

**ALIGNMENT OF MONTESSORI MATERIALS AND LESSONS WITH
COLORADO ACADEMIC STANDARDS**

~Sixth Grade~

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Reading, Writing, and Communicating

1. Oral Expression and Listening

| | Standards and Evidence Outcomes | Montessori Materials, Instructional Methods, And Tools | Measuring Methods And Tools |
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| 1. Successful group discussions require planning and participation by all | <p>Students Can:</p> <ul style="list-style-type: none"> a. Present claims and findings, sequencing ideas logically and using pertinent descriptions, facts, and details to accentuate main ideas or themes; use appropriate eye contact, adequate volume, and clear pronunciation. b. Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information. c. Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. d. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse | <p>Work Time, Circle Time, Lit Groups, Classroom Problem Solving, Read Aloud, Moral Stories, Grace and Courtesy, Community Building, Presentation of Work, Book Reports, Writer’s Workshop, Poetry Slam, Songs, Persuasive Essays, Debates, Independent Research, Power point presentations, Community Outreach,</p> | |

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| | <p>partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.</p> <ul style="list-style-type: none">i. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.ii. Follow rules for collegial discussions, set specific goals and deadlines, and define individual roles as needed.iii. Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion.iv. Review the key ideas expressed and demonstrate understanding of multiple perspectives through reflection and paraphrasing. <p>e. Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to a topic, text, or issue under study.</p> <p>f. Delineate a speaker's argument and specific claims, distinguishing claims that are supported by reasons and evidence</p> | | |
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| | <p>from claims that are not.</p> <p>g. Use evidence to develop credibility (such as citing textual evidence to support opinions)</p> <p>h. Recognize the difference between informal and formal language and make choices appropriate for group purposes</p> | | |
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2. Reading for All Purposes

| | Standards and Evidence Outcomes | Montessori Materials, Instructional Methods, And Tools | Measuring Methods And Tools |
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| <p>1. Understanding the meaning within different types of literature depends on properly analyzing literary components</p> | <p>Students Can:</p> <p>a. Use Key Ideas and Details to:</p> <p>i. Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.</p> <p>ii. Determine a theme or central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.</p> | <p>Research, Word Studies, Literature Circles (guiding reading), Author Study, Biography Study,</p> <p>Supplemental: Power Builders/SRAs, Poetry Studies, Media,</p> | |

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| | <ul style="list-style-type: none">iii. Describe how a particular story or drama's plot unfolds in a series of episodes as well as how the characters respond or change as the plot moves toward a resolution. <p>b. Use Craft and Structure to:</p> <ul style="list-style-type: none">i. Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of a specific word choice on meaning and tone.ii. Analyze how a particular sentence, chapter, scene, or stanza fits into the overall structure of a text and contributes to the development of the theme, setting, or plot.iii. Explain how an author develops the point of view of the narrator or speaker in a text. <p>c. Use Integration of Knowledge and Ideas to:</p> <ul style="list-style-type: none">i. Compare and contrast the experience of reading a story, drama, or poem to listening to or viewing an audio, video, or live version of the text, including contrasting what they "see" and "hear" when reading the text to | | |
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| | <p>what they perceive when they listen or watch.</p> <ul style="list-style-type: none"> ii. Compare and contrast texts in different forms or genres (e.g., stories and poems; historical novels and fantasy stories) in terms of their approaches to similar themes and topics. <p>d. Use Range of Reading and Complexity of Text to:</p> <ul style="list-style-type: none"> i. By the end of the year, read and comprehend literature, including stories, dramas, and poems, in the grades 6-8 text complexity band proficiently, with scaffolding as needed at the high end of the range. <p>e. Use different kinds of questions to clarify and extend comprehension</p> <p>f. Identify how the author uses dialogue and specific word choice to achieve an effect</p> | | |
| <p>2. Organizing structure to understand and analyze factual</p> | <p>Students Can:</p> <ul style="list-style-type: none"> a. Use Key Ideas and Details to: <ul style="list-style-type: none"> i. Cite textual evidence to support analysis of what the text says | <p>Cultural Control Charts, Cultural Works (example: Timeline of Life, Fundamental Needs of Humans,</p> | |

