

Appendix B

Common Core and
Next Generation Science Standards
Alignment with Montessori Curriculum
(Sample documents)

Common Core/ Montessori Matrix

3rd, 6th and 7th Grade

3rd Grade Common Core/Montessori Alignment			
Language-Reading			
Standards for Reading: Informational Text			
Anchor Standard for Reading	3rd Grade CC State Standards	Montessori Material	Supplemental Materials
Key Ideas and Details			
1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.	R I.3. 1. Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.		Reading group oral discussion, read aloud
2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.	R I.3.2. Determine the main idea of a text; recount the key details and explain how they support the main idea.		Reading group oral discussion, read aloud, main idea and detail graphic organizer
3. Analyze how and why individuals, events, or ideas develop and interact over the course of a text.	R I.3.3. Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.		Reading group oral discussion, read aloud, cultural units
Craft and Structure			
4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.	R I.3.4. Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 3 topic or subject area.		Reading group oral discussion, language lessons, cultural units
5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.	R I.3.5. Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.		Reading group oral discussion, cultural research
6. Assess how point of view or purpose shapes the content and style of a text.	R I.3.6. Distinguish their own point of view from that of the author of a text.		Reading group oral discussion, read aloud
Integration of Knowledge and Ideas			

<p>7. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.¹</p>	<p>R I.3.7. Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events</p>		<p>Reading group oral discussion, language lessons, cultural units, map lesson</p>
<p>8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.</p>	<p>R I.3.8. Describe the logical connection between particular sentences and paragraphs in a text (e.g., comparison, cause/effect, first/second/third in a</p>		<p>Reading group oral discussion, read aloud</p>
<p>9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.</p>	<p>R I.3.9. Compare and contrast the most important points and key details presented in two texts on the same topic.</p>		<p>Reading group oral discussion, read aloud, compare and contrast cards, Historical Halloween, Cultural Fair, Science Fair</p>
<p>Range of Reading and Level of Text Complexity</p>			
<p>10. Read and comprehend complex literary and informational texts independently and proficiently.</p>	<p>R I.3.10. By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 2–3 text complexity band independently and proficiently.</p>		<p>Reading group oral discussion, read aloud, cultural units, Historical Halloween, Cultural Fair, Science Fair</p>

3rd Grade Common Core/Montessori Alignment

Language-Reading

Standards for Reading: Literature

Anchor Standard for Reading	3rd Grade CORE Standards	Montessori Materials	Supplemental Materials
Key Ideas and Details			
1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.	RL.3.1. Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.		Reading group, SRA, read aloud, cultural units
2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.	RL.3.2. Recount stories, including, fables, folktales, and myths from diverse cultures; determine the central message, lesson or moral and explain how it is conveyed through key details in the text.		Reading group, SRA, read aloud, specific graphic organizer
3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text.	RL.3.3. Describe characters in a story (e.g., their traits, motivations, or feelings) and explain how their actions contribute to the sequence of events.		Reading group, SRA, read aloud, cultural units
Craft and Structure			
4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape	RL.3.4. Determine the meaning of words and phrases as they are used in a text, distinguishing literal from nonliteral language.		Dictionary work, skyscrapers, reading group, read aloud, cultural units
5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.	RL.3.5. Refer to parts of stories, dramas, and poems when writing or speaking about a text, using terms such as chapter, scene, and stanza; describe how each successive part builds on earlier sections.		Reading group, SRA, read aloud, poetry
6. Assess how point of view or purpose shapes the content and style of a text.	RL.3.6. Distinguish their own point of view from that of the narrator or those of the characters.		Reading group, read aloud

Integration of Knowledge and Ideas			
7. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.¹	RL.3.7. Explain how specific aspects of a text's illustrations contribute to what is conveyed by the words in a story (e.g., create mood, emphasize aspects of a character or setting).		Reading group, read aloud
8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.	Not applicable to literature.		
9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.	RL.3.9. Compare and contrast the themes, settings, and plots of stories written by the same author about the same or similar characters (e.g., in books from a series).		Reading group, read aloud, compare and contrast cards, Read Works
Range of Reading and Level of Text Complexity			
10. Read and comprehend complex literary and informational texts independently and proficiently.	RL.3.10. By the end of the year, read and comprehend literature, including stories, dramas and poetry, at the high end of the grades 2-3 text complexity band independently and		

