul style="list-style-type: none"> <li>Decompose whole numbers 1-100 into factor pairs, and classify numbers as prime or composite.</li> <li>Multiply fractions by a whole number.</li> <li>Describe and identify points, lines and line segments, and parallel and perpendicular lines.</li> </ul>	<p>During the marking period, students continue to develop their understanding of geometry and geometric measurement. Students extend understanding about fractions to represent decimals to hundredths. Students solve word problems involving distances, liquid volumes and time involving addition and subtraction of simple decimals. Students also: identify and name lines, points and angles.</p> <ul style="list-style-type: none"> <li>Classify two-dimensional shapes by properties of their lines and angles.</li> <li>Compare decimals to hundredths.</li> <li>Reason about number and shape patterns.</li> </ul>

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### CURRICULUM 2.0 READING

Marking Period 1	Marking Period 2
<p>During the marking period, students review the characteristics of historical fiction and analyze the impact setting has on characters and sequence of events. They examine how an author uses evidence to support particular points and explain their ideas during collaborative discussions. Students also:</p> <ul style="list-style-type: none"> <li>• Establish rules for collaboration with peers.</li> <li>• Examine the use of chronology, and cause and effect as text structures.</li> <li>• Read and paraphrase text, including multimedia formats, to summarize the main ideas in texts.</li> </ul>	<p>During the marking period, students discuss the characteristics of plays and compare a visual representation of a play with the text. They read informational texts, including firsthand accounts, and paraphrase key details to summarize. They read and collect information across multiple texts on the same topic and generate inquiry questions during collaborative discussions. Students also:</p> <ul style="list-style-type: none"> <li>• Discuss poetic elements including verse, rhythm and meter.</li> <li>• Use reference materials to determine word meaning.</li> </ul>
Marking Period 3	Marking Period 4
<p>During the marking period, read Greek myths and compare the treatment of similar themes in myths and traditional literature from other cultures. They integrate information from two texts on the same topic and make inferences based on information in the texts. Students also:</p> <ul style="list-style-type: none"> <li>• Use Greek and Latin roots and affixes.</li> <li>• Explain procedures in a technical text and describe the structure of informational text.</li> <li>• Compare and contrast a firsthand and secondhand account of the same event.</li> </ul>	<p>During the marking period, students compare the structure of poems, plays and prose. They identify the theme of a realistic novel and summarize portions of text and discuss point of view. Students also:</p> <ul style="list-style-type: none"> <li>• Read and compare a variety of genres including poetry, drama, literary nonfiction, realistic fiction and technical text.</li> <li>• Discuss the use of similes and metaphors in poetry to add description to writing.</li> </ul>

### CURRICULUM 2.0 WRITING

Marking Period 1	Marking Period 2
<p>During the marking period, students research a setting and compose an original historical fiction piece. They research and write an informational piece about a time period in history that interests them, including an introduction, descriptive paragraphs, and a closure. Students also:</p> <ul style="list-style-type: none"> <li>• Gather evidence from a text to write their opinion about a character's impact on a story.</li> <li>• Revise writing for organization and conventions.</li> <li>• Select a format for publishing their writing.</li> </ul>	<p>During the marking period, students compose poetry using a variety of strategies. Students research and write a community profile, then synthesize information to write an opinion about which business would best support their community. They combine their informative and opinion pieces to develop a multimedia product. Students also:</p> <ul style="list-style-type: none"> <li>• Incorporate similes and metaphors in their poetry.</li> <li>• Use knowledge of language and its conventions when writing, speaking, reading or listening.</li> </ul>
Marking Period 3	Marking Period 4
<p>During the marking period, students write an informational piece with text features. They write an opinion piece on a topic and support with reasons and information. Students reflect on a personal experience to compose a memoir. Students also:</p> <ul style="list-style-type: none"> <li>• Use evidence from literary or informational texts to support analysis, reflection, and research.</li> <li>• Create an audio recording and visual display to share their opinion piece.</li> </ul>	<p>During the marking period, students synthesize information from two sources to write an analytic paragraph. They research, gather secondary sources to write an opinion essay which supports their point of view on the topic of their informative text. Students also:</p> <ul style="list-style-type: none"> <li>• Revise their writing for coherence with peers..</li> <li>• Edit their writing for completion and sentence fluency.</li> </ul>