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| <p>information</p> | <p>explicitly as well as inferences drawn from the text.</p> <ul style="list-style-type: none"> ii. Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments. iii. Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes). <p>b. Use Craft and Structure to:</p> <ul style="list-style-type: none"> i. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings. ii. Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas. iii. Determine an author's point of view or purpose in a text and explain how it is conveyed in the text. <p>c. Use Integration of Knowledge and Ideas to:</p> <ul style="list-style-type: none"> i. Integrate information presented in different media or formats (e.g., | <p>Civilization Timeline, Kingdom Studies), Research, Word Studies, Literature Groups (guiding reading), Author Study, Biography Study, Cultural Nomenclature</p> <p>Supplemental: Power Builders/SRAs, Poetry Studies, Research Outlines, Project Planners, Graphic Organizers, Media, Current Events,</p> | |
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| | <p>visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.</p> <ul style="list-style-type: none">ii. Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not.iii. Compare and contrast one author's presentation of events with that of another (e.g., a memoir written by and a biography on the same person). <p>d. Use Range of Reading and Complexity of Text to:</p> <ul style="list-style-type: none">i. By the end of the year, read and comprehend literary nonfiction in the grades 6-8 text complexity band proficiently, with scaffolding as needed at the high end of the range. <p>e. Generate questions, make/confirm/adjust predictions, make inferences, and draw conclusions based on text structures</p> <p>f. Use information from text and text features (such as timeline, diagram, captions) to answer questions or perform specific tasks</p> | | |
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| <p>3. Word meanings are determined by how they are designed and how they are used in context</p> | <p>Students Can:</p> <ul style="list-style-type: none"> a. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 6 reading and content, choosing flexibly from a range of strategies. <ul style="list-style-type: none"> i. Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase. ii. Make connections back to previous sentences and ideas to resolve problems in comprehension iii. Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., audience, auditory, audible). iv. Employ synonyms or antonyms gleaned from a passage to provide an approximate meaning of a word v. Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify | <p>Etymology Studies, Morphology Studies, Word Studies, Lit Groups (guided reading), Grammar Studies, Sentence Analysis</p> <p>Supplemental: Latin Study, Instructional Spelling Program, Dictionary and Thesaurus Works, Self-Editing</p> | |
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| | <p>its precise meaning or its part of speech.</p> <ul style="list-style-type: none">vi. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary). <p>b. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.</p> <ul style="list-style-type: none">i. Interpret figures of speech (e.g., personification) in context.ii. Use the relationship between particular words (e.g., cause/effect, part/whole, item/category) to better understand each of the words.iii. Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., stingy, scrimping, economical, thrifty). <p>c. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.</p> | | |
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3. Writing and Composition

| | Standards and Evidence Outcomes | Montessori Materials, Instructional Methods, And Tools | Measuring Methods And Tools |
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| <p>1. Writing literary genres for intended audiences and purposes requires ideas, organization, and voice</p> | <p>Students Can:</p> <ul style="list-style-type: none"> a. Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences. <ul style="list-style-type: none"> i. Engage and orient the reader by establishing a context and introducing a narrator and/or characters; organize an event sequence that unfolds naturally and logically. ii. Use narrative techniques, such as dialogue, pacing, and description, to develop experiences, events, and/or characters. iii. Use a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another. | <p>Sentence Analysis, Grammar Boxes, Cultural Research Work</p> <p>Supplemental: Writer's Workshop, Step Up, Six Traits Writing, Write Source Text Books, Guided Outlines, Graphic Organizers</p> | |

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| | <ul style="list-style-type: none"> iv. Use precise words and phrases, relevant descriptive details, and sensory language to convey experiences and events. v. Provide a conclusion that follows from the narrated experiences or events. b. Employ a range of planning strategies to generate descriptive and sensory details (webbing, free writing, graphic organizers) c. Use a range of poetic techniques (alliteration, onomatopoeia, rhyme scheme); figurative language (simile, metaphor, personification); and graphic elements (capital letters, line length, word position) to express personal or narrative voice in texts d. Organize literary and narrative texts using conventional organizational patterns of the chosen genre e. Use literary elements of a text (well-developed characters, setting, dialogue, conflict) to present ideas in a text f. Use word choice, sentence structure, and sentence length to create voice and tone in writing | | |
| <p>2. Writing informational and</p> | <p>Students Can:</p> <ul style="list-style-type: none"> a. Write arguments to support claims with | <p>Sentence Analysis, Grammar Boxes, Cultural Research Work</p> | |