3rd Grade Common Core/Montessori Alignment

Language-Writing

Standards for Writing

Anchor Standard for Writing	3rd Grade CORE Standards	Montessori Material	Supplemental Materials
Text Types and Purposes		Writers Workshop	
1. Write opinion pieces on topics or texts, supporting a point of view with reasons.	<p>W.3. 1. a-Introduce the topic or text they are writing about, state an opinion, and create an organizational structure that lists reasons.</p> <p>b-Provide reasons that support the opinion.</p> <p>c-Use linking words and phrases (e.g., because, therefore, since, for example) to connect opinion and reasons.</p> <p>d-Provide a concluding statement or section.</p>		Four square 'opinion' + reasons/detail and concluding statement
2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.	<p>W.3.2.a- Introduce a topic and group related information together; include illustrations when useful to aiding comprehension.</p> <p>b- Develop the topic with facts, definitions, and details.</p> <p>c-Use linking words and phrases (e.g., also, another, and, more, but) to connect ideas within categories of information.</p> <p>d-Provide a concluding statement</p>		Four square, research, classroom newspaper, Historical Halloween, Cultural Fair, Science Fair
3. Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.	<p>W.3.3. a- Establish a situation and introduce a narrator and/or characters; organize an event sequence that unfolds naturally.</p> <p>b-Use dialogue and descriptions of actions, thoughts, and feelings to develop experiences and events or show the response of characters to situations.</p> <p>c-Use temporal words and phrases to signal event order.</p> <p>d-Provide a sense of closure.</p>		Four square, story writing, journal
Production and Distribution of Writing			

4. Produce clear and coherent writing in which the development, organization and style are appropriate to task, purpose and audience.	W.3.4. With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose.		Four square
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting or trying a new approach.	W.3.5. With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing. (Editing for conventions should demonstrate command of Language standards 1-3 up to and including grade 3 here.)		Writer's workshop
6. Use technology, including the internet, to produce and publish writing and to interact and collaborate with others.	W.3.6. With guidance and support from adults, use technology to produce and publish writing (using keyboarding skills) as well as to interact and collaborate with others.		Research group projects, class newspaper, Historical Halloween, Cultural Fair, Science Fair, KWT
Research to Build and Present Knowledge			
7. Conduct short research projects that build knowledge about a topic.	W.3.7. Conduct short research projects that build knowledge about a topic.		Four square, research, cultural, Historical Halloween, Cultural Fair, Science Fair
8. Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided	W.3.8. Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.		Research, cultural, class newspaper, field-trips, Historical Halloween, Cultural Fair, Science Fair
9. Begins in grade 4			
Range of Writing			
10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	W.3.10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.		Journal, four square, Writer's workshop, research, cultural

3rd Grade Common Core/Montessori Alignment			
Language-Speaking and Listening			
Standards for Speaking and Listening			
Anchor Standard for Speaking and Listening	3rd Grade CORE Standards	Montessori Material	Supplemental Materials
Comprehension and Collaboration			
1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on other's ideas and expressing their own clearly and persuasively.	SL.3.1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.		Reading group, read aloud, class meeting, peace table, peace education, classroom newspaper
	SL.3.1A Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.		Reading group, cultural unit research, Historical Halloween, Cultural Fair, Science Fair, sharing
	SL.3.1. B Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).		Reading group, read aloud, cultural unit research, Historical Halloween, Cultural Fair, Science Fair, sharing, class meetings, peace conference
	SL.3.1.C Ask questions to check understanding of information presented, stay on topic, and link their comments to the remarks of others.		Reading group, read aloud, cultural unit research, Historical Halloween, Cultural Fair, Science Fair, sharing, class meetings
	SL.3.1.D Explain their own ideas and understanding in light of the discussion.		Reading group, read aloud, cultural unit research, Historical Halloween, Cultural Fair, Science Fair, sharing, class meetings

<p>2. Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.</p>	<p>SL. 3. 2 Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.</p>		<p>Reading group, Historical Halloween, Cultural Fair, Science Fair, read aloud</p>
<p>3. Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.</p>	<p>SL. 3. 3 Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.</p>		<p>Reading group, read aloud, cultural unit research, Historical Halloween, Cultural Fair, Science Fair, sharing, class</p>
<p>Presentation of Knowledge and Ideas</p>			
<p>4. Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.</p>	<p>SL. 3.4 Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.</p>		<p>Reading group, read aloud, cultural unit research, Historical Halloween, Cultural Fair, Science Fair, class meeting, sharing, newspaper</p>
	<p>SL. 3.4. A Plan and deliver an informative/explanatory presentation on a topic that: organizes ideas around major points of information, follows a logical sequence, includes supporting details, uses clear and specific vocabulary, and provides a strong conclusion.</p>		<p>Research, Historical Halloween, Cultural Fair, Science Fair, sharing</p>
<p>5. Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.</p>	<p>SL. 3.5 Create engaging audio recordings of stories or poems that demonstrate fluid reading at an understandable pace; add visual displays when appropriate to emphasize or enhance certain facts or details.</p>		<p>Research, Historical Halloween, Cultural Fair, Science Fair, class newspaper</p>

6.Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.	SL. 3.6 Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification. (See grade 3 Language standards 1 and 3 here for specific expectations.)		Research, Historical Halloween, Cultural Fair, Science Fair, sharing, reading group, group meeting, peace table conference
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3rd Grade Common Core/Montessori Alignment			
Language			
Standards for Language			
Anchor Standard for Language	3rd Grade CORE Standards	Montessori Material	Supplemental Material
Conventions of Standard English			
1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	L. 3. 1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.		
	L.3.1.A Explain the function of nouns, pronouns, verbs, adjectives, and adverbs in general and their functions in particular sentences.	Grammar K. E. : Noun, adjectives, verbs, adverbs, pronouns, sentence analysis; Grammar Boxes	Grammar follow-up activities, command cards
	L.3.1.B Form and use regular and irregular plural nouns.	Noun types	Plural noun follow-up; s, es, ies, ves, etc.
	L.3.1.C Use abstract nouns (e.g., childhood).	Concrete and abstract nouns	Noun types follow-up activities
	L.3.1. D Form and use regular and irregular verbs.	Verbs tenses	verb tense follow-up activities
	L.3.1. E Form and use the simple (e.g., I walked; I walk; I will walk) verb tenses.	Verb tenses, Verb G. B. IV	verb tense follow-up activities
	L.3.1.F Ensure subject-verb and pronoun-antecedent agreement.	Sentence analysis	Subject-verb agreement follow-up
	L.3.1.G Form and use comparative and superlative adjectives and adverbs, and choose between them depending on what is to be modified.	K. E. Adjective comparison, Adjective G.B. III	Adjective follow-up
	L.3.1.H Use coordinating and subordinating conjunctions.	K. E. Conjunctions	Conjunction follow-up
	L.3.1.I Produce simple, compound, and complex sentences.	Sentence types, sentence analysis	Sentence type follow-up
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.	L.3.2. A. Capitalize appropriate words in titles.	K. E. Capital Letters	Sky M, capitalization follow-up , research, lesson headings
	L.3.2. B. Use commas in addresses.	K. E. Commas	Sky , Address follow-up

	L.3.2. C. Use commas and quotation marks in dialogue.	K. E. Quotation Marks	Quotation mark follow-up
	L.3.2. D. Form and use possessives.	K. E. Apostrophe	Sky, Apostrophe follow-up
	L.3.2. E. Use conventional spelling for high-frequency and other studied words and for adding suffixes to base words (e.g., sitting, smiled, cried, happiness)	Puzzle words, K. E. Suffix	Spelling group and follow-up, Star spelling, suffix follow-up, verb tense follow-up, plurals
	L.3.2. F. Use spelling patterns and generalizations (e.g., word families, position-based spellings, syllable patterns, ending rules, meaningful word parts) in writing words.	K. E. Period	Spelling group and follow-up, sentence follow-up, affix follow-up, creative writing
	L.3.2. G. Consult reference materials, including beginning dictionaries, as needed to check and correct spellings.	K. E. Dictionary	Sky W, Quick Word, dictionaries, dictionary.com website
Knowledge of Language			
3. Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.	L.3.3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.		Mechanics K. E. , Grammar K. E. , Vocabulary K. E., Creative writing, journal, reading group, research
	L.3.3.A. Choose words and phrases for effect.*		Creative writing, journal, reading group, research
	L.3.3.B. Recognize and observe differences between the conventions of spoken and written standard English.	Mechanics K. E.	Creative writing, journal, reading group
Vocabulary Acquisition and Use:			

<p>3.4 Determine to clarify the meaning of unknown and multiple-meaning word and phrases based on grade 3 reading and content, choosing flexibly from a range of strategies.</p>			
	<p>L.3.4. A. Use sentence-level context as a clue to the meaning of a word or phrase.</p>		<p>Reading group, read aloud, SRA</p>
	<p>L.3.4. B. Determine the meaning of the new word formed when a known affix is added to a known word (e.g., agreeable/disagreeable, comfortable/uncomfortable, care/careless, heat/preheat).</p>	<p>K. E. Prefix, K. E. Suffix</p>	<p>Prefix and Suffix follow-up</p>
	<p>L.3.4. C Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., company, companion).</p>		<p>Prefix and Suffix follow-up, spelling group</p>
	<p>L.3.4. D. Use glossaries or beginning dictionaries, both print and digital, to determine or clarify the precise meaning of key words and phrases.</p>		<p>Sky W, Quick Word, dictionaries, dictionary.com website</p>
<p>5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.</p>	<p>5. A. Distinguish the literal and nonliteral meanings of words and phrases in context (e.g., take steps).</p>		<p>Reading group, read aloud, SRA, poetry</p>
	<p>5. B. Identify real-life connections between words and their use (e.g., describe people who are friendly or helpful)</p>		<p>Suffix follow-up, spelling group</p>
	<p>5. C. Distinguish shades of meaning among related words that describe states of mind or degrees of certainty (e.g., knew, believed, suspected, heard, wondered).</p>		<p>Reading group, read aloud, SRA</p>

<p>6. Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.</p>		<p>All Grammar materials, all Vocabulary materials, all Mechanics materials</p>	<p>Reading group, read aloud, SRA, language follow-up, creative writing, cultural research, class meetings, sharing, peace education</p>
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3rd Grade Common Core/Montessori Alignment