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| <p>persuasive genres for intended audiences and purposes require ideas, organization, and voice develop</p> | <p>clear reasons and relevant evidence.</p> <ul style="list-style-type: none"> i. Introduce claim(s) and organize the reasons and evidence clearly. ii. Support claim(s) with clear reasons and relevant evidence, using credible sources and demonstrating an understanding of the topic or text. iii. Use words, phrases, and clauses to clarify the relationships among claim(s) and reasons. iv. Establish and maintain a formal style. <p>b. Provide a concluding statement or section that follows from the argument presented.</p> <p>c. Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.</p> <ul style="list-style-type: none"> i. Introduce a topic; organize ideas, concepts, and information, using strategies such as definition, classification, comparison/contrast, and cause/effect; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension. | <p>Supplemental: Writer's Workshop, Step Up, Six Traits Writing, Write Source Text Books, Guided Outlines, Graphic Organizers</p> | |
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| | <ul style="list-style-type: none">ii. Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples.iii. Use appropriate transitions to clarify the relationships among ideas and concepts.iv. Use precise language and domain-specific vocabulary to inform about or explain the topic.v. Establish and maintain a formal style.vi. Provide a concluding statement or section that follows from the information or explanation presented. <ul style="list-style-type: none">d. Write multi-paragraph compositions that have clear topic development, logical organization, effective use of detail, and variety in sentence structuree. Organize information into a coherent essay or report with a thesis statement in the introduction and transition sentences to link paragraphsf. Write to pursue a personal interest, to explain, or to persuadeg. Write to analyze informational texts (explains the steps in a scientific investigation)h. Analyze and improve clarity of paragraphs and transitions | | |
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| | <ul style="list-style-type: none"> i. Select vocabulary and information to enhance the central idea j. Identify persuasive elements in a peer's writing and critique the effectiveness | | |
| <p>3. Specific editing for grammar, usage, mechanics, and clarity gives writing its precision and legitimacy</p> | <p>Students Can:</p> <ul style="list-style-type: none"> a. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. <ul style="list-style-type: none"> i. Ensure that pronouns are in the proper case (subjective, objective, possessive). ii. Use intensive pronouns (e.g., myself, ourselves). iii. Recognize and correct inappropriate shifts in pronoun number and person. iv. Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents). v. Recognize variations from standard English in their own and others' writing and speaking, and identify and use strategies to improve expression in conventional language. vi. Identify fragments and run-ons and revise sentences to eliminate them | <p>Sentence Analysis, Grammar Studies, Word Studies, Punctuation Key Lessons</p> <p>Supplemental: Writer's Workshop Conventions, Editing Process, Published Writing, Projects for a variety of audiences, Instructional Spelling Program, keyboarding software</p> | |

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| | <ul style="list-style-type: none">vii. Use coordinating conjunctions in compound sentencesviii. Maintain consistent verb tense within paragraph.ix. Choose adverbs to describe verbs, adjectives, and other adverbs <p>b. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.</p> <ul style="list-style-type: none">i. Use punctuation (commas, parentheses, dashes) to set off nonrestrictive/parenthetical elements.ii. Spell correctly. <p>c. Use knowledge of language and its conventions when writing, speaking, reading, or listening.</p> <ul style="list-style-type: none">i. Vary sentence patterns for meaning, reader/listener interest, and style.ii. Maintain consistency in style and tone. <p>d. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in grade level expectations 1 and 2 above.)</p> <p>e. With some guidance and support from</p> | | |
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| | <p>peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.</p> <p>f. Use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of three pages in a single sitting.</p> | | |
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4. Research and Reasoning

| | Standards and Evidence Outcomes | Montessori Materials, Instructional Methods, And Tools | Measuring Methods And Tools |
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| 1. Individual and group research projects require obtaining information on a topic from a variety of | <p>Students Can:</p> <p>a. Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.</p> <p>i. Identify a topic for research, developing the central idea or focus and potential research question(s)</p> | <p>Montessori Cultural Curriculum</p> <p>Supplemental: Research Projects, Drafting Process, Editing Process, Gathering Sources of Information, Publishing, Teacher directed and</p> | |

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| <p>sources and organizing it for presentation</p> | <p>b. Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources.</p> <ul style="list-style-type: none"> i. Use a range of print and non-print sources (atlases, data bases, reference materials, online and electronic resources, interviews, direct observation) to locate information to answer research questions ii. Locate specific information within resources using indexes, tables of contents, electronic search key words, etc. <p>c. Draw evidence from literary or informational texts to support analysis, reflection, and research.</p> <ul style="list-style-type: none"> i. Follow established criteria for evaluating accuracy, validity, and usefulness of information ii. Select and organize information, evidence, details, or quotations that support the central idea or focus iii. Apply grade 6 Reading standards to literature (e.g., "Compare and contrast texts in different forms or | <p>independent study, Group Presentations, Point of View Studies, Lit Groups,</p> | |
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| | <p>genres [e.g., stories and poems; historical novels and fantasy stories] in terms of their approaches to similar themes and topics").</p> <p>iv. Apply grade 6 Reading standards to literary nonfiction (e.g., "Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not").</p> | | |
| <p>2. Assumptions can be concealed, and require identification and evaluation</p> | <p>Students Can:</p> <ul style="list-style-type: none"> a. Accurately identify own assumptions, as well as those of others b. Make assumptions that are consistent with one another c. Identify the natural tendency in humans to use stereotypes, prejudices, biases, and distortions d. Identify stereotypes, prejudices, biases, and distortions in self and thinking of others e. Accurately state the assumptions underlying the inferences they or others make, and then accurately assess those assumptions for justifiability | <p>Lit Groups, Social Emotional Learning</p> <p>Supplemental: Current Events and Topics</p> | |

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| <p>3. Monitoring the thinking of self and others is a disciplined way to maintain awareness</p> | <p>Students Can:</p> <ul style="list-style-type: none"> a. Determine strengths and weaknesses of their thinking and thinking of others by using criteria including relevance, clarity, accuracy, fairness, significance, depth, breadth, logic, and precision b. Take control over their thinking to determine when thinking should be questioned and when it should be accepted. (intellectual autonomy) | <p>Lit Groups, Problem Solving Discussions, Class Meetings,</p> <p>Supplemental: Critical Thinking Works, Logic Puzzles,</p> | |
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Mathematics – 6th Grade

1. Number Sense, Properties, and Operations

| | Standards and Evidence Outcomes | Montessori Materials, Instructional Methods, And Tools | Measuring Methods And Tools |
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| <p>1. Quantities can be expressed and compared using ratios and rates</p> | <p>Students Can:</p> <ul style="list-style-type: none"> a. Apply the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. b. Apply the concept of a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$, and use rate language in the context of a ratio relationship. c. Use ratio and rate reasoning to solve real-world and mathematical problems. <ul style="list-style-type: none"> i. Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. ii. Use tables to compare ratios. iii. Solve unit rate problems including those involving unit pricing and constant speed. iv. Find a percent of a quantity as a rate per 100. v. Solve problems involving finding the whole, given a part and the | <p>Command Cards, Euclid's Laws, Pegboard, Centesimal Frame, Fraction Circles,</p> <p>Supplemental: Manipulatives, Practical Life (baking, measurement cups), Abstract works</p> | |

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| | <p>percent.</p> <p>vi. Use common fractions and percents to calculate parts of whole numbers in problem situations including comparisons of savings rates at different financial institutions (PFL)</p> <p>vii. Express the comparison of two whole number quantities using differences, part-to-part ratios, and part-to-whole ratios in real contexts, including investing and saving (PFL)</p> <p>viii. Use ratio reasoning to convert measurement units.</p> | | |
| <p>2. Formulate, represent, and use algorithms with positive rational numbers with flexibility, accuracy, and efficiency</p> | <p>Students Can:</p> <p>a. Fluently divide multi-digit numbers using standard algorithms.</p> <p>b. Fluently add, subtract, multiply, and divide multi-digit decimals using standard algorithms for each operation.</p> <p>c. Find the greatest common factor of two whole numbers less than or equal to 100.</p> <p>d. Find the least common multiple of two whole numbers less than or equal to 12.</p> <p>e. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor.</p> | <p>Sieve of Eratosthenes, Pegboard, Table of Multiples, Table of Factors, Fraction Skittles, Wooden Cubing, Stamp Game Squaring,</p> <p>Supplemental Materials: Geometry insets (finding fractions), Venn Diagrams, Greatest Common Factor and Lowest Common Multiple works, Word problems, Abstract Practice, Houston Montessori</p> | |

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| | <ul style="list-style-type: none"> f. Interpret and model quotients of fractions through the creation of story contexts. g. Compute quotients of fractions. h. Solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. | Command Math | |
| <p>3. In the real number system, rational numbers have a unique location on the number line and in space</p> | <p>Students Can:</p> <ul style="list-style-type: none"> a. Explain why positive and negative numbers are used together to describe quantities having opposite directions or values. <ul style="list-style-type: none"> i. Use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation. b. Use number line diagrams and coordinate axes to represent points on the line and in the plane with negative number coordinates. <ul style="list-style-type: none"> i. Describe a rational number as a point on the number line. ii. Use opposite signs of numbers to indicate locations on opposite sides of 0 on the number line. iii. Identify that the opposite of the opposite of a number is the number itself. iv. Explain when two ordered pairs | <p>Positive Negative Board, Positive Negative Snake Game, Greater than Less than practice, Classification of Number Line, Table of Pythagoras, Multiplication Board, Decimal Checkerboard</p> <p>Supplemental: Plotting Coordinates, Quadrant Grids, Thermometer Measurement, Money and Debt, Graphing, Abstract Practice,</p> | |