3rd Grade Common Core/Montessori Alignment			
Language-Reading Strand			
Standards for Foundational Skills			
Anchor Standard for Reading	3rd Grade CORE Standards	Montessori Material	Supplemental Materials
	<u>3rd Grade Reading Standards for Foundational</u>		
Phonics and Word Recognition			
	RF. 3.3 Know and apply grade-level phonics and word analysis.	Listening activities, movable alphabet, word lists, 3 part cards, phonogram booklets and readers.	reading group, informational text for research, skyscrapers, grammar and word study follow-up, spelling group
	RF. 3.3.A Identify and know the meaning of the most common prefixes and derivational suffixes.	Prefix K. E., Suffix K. E.	follow-up activities
	RF. 3.3.B Decode words with common Latin suffixes.	Suffix Boxes, Command cards	Suffix follow-up, Command cards
	RF. 3.3. C Decode multi-syllab	Syllable K. E., follow-up	
	RF. 3.3. D Read grade appropriate irregularly spelled words.	puzzle words	reading group, spelling program, cultural unit, skyscrapers, language material
Fluency			
	RF. 3.4 Read with sufficient accuracy and fluency to support comprehension.		reading group, research reports, Historical Halloween, Cultural Fair, Science Fair, sharing form
	RF. 3.4. A Read on level text with purpose and understanding.		reading group, research reports, Historical Halloween, Cultural Fair, Science Fair, sharing form
	RF. 3.4. B Read on level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings.		poetry
	RF. 3.4.C Use context to confirm or self-correct word recognition and understanding, re-reading as necessary.		reading strategies

3rd Grade Common Core/Montessori Alignment

Math

Standards for Math

Operations and Algebraic Thinking	Montessori Material	Supplemental Material
Represent and solve problems involving multiplication and division.		
3. OA.A.1 Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be	multiplication bead layout, chains, multiplication board, multiplication finger chart	word problems, command cards, ETC, Math Cards-MC
3. OA.A.2. Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in	division board, stamp game, test tubes, rack and tubes, division finger chart	word problems, command cards, ETC, Math Cards-MC
3. OA.A.3. Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to	stamp game	word problems, command cards, ETC, Math Cards-MC
3. OA.A.4. Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 \times ? = 48$, $5 = _ \div 3$,	multiplication board, multiplication finger chart, division board, division finger chart	word problems, ETC, Math Cards-MC
Understand properties of multiplication and the relationship between		
3. OA.B 5. Apply properties of operations as strategies to multiply and divide.2 Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$, then $15 \times 2 = 30$, or by $5 \times 2 = 10$, then $3 \times 10 = 30$. (Associative property of multiplication.) Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$,	multiplication bead layout, multiplication board, multiplication finger chart, division board, division finger chart	fact family, word problems, command cards, ETC, Math Cards-MC
3. O.A.B. 6. Understand division as an unknown-factor problem. For example, find $32 \div 8$ by finding the number that makes 32 when multiplied by 8.	multiplication board, multiplication finger chart, division board, division finger chart	fact family, word problems, command cards, ETC, Math Cards-MC

Multiply and divide within 100.		
3. OA. C. 7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-	multiplication board, multiplication finger chart, division board, division finger chart	fact family, word problems, command cards, math facts, ETC, Math Cards-MC
Solve problems involving the four operations, and identify and explain patterns in arithmetic.		
3.OA. D. 8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation	stamp game	fact family, word problems, command cards, "Word Problem of the Day", rounding lesson, ETC, Math Cards-MC
3. OA. D9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two	multiplication bead layout, chains, multiplication board, multiplication finger chart, addition strip board, addition finger chart, skip counting booklet	fact family, word problems, command cards, "Word Problem of the Day", odd and even, ETC, Math Cards-MC
Number and Operations in Base Ten		
Use place value understanding and properties of operations to perform multi		
3. NBT. A. 1 Use place value understanding to round whole numbers to the nearest 10 or 100.	number card layout	Math Insights, rounding lesson "roller coaster", ETC, Math Cards-MC
3. NBT. A. 2. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the	stamp game	Inverse operation, ETC, Math Cards-MC; Inverse operation
3. NBT. A.3 . Multiply one-digit whole numbers by multiples of 10 in the range 10-90 (e.g., 9×80 , 5×60) using strategies based on place value and properties of	stamp game, bead frame, dot board	command cards, ETC, Math Cards-MC
Number and Operations --Fractions		
Develop understanding of fractions as numbers.		

3.NF. A.1. Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size $1/b$.	Fraction Key Experience, fraction insets, fraction box	command cards, ETC, Math Cards-MC
3.NF. A. 2. Understand a fraction as a number on the number line; represent fractions on a number line diagram.	Fraction insets, fraction box	Fraction number line, ETC, Math Cards-MC
3.NF. A. 2A. Represent a fraction $1/b$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size $1/b$ and that the endpoint of the part based at 0	Fraction insets, fraction box	Fraction number line, ETC, Math Cards-MC
3.NF. A. 2B. Represent a fraction a/b on a number line diagram by marking off a lengths $1/b$ from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the	Fraction insets, fraction box	Fraction number line, ETC, Math Cards-MC
3.NF. A.3. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.	Fraction insets, fraction box	Fraction number line, ETC, Math Cards-MC
3.NF. A. 3A. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.	Fraction insets, fraction box	Fraction number line, ETC, Math Cards-MC
3.NF. A. 3B. Recognize and generate simple equivalent fractions, e.g., $1/2 = 2/4$, $4/6 = 2/3$. Explain why the fractions are equivalent, e.g., by using a visual	Fraction insets, fraction box	Math Insights, ETC, Math Cards-MC
3.NF. A. 3C. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form $3 = 3/1$; recognize that $6/1 = 6$; locate $4/4$ and 1 at the same	Fraction insets, fraction box	ETC, Math Cards-MC
3.NF. A. 3D. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols $>$, $=$, or $<$,	Fraction insets, fraction box	ETC, Math Cards-MC, Math Insights
Measurement and Data		
Solve problems involving measurement		

3. MD. A.1. Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.	Clock material	Math Insights, word problems, ETC, Math Cards-MC
3. MD. A.2. Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).1 Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a		ETC, Math Cards-MC, Math Insights, measurement materials, command cards , word problems, cooking projects
Represent and interpret data.		
3. MD. B..3. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.		ETC, Math Cards-MC, Math Insights, graph command cards and word problems
3. MD. B.4. Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.		ETC, Math Cards-MC, Math Insights, measurement materials, command cards and word problems
Geometric measurement: understand concepts of area and relate area to		
3. MD. C.5. Recognize area as an attribute of plane figures and understand concepts of area measurement.	Yellow area material, geometric stick box	Command cards, ETC, Math Cards-MC
3. MD. C.5A. A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area.	Yellow area material, geometric stick box	Command cards, ETC, Math Cards-MC

3. MD. C.5B. A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units.	Yellow area material, geometric stick box	Command cards, ETC, Math Cards-MC
3. MD. C. 6. Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).	Yellow area material, geometric stick box	Command cards, ETC, Math Cards-MC
3. MD. C.7. Relate area to the operations of multiplication and addition.	addition and multiplication finger charts	Area formula, ETC, Math Cards-MC
3. MD. C.7A. Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.	geometric stick box, constructive triangle boxes,	geometric stick box, constructive triangle boxes,
3. MD. C.7B. Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.	geometric stick box, constructive triangle boxes, geometric cabinet	word problems, command cards, ETC, Math Cards-MC
3. MD. C.7C. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning.	geometric stick box, constructive triangle boxes, geometric cabinet	word problems, command cards, ETC, Math Cards-MC
		word problems, command cards
Geometric measurement: recognize perimeter		
3. MD. D.8. Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.	geometric stick box, constructive triangle boxes, geometric cabinet, square insets	Command cards, word problems
Geometry		
Reason with shapes and their attributes.		

<p>3. G. A. 1. Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.</p>	<p>geometric stick box, constructive triangle boxes, geometric cabinet, square insets</p>	<p>Command cards, ETC, Math Cards-MC</p>
<p>3. G. A. 2. Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as $\frac{1}{4}$ of the area of the shape.</p>	<p>Fraction insets, fraction box</p>	<p>Command cards, word problems, fraction number line, ETC, Math Cards-MC</p>

6th Grade Common Core/Montessori Alignment

Language-Reading

Standards for Reading Informational Text

Anchor Standard for Reading	6th Grade CORE Standards	Montessori Materials	Supplemental Materials
Key Ideas and Details			
1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.	RI.6. 1.Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.		Reading group, read aloud, cultural unit, Science SRA, Specific Skills program
2.Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.	RI.6.2. 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.		Reading group, read aloud, graphic organizer, cultural, Science SRA, Specific Skills program
3. Analyze how and why individuals, events, or ideas develop and interact over the course of a text.	RI.6.3. Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes).		Reading group oral discussion, read aloud, cultural units, Science SRA, Specific Skills program

Craft and Structure

4.Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.	RI.6.4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings.		Reading group oral discussion, language lessons, vocabulary lessons, cultural units, Science SRA, Specific Skills program
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<p>5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.</p>	<p>RI.6.5. 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.</p>		<p>Reading group oral discussion, cultural research</p>
<p>6. Assess how point of view or purpose shapes the content and style of a text.</p>	<p>RI.6.6. Determine an author's point of view or purpose in a text and explain how it is conveyed in the text.</p>		<p>Reading group oral discussion, read aloud, cultural research, Science SRA</p>
<p>Integration of Knowledge and Ideas</p>			
<p>7. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.¹</p>	<p>RI.6.7. Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.</p>		<p>Reading group oral discussion, language lessons, cultural units, research, computer lab, Science SRA, Specific Skills program</p>
<p>8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.</p>	<p>RI.6.8. 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>Reading group oral discussion, read aloud, Science SRA, Specific Skills program</p>

<p>9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.</p>	<p>RI.6.9. 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>		<p>Reading group oral discussion, read aloud, literature circle, Science SRA, cultural research</p>
<p>Range of Reading and Level of Text Complexity</p>			
<p>10. Read and comprehend complex literary and informational texts independently and proficiently.</p>	<p>RI.6.10. 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>		<p>Reading group oral discussion, read aloud, literature circle, cultural units, Science SRA, Specific Skills program</p>