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| | <p>differ only by signs, the locations of the points are related by reflections across one or both axes.</p> <ul style="list-style-type: none">v. Find and position integers and other rational numbers on a horizontal or vertical number line diagram.vi. Find and position pairs of integers and other rational numbers on a coordinate plane. <p>c. Order and find absolute value of rational numbers.</p> <ul style="list-style-type: none">i. Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram.ii. Write, interpret, and explain statements of order for rational numbers in real-world contexts.iii. Define the absolute value of a rational number as its distance from 0 on the number line and interpret absolute value as magnitude for a positive or negative quantity in a real-world situation.iv. Distinguish comparisons of absolute value from statements about order. <p>d. Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane including the use of coordinates and absolute value to find distances between</p> | | |
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| | points with the same first coordinate or the same second coordinate. | | |
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2. Patterns, Functions, and Algebraic Structures

| | Standards and Evidence Outcomes | Montessori Materials, Instructional Methods, And Tools | Measuring Methods And Tools |
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| 1. Algebraic expressions can be used to generalize properties of arithmetic | <p>Students Can:</p> <ul style="list-style-type: none"> a. Write and evaluate numerical expressions involving whole-number exponents. <ul style="list-style-type: none"> i. Write, read, and evaluate expressions in which letters stand for numbers. ii. Write expressions that record operations with numbers and with letters standing for numbers. iii. Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient) and describe one or more parts of an expression as a single entity. iv. Evaluate expressions at specific | <p>Number Base Study, Algorithms, Pegboard Squaring, Wooden Cubing,</p> <p>Supplemental: Real World Algebra by Edward Zaccaro, Exponents with Factoring</p> | |

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| | <p>values of their variables including expressions that arise from formulas used in real-world problems.</p> <ul style="list-style-type: none"> v. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). <ul style="list-style-type: none"> b. Apply the properties of operations to generate equivalent expressions. c. Identify when two expressions are equivalent. | | |
| <p>2. Variables are used to represent unknown quantities within equations and inequalities</p> | <p>Students Can:</p> <ul style="list-style-type: none"> a. Describe solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? b. Use substitution to determine whether a given number in a specified set makes an equation or inequality true. c. Use variables to represent numbers and write expressions when solving a real-world or mathematical problem. <ul style="list-style-type: none"> i. Recognize that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified | <p>Euclid's Laws, Pythagoras Inset, Volume Material</p> <p>Supplemental: Expressing and Solving equations using Algebraic language, Real World Algebra by Edward Zaccaro, Kahn Academy website, IXL website, Euclid's Laws Worksheets</p> | |

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| | <p>set.</p> <ul style="list-style-type: none">d. Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p, q and x are all nonnegative rational numbers.e. Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem.f. Show that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams.g. Represent and analyze quantitative relationships between dependent and independent variables.<ul style="list-style-type: none">i. Use variables to represent two quantities in a real-world problem that change in relationship to one another.ii. Write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable.iii. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. | | |
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3. Data Analysis, Statistics, and Probability

| | Standards and Evidence Outcomes | Montessori Materials, Instructional Methods, And Tools | Measuring Methods And Tools |
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| 1. Visual displays and summary statistics of one-variable data condense the information in data sets into usable knowledge | <p>Students Can:</p> <ul style="list-style-type: none"> a. Identify a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. b. Demonstrate that a set of data collected to answer a statistical question has a distribution that can be described by its center, spread, and overall shape. c. Explain that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number. d. Summarize and describe distributions. <ul style="list-style-type: none"> i. Display numerical data in plots on a number line, including dot plots, histograms, and box plots. | <p>Supplemental: Authentic Graphs (science/social studies), Computer Graphing, Science and Social Studies controlled experiments with variables i.e. Foss kits, Scientific Method, Graphing Practice Sheets</p> | |

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| | <p>ii. Summarize numerical data sets in relation to their context.</p> <ol style="list-style-type: none">1. Report the number of observations.2. Describe the nature of the attribute under investigation, including how it was measured and its units of measurement.3. Give quantitative measures of center (median and/or mean) and variability (inter-quartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.4. Relate the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered. | | |
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4. Shape, Dimension, and Geometric Relationships

| | Standards and Evidence Outcomes | Montessori Materials, Instructional Methods, And Tools | Measuring Methods And Tools |
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| 1. Objects in space and their parts and attributes can be measured and analyzed | <p>Students Can:</p> <ul style="list-style-type: none"> a. Develop and apply formulas and procedures for area of plane figures <ul style="list-style-type: none"> i. Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes. ii. Apply these techniques in the context of solving real-world and mathematical problems. b. Develop and apply formulas and procedures for volume of regular prisms. <ul style="list-style-type: none"> i. Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths. ii. Show that volume is the same as | <p>Volume Study, Solids Review, Prisms, Volume Cubes, Algebraic Volume Formulas, Blue Volume material, Graduated Cylinders, Beakers, Equivalence Cabinet</p> <p>Supplemental: Foss Kits, 3-D Geometric Nets, Area and Volume command cards</p> | |