6th Grade Common Core/Montessori Alignment			
Language-Reading Strand			
Standards for Literature			
Anchor Standard for Reading	6th Grade CORE Standard	Montessori Material	Supplemental Materials
Key Ideas and Details			
1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.	RL. 6.1. Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.		Reading group, literature circle
2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.	RL. 6.2. 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.		Reading group, literature circle
3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text.	RL. 6.3. Describe how a particular story's 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.		Reading group, literature circle

Craft and Structure		
4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.	RL. 6.4. 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.	Dictionary work, reading group, literature circle
5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.	RL. 6.5. 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.	Reading group, literature circle, poetry
6. Assess how point of view or purpose shapes the content and style of a text.	RL. 6.6. Explain how an author develops the point of view of the narrator or speaker in a text.	Reading group, literature circle
Integration of Knowledge and Ideas		

<p>7. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.¹</p>	<p>RL. 6.7. 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 what</p>		<p>Reading group, literature circle, computer lab</p>
<p>8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.</p>	<p>Not applicable to literature.</p>		
<p>9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.</p>	<p>RL. 6.9. 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>		<p>Reading group, literature circle, poetry, history</p>
<p>Range of Reading and Level of Text Complexity</p>			

10. Read and comprehend complex literary and informational texts independently and proficiently.

RL. 6.10. 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.

Reading group, literature circle, poetry

6th Grade Common Core/Montessori Alignment			
Language-Writing			
Standards for Writing			
Anchor Standard for Writing	6th Grade CORE Standards	Montessori Material	Supplemental Materials
Text Types and Purposes			
1. Write arguments to support claims in an analysis of substantive topics or texts using valid reasoning and relevant and sufficient evidence.	W. 6.1. Write arguments to support claims with clear reasons and relevant evidence.		Creative writing, 6 traits, newspaper, cultural/science research, debate, L. Calkins
	W. 6.1.A Introduce claim(s) and organize the reasons and evidence clearly.		Creative writing, 6 traits, newspaper, cultural, science research, debate, student govt.
	W. 6.1.B. Support claim(s) with clear reasons and relevant evidence, using credible sources and demonstrating an understanding of the topic or text.		Creative writing, 6 traits, newspaper, cultural/science research, debate, student govt.
	W. 6.1.C. Use words, phrases, and clauses to clarify the relationships among claim(s) and reasons.		Creative writing, 6 traits, newspaper, cultural/science research, debate, student govt.
	W.6.1.D Establish and maintain a formal style.		Creative writing, 6 traits, newspaper, cultural/science research, debate, student govt., L.
	W. 6.1. E Provide a concluding statement or section that follows from the argument presented.		Creative writing, 6 traits, newspaper, debate, student govt., L. Calkins

<p>2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.</p>	<p>W. 6.2. Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.</p>		<p>Creative writing, 6 traits, newspaper, cultural/science research, debate, student govt., L. Calkins</p>
	<p>W. 6.2.A 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</p>		<p>Creative writing, 6 traits, newspaper, cultural/science research, debate, student govt., L. Calkins</p>
	<p>W. 6.2.B. Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples.</p>		<p>Creative writing, 6 traits, newspaper, cultural/science research, debate, student govt., L. Calkins</p>
	<p>W. 6.2.C. Use appropriate transitions to clarify the relationships among ideas and concepts.</p>		<p>Creative writing, 6 traits, newspaper, cultural, science research, debate, student govt., L. Calkins</p>
	<p>W. 6.2.D. Use precise language and domain-specific vocabulary to inform about or explain the topic.</p>		<p>Vocabulary lessons, creative writing</p>
	<p>W. 6.2.E. Establish and maintain a formal style.</p>		<p>Creative writing, 6 traits, newspaper, cultural/science research, debate, student govt., L. Calkins</p>

	W.6.2.F Provide a concluding statement or section that follows from the information or explanation presented.		Creative writing, 6 traits, newspaper, cultural/science research, debate, student govt., L. Calkins
3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details and well-structured event sequences.	W. 6.3. Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.		Creative writing, 6 traits, newspaper, cultural/science research, debate, student govt., L. Calkins
	W. 6.3.A. 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.		Creative writing, 6 traits, newspaper
	W. 6.3.B. Use narrative techniques, such as dialogue, pacing, and description, to develop experiences, events, and/or characters.	Quotation marks K.E.	Creative writing, 6 traits, L. Calkins
	W. 6.3.C. Use a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another.		Creative writing, 6 traits, L. Calkins
	W. 6.3.D. Use precise words and phrases, relevant descriptive details, and sensory language to convey experiences and events.	Adjectives, adverbs	Creative writing, 6 traits
	W. 6.3.E. Provide a conclusion that follows from the narrated experiences or events.		Creative writing, 6 traits, L. Calkins

Production and Distribution of Writing			
<p>4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p>	<p>W. 6.4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p>		<p>Creative writing, 6 traits, newspaper, cultural/science research, debate, student govt.</p>
<p>5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.</p>	<p>W. 6.5. With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.</p>		<p>Writers Workshop, L. Calkins</p>
<p>6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.</p>	<p>W. 6.6. 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>		<p>Writers Workshop, keyboarding</p>
<p>Research to Build and Present Knowledge</p>			
<p>Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.</p>	<p>W.6.7. Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.</p>		<p>Research project, cultural unit</p>