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| | <p>multiplying the edge lengths of a rectangular prism.</p> <p>iii. Apply the formulas $V = l w h$ and $V = b h$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.</p> <p>c. Draw polygons in the coordinate plan to solve real-world and mathematical problems.</p> <p>i. Draw polygons in the coordinate plane given coordinates for the vertices.</p> <p>ii. Use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate.</p> <p>d. Develop and apply formulas and procedures for the surface area.</p> <p>i. Represent three-dimensional figures using nets made up of rectangles and triangles.</p> <p>ii. Use nets to find the surface area of figures.</p> <p>iii. Apply techniques for finding surface area in the context of solving real-world and mathematical problems.</p> | | |
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Science – 6th Grade

1. Physical Science

| | Standards and Evidence Outcomes | Montessori Materials, Instructional Methods, And Tools | Measuring Methods And Tools |
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| <p>1. All matter is made of atoms, which are far too small to see directly through a light microscope. Elements have unique atoms and thus, unique properties. Atoms themselves are made of even smaller particles</p> | <p>Students Can:</p> <ul style="list-style-type: none"> a. Identify evidence that suggests there is a fundamental building block of matter (DOK 1) b. Use the particle model of matter to illustrate characteristics of different substances (DOK 1-2) c. Develop an evidence based scientific explanation of the atomic model as the foundation for all chemistry (DOK 1-3) d. Find and evaluate appropriate information from reference books, journals, magazines, online references, and databases to compare and contrast historical explanations for the nature of matter (DOK 1-2) | <p><i>Parts of the Atom, Elements Nomenclature, Periodic Chart of the Element, 8 Atoms Models, scientific method, research on matter, timeline of matter, collaborative writing on matter, models, science lab z</i></p> | |
| <p>2. Atoms may stick together in well-defined molecules or be packed together in large arrays. Different arrangements</p> | <p>Students Can:</p> <ul style="list-style-type: none"> a. Explain the similarities and differences between elements and compounds (DOK 1-2) b. Identify evidence suggesting that atoms form into molecules with different properties than their components (DOK 1-2) c. Find and evaluate information from a | <p>elements and compounds, research molecules, science lab, Science Fair</p> | |

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| <p>of atoms into groups compose all substances</p> | <p>variety of resources about molecules (DOK 1-2)</p> | | |
| <p>3. The physical characteristics and changes of solid, liquid, and gas states can be explained using the particulate model</p> | <p>Students Can:</p> <ul style="list-style-type: none"> a. Explain how the arrangement and motion of particles in a substance such as water determine its state (DOK 1-2) b. Distinguish between changes in temperature and changes of state using the particle model of matter (DOK 1-2) | <p>changes in temperature and changes of state, kinetic molecule theory, molecular levels during phase changes, scientific laws, theories, hypothesis, collaborative writing on states of matter, It's What Matters; Properties of Objects and Materials, science lab, Science Fair</p> | |
| <p>4. Distinguish among, explain, and apply the relationships among mass, weight, volume, and density</p> | <p>Students Can:</p> <ul style="list-style-type: none"> a. Explain that the mass of an object does not change, but its weight changes based on the gravitational forces acting upon it (DOK 1) b. Predict how changes in acceleration due to gravity will affect the mass and weight of an object (DOK 1-2) c. Predict how mass, weight, and volume affect density (DOK 1-2) d. Measure mass and volume, and use these quantities to calculate density (DOK 1) e. Use tools to gather, view, analyze, and | <p>gravitational forces, predict, measurement, appropriate tools , scientific process, practical uses of weight, mass, density, <i>Metal Volume Containers</i>, Science Fair</p> | |

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| | report results for scientific investigations about the relationships among mass, weight, volume, and density (DOK 1-2) | | |
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2. Life Science

| | Standards and Evidence Outcomes | Montessori Materials, Instructional Methods, And Tools | Measuring Methods And Tools |
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| 1. Changes in environmental conditions can affect the survival of individual organisms, populations, and entire species | <p>Students Can:</p> <ul style="list-style-type: none"> a. Interpret and analyze data about changes in environmental conditions - such as climate change - and populations that support a claim describing why a specific population might be increasing or decreasing (DOK 1-3) b. Develop, communicate, and justify an evidence-based explanation about how ecosystems interact with and impact the global environment (DOK 1-3) c. Model equilibrium in an ecosystem, including basic inputs and outputs, to | maps, ecosystems, biodiversity, global environments, terrariums, research, scientific process, , ethical traditions of science, Science Fair | |