<p>Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.</p>	<p>W.6.8. 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>		<p>Research, computer lab</p>
<p>Draw evidence from literary or informational texts to support analysis, reflection, and research.</p>	<p>W.6.9. Draw evidence from literary or informational texts to support analysis, reflection, and research.</p>		<p>Creative writing, 6 traits, cultural/science research</p>
	<p>W.6.9.A. Apply grade 6 Reading standards to literature (e.g., "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>		<p>Reading group, literature circle, creative writing, 6 traits</p>
	<p>W.6.9.B. 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>Reading group, literature circle, creative writing, 6 traits, cultural/science research</p>
<p>Range of Writing</p>			

<p>Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.</p>	<p>W.6.10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.</p>		<p>Creative writing, Writers Workshop, Journal</p>
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6th Grade Common Core/Montessori Alignment			
Language-Speaking and Listening			
Standards for Speaking and Listening			
Anchor Standard for Speaking and Listening	6th Grade CORE Standards	Montessori Material	Supplemental Materials
Comprehension and Collaboration			
1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on other's ideas and expressing their own clearly and persuasively.	<p>SL. 6. 1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and</p> <p>SL. 6. 1.A 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.</p> <p>SL. 6. 1.B Follow rules for collegial discussions, set specific goals and deadlines, and define individual roles as needed.</p>		<p>Reading group, read aloud, class meeting, peace table, peace education, classroom newspaper, cultural unit, student govt.</p> <p>Reading group, literature circle, classroom discussion and guidelines, student govt., research presentations, class meeting, debate</p> <p>Reading group, literature circle, classroom discussion and guidelines, student govt., research presentations, class meeting, debate</p>

	<p>SL. 6. 1.C Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion.</p> <p>SL. 6 1.D Review the key ideas expressed and demonstrate understanding of multiple perspectives through reflection and paraphrasing.</p>		<p>Reading group, literature circle, classroom discussion, student govt., research presentations, class meeting, debate</p>
<p>2. Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.</p>	<p>SL. 6. 2 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>Reading group, literature circle, classroom discussion, student govt., research presentations, class meeting, debate</p>
<p>3. Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.</p>	<p>SL. 6. 3 Delineate a speaker's argument and specific claims, distinguishing claims that are supported by reasons and evidence from claims that are not.</p>		<p>Reading group, literature circle, classroom discussion, student govt., research presentations, class meeting, debate</p>
<p>Presentation of Knowledge and</p>			

<p>4. Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.</p>	<p>SL. 6. 4 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.</p>	<p>Reading group, literature circle, classroom discussion, student govt., research presentations, class meeting, debate</p>
<p>5. Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.</p>	<p>SL. 6. 5 Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information.</p>	<p>Research presentation, computer lab</p>
<p>6. Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.</p>	<p>SL. 6. 6 Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See grade 6 Language standards 1 and 3 for specific expectations.)</p>	<p>Reading group, literature circle, classroom discussion, student govt., research presentations, class meeting, debate</p>

6th Grade Common Core/Montessori Alignment			
Language			
Standards for Language			
Anchor Standard for Language	6th Grade CORE Standards	Montessori Material	Supplemental Materials
Conventions of Standard English			
1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	L. 6.1.A Ensure that pronouns are in the proper case (subjective, objective, possessive).	Pronouns, Sentence analysis	Pronoun follow-up, sentence analysis
	L. 6.1.B Use intensive pronouns (e.g., myself, ourselves).	Verb tenses	verb tense follow-up activities
	L.6.1.C Recognize and correct inappropriate shifts in pronoun number and person.*	Verb tenses, pronoun review	verb tense follow-up activities, pronoun follow-up activities
	L. 6.1.D Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents).	Pronouns review and discussion	Pronoun follow-up activities
	L. 6.1.E Recognize variations from standard English in their own and others' writing and use strategies to improve expression in conventional language.*	Review grammar functions	Grammar follow-up activities
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.	L. 6.2.A Use punctuation (commas, parentheses, dashes) to set off nonrestrictive/parenthetical elements.*	Comma K. E., Parentheses K. E.	Comma follow-up activities, parentheses follow-up activities
	L. 6.2.B Spell correctly.		Spelling group, dictionaries

<p>Knowledge of Language</p>			
<p>3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.</p>	<p>L. 6.3.A Vary sentence patterns for meaning, reader/listener interest, and style.*</p> <p>L. 6.3.B. Maintain consistency in style and tone.*</p>		<p>Spelling group, dictionaries, Skyscraper</p>
<p>Vocabulary Acquisition and Use</p>			
<p>4. 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.</p>	<p>L. 6.4.A. 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.</p>	<p>Sentence analysis</p>	<p>Reading, creative writing</p>
	<p>L. 6.4.B. Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., audience, auditory, audible).</p>	<p>Suffix K. E., Prefix K. E.</p>	<p>Suffix follow-up activities, prefix follow-up activities, root word follow-up</p>
	<p>L. 6.4.C. Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of</p>		<p>Dictionary work, thesaurus work, dictionary.com, thesaurus.com</p>