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| | <p>predict how a change to that ecosystem such as climate change might impact the organisms, populations, and species within it such as the removal of a top predator or introduction of a new species (DOK 2-3)</p> <p>d. Examine, evaluate, question, and ethically use information from a variety of sources and media to investigate how environmental conditions affect the survival of individual organisms (DOK 1-2)</p> | | |
| <p>2. Organisms interact with each other and their environment in various ways that create a flow of energy and cycling of matter in an ecosystem</p> | <p>Students Can:</p> <p>a. Develop, communicate, and justify an evidence-based explanation about why there generally are more producers than consumers in an ecosystem (DOK 1-3)</p> <p>b. Design a food web diagram to show the flow of energy through an ecosystem (DOK 1-2)</p> <p>c. Compare and contrast the flow of energy with the cycling of matter in ecosystems (DOK 2)</p> | <p>producers and consumers, food web, jobs organisms perform, Island Ecosystems Kit, Terrarium Explorations Kit, Habitat Models, Worm Away, Exploring Pond Microlife, environmental issues and solutions, models</p> | |
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3. Earth Systems Science

| | Standards and Evidence Outcomes | Montessori Materials, Instructional Methods, And Tools | Measuring Methods And Tools |
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| 1. Complex interrelationships exist between Earth's structure and natural processes that over time are both constructive and destructive | <p>Students Can:</p> <ul style="list-style-type: none"> a. Gather, analyze, and communicate an evidence-based explanation for the complex interaction between Earth's constructive and destructive forces (DOK 2-3) b. Gather, analyze and communicate evidence from text and other sources that explains the formation of Earth's surface features (DOK 1-3) c. Use or create a computer simulation for Earth's changing crust (DOK 1-2) | <p><i>Techtronic Plates, Parts of the Volcano, Parts of Tornado, Tornado Tube, Sedimentary Tube, Landform Demonstration Kit, Stream Table Erosion Kit, Geological Landform Model, scientific process, models, Science Fair, research, computer simulator, natural disasters</i></p> | |
| 2. Water on Earth is distributed and circulated through oceans, glaciers, rivers, | <p>Students Can:</p> <ul style="list-style-type: none"> a. Gather and analyze data from a variety of print resources and investigations to account for local and world-wide water circulation and | <p><i>The Water Cycle, The Watershed, local and global water issues, sewage systems, water purification, lack or</i></p> | |

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| <p>ground water, and the atmosphere</p> | <p>distribution patterns (DOK 1-3)</p> <ul style="list-style-type: none"> b. Use evidence to model how water is transferred throughout the earth (DOK 1-3) c. Identify problems, and propose solutions related to water quality, circulation, and distribution - both locally and worldwide (DOK 1-4) d. Identify the various causes and effects of water pollution in local and world water distributions (DOK 1-2) e. Describe where water goes after it is used in houses or buildings (DOK 1-2) | <p>abundance of water</p> | |
| <p>3. Earth's natural resources provide the foundation for human society's physical needs. Many natural resources are nonrenewable on human timescales, while others can be renewed or recycled</p> | <p>Students Can:</p> <ul style="list-style-type: none"> a. Research and evaluate data and information to learn about the types and availability of various natural resources, and use this knowledge to make evidence-based decisions (DOK 2-3) b. Identify and evaluate types and availability of renewable and nonrenewable resources (DOK 1-2) c. Use direct and indirect evidence to determine the types of resources and their applications used in communities (DOK 1-2) d. Research and critically evaluate data | <p>products made from resources, Colorado resources, recycling, responsible choices, scientific process, advantages and disadvantages for types of fuels, current events, Renewable Energy Kit</p> | |

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| | <p>and information about the advantages and disadvantages of using fossil fuels and alternative energy sources (DOK 2-3)</p> | | |
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Social Studies – 6th Grade

1. History

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| | <p>Standards and Evidence Outcomes</p> | <p>Montessori Materials, Instructional Methods, And Tools</p> | <p>Measuring Methods And Tools</p> |
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| <p>1. Analyze and interpret historical sources to ask and research historical questions</p> | <p>Students Can:</p> <ul style="list-style-type: none"> a. Identify ways different cultures record history (DOK 1) b. Interpret documents and data from multiple primary and secondary sources while formulating historical questions. Sources to include but not limited to art, artifacts, eyewitness accounts, letters and diaries, artifacts, real or simulated historical sites, charts, graphs, diagrams and written texts (DOK 1-3) c. Critique information to determine if it is sufficient to answer historical questions (DOK 1-3) | <p>ways different cultures report history- art, artifacts, eye witness accounts, letters, diaries, real or simulated historical sites, charts, graphs, diagrams, written texts, research, points of view</p> | |
| <p>2. The historical eras, individuals, groups, ideas and themes in regions of the Western Hemisphere and their relationships with one another</p> | <p>Students Can:</p> <ul style="list-style-type: none"> a. Explain how people, products, cultures, and ideas interacted and are interconnected over key eras in the Western Hemisphere (DOK 1-2) b. Determine and explain the historical context of key people, events, and ideas over time including the examination of different perspectives from people involved. Topics to include but not limited to Aztec, Maya, Inca, Inuit, early Native American cultures of North America, major explorers, colonizers of countries in the Western Hemisphere, | <p>key eras, Aztec, Mya, Inca, Inuit, Early Native Americans, explorers, colonizers of countries, Columbian Exchange, success and failures of civilizations, timelines, Mystery History,</p> | |

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| | <p>and the Columbian Exchange (DOK 1-3)</p> <p>c. Identify examples of the social, political, cultural, and economic development in key areas of the Western Hemisphere (DOK 1-2)</p> | | |
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2. Geography

| | Standards and Evidence Outcomes | Montessori Materials, Instructional Methods, And Tools | Measuring Methods And Tools |
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| 1. Use geographic tools to solve problems | <p>Students Can:</p> <p>a. Use longitude, latitude, and scale on maps and globes to solve problems (DOK 1-2)</p> <p>b. Collect and analyze data to interpret regions in the Western Hemisphere (DOK 1-3)</p> <p>c. Ask multiple types of questions after examining geographic sources (DOK 2-3)</p> <p>d. Interpret and communicate geographic data to justify potential solutions to problems (DOK 1-3)</p> <p>e. Distinguish different types of maps and</p> | compare variety of maps and globes, latitude and longitude, various ways to find directions | |

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| | use them in analyzing an issue (DOK 1-3) | | |
| 2. Human and physical systems vary and interact | <p>Students Can:</p> <ul style="list-style-type: none"> a. Classify and analyze the types of connections between places (DOK 2-3) b. Identify physical features and explain their effects on people in the Western Hemisphere (DOK 1-2) c. Give examples of how people have adapted to their physical environment (DOK 1) d. Analyze positive and negative interactions of human and physical systems in the Western Hemisphere (DOK 1-2) | Fundamental Needs of People physical geography of Western Hemisphere, biomes, analyzing data, globalization, interdependence | |

3. Economics

| | Standards and Evidence Outcomes | Montessori Materials, Instructional Methods, And Tools | Measuring Methods And Tools |
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| 1. Identify and | Students Can: | traditional, market, mixed, production and | |

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| <p>analyze different economic systems</p> | <ul style="list-style-type: none"> a. Describe the characteristic of traditional, command, market, and mixed economic systems (DOK 1-2) b. Explore how different economic systems affect job and career options and the population's standards of living (DOK 1-2) c. Use economic reasoning to explain why certain careers are more common in one region than in another and how specialization results in more interdependence (DOK 2-3) | <p>distribution of goods and services, economic development, career opportunities, levels of education</p> | |
| <p>2. Saving and investing are key contributors to financial well-being (PFL)</p> | <p>Students Can:</p> <ul style="list-style-type: none"> a. Differentiate between saving and investing (DOK 1-2) b. Give examples of how saving and investing can improve financial well-being (DOK 1-2) c. Describe the advantages and disadvantages of saving for short- and medium-term goals (DOK 1-2) d. Explain the importance of an emergency fund (DOK 1) e. Explain why saving is a prerequisite to investing (DOK 1) f. Explain how saving and investing income can improve financial well-being (DOK 1-2) | <p>compare and contrast, emergency fund, financial well being, risky investments, investment research,</p> | |

4. Civics

| | Standards and Evidence Outcomes | Montessori Materials, Instructional Methods, And Tools | Measuring Methods And Tools |
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| 1. Analyze the interconnectedness of the United States and other nations | <p>Students Can:</p> <ul style="list-style-type: none"> a. Discuss advantages and disadvantages of living in an interconnected world (DOK 1-2) b. Examine changes and connections in ideas about citizenship in different times and places (DOK 1-3) c. Describe how groups and individuals influence the government and other nations (DOK 1-2) d. Explain how political ideas and significant people have interacted, are interconnected, and have influenced nations (DOK 1-3) e. Analyze political issues from both a national and global perspective over time (DOK 1-4) f. Identify historical examples illustrating how Americans from diverse backgrounds perceived and reacted to various global issues (DOK | political ideas, historical perspectives from different viewpoints, and current events , globalization | |

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| | 1-3) | | |
| 2. Compare multiple systems of government | <p>Students Can:</p> <ul style="list-style-type: none"> a. Describe different forms of government (DOK 1) b. Identify how different forms of government relate to their citizens. Topics to include but limited to democracy and authoritarian government (DOK 1-2) c. Compare the economic components of different forms of government (DOK 1-2) d. Compare various governments' and the liberties of their citizens (DOK 1-2) | <p>democracy and authoritarian, rights, economics, past and present effective and ineffective components, support ideas, global consequences, current events, timelines of Presidents and World Leaders</p> | |