<p>5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.</p>	<p>L. 6.4.D. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the <i>inferred meaning in context</i>).</p> <p>L. 6.5.A Interpret figures of speech (e.g., personification) in context.</p>	<p>Personification K.E.</p>	<p>Dictionary work, thesaurus work, dictionary.com, thesaurus.com</p> <p>personification follow-up</p>
	<p>L. 6.5.B Use the relationship between particular words (e.g., cause/effect, part/whole, item/category) to better understand each of</p>		<p>Word study</p>
	<p>L. 6.5.C Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., stingy, scrimping, economical, unwasteful, thrifty).</p>	<p>Synonym K. E., Word study-connotation and denotations</p>	<p>Synonym follow-up, thesaurus, thesaurus.com</p>
<p>6. 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>	<p>L. 6.6 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</p>		<p>Spelling program, vocabulary , word study</p>

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6th Grade Common Core/Montessori Alignment			
Math			
Ratios and Proportional Relationships			
Understand ratio concepts and use ratio reasoning to solve problems.	Montessori Material	Supplemental Material	
6. R.P.A.1 Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. For example, "The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak." "For every vote candidate A received, candidate C received nearly three votes."	multiplication bead box, memorization charts	command cards	
6. R.P.A.2 Understand 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. For example, "This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is $3/4$ cup of flour for each cup of sugar." "We paid \$75 for 15 hamburgers, which is a rate of \$5 per hamburger."1	memorization boards, stamp game, bead frame	word problems, command cards	
6. R.P.A.3 Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.			
6. R.P.A.3 A 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. Use tables to compare ratios.	multiplication board, multiplication finger chart, chains	word problems, Math Insights	

<p>6. R.P.A.3.B Solve unit rate problems including those involving unit pricing and constant speed. For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?</p>		word problems, Math Insights
<p>6.R.P.A.3.C. Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.</p>	Fractions, decimal board, percentage	
<p>6. R.P.A.3.D Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.</p>	Fractions, decimal board, percentage	command cards
<p>The Number System</p>		
<p>6. NS.A.1 Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. For example, create a story context for $(2/3) \div (3/4)$ and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that $(2/3) \div (3/4) = 8/9$ because $3/4$ of $8/9$ is $2/3$. (In general, $(a/b) \div (c/d) = ad/bc$.) How much chocolate will each person get if 3 people share $1/2$ lb of chocolate equally? How many $3/4$-cup servings are in $2/3$ of a cup of yogurt? How wide is a rectangular strip of land with length $3/4$ mi and area</p>	decimal board, bank game, fraction box, fraction skittles	word problems, Math Insights, command cards
<p>Compute fluently with multi-digit numbers and find common factors and multiples.</p>		
<p>6. NS.B. 2 Fluently divide multi-digit numbers using the standard algorithm.</p>	test tubes	word problems, Math Insights, command cards

<p>6. NS.B. 3 Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.</p>	<p>decimal board, bank game, decimal checkerboard</p>	<p>word problems, Math Insights, command cards</p>
<p>6. NS.B. 4 Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. 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. For example,</p>	<p>GCF review, distributive properties</p>	
<p>Apply and extend previous understandings of numbers to the system of rational numbers.</p>		
<p>6. NS.C. 5 Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.</p>	<p>introduction of negative numbers on a number line</p>	<p>Inverse operation, command cards</p>
<p>6. NS.C. 6 Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.</p>	<p>negative integers</p>	<p>word problems, Math Insights, command cards, dice</p>
<p>6. NS.C. 6. A Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., $-(-3) = 3$, and that 0 is its own</p>		

<p>6. NS.C. 6.B Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.</p>		
<p>6. NS.C.6. C Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.</p>	<p>peg board, fraction skittles, fraction insets, fraction box</p>	<p>word problems, Math Insights, command cards, dice</p>
<p>6. NS.C. 7 Understand ordering and absolute value of rational numbers.</p>	<p>peg board, fraction skittles, fraction insets, fraction box</p>	<p>word problems, Math Insights, command cards, dice</p>
<p>6. NS.C. 7. A Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. For example, interpret $-3 > -7$ as a statement that -3 is located to the right of -7 on a number line oriented from left to</p>	<p>negative numbers work, number line</p>	
<p>6. NS.C. 7. B Write, interpret, and explain statements of order for rational numbers in real-world contexts. For example, write $-3\text{ }^{\circ}\text{C} > -7\text{ }^{\circ}\text{C}$ to express the fact that $-3\text{ }^{\circ}\text{C}$ is warmer than $-7\text{ }^{\circ}\text{C}$.</p>	<p>peg board, fraction skittles, fraction insets, fraction box, rounding lesson</p>	<p>word problems, Math Insights, command cards, dice, rounding</p>
<p>6. NS.C. 7.C Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation. For example, for an account balance of -30 dollars, write $-30 = 30$ to describe the size of the debt in dollars.</p>	<p>Fraction insets, fraction box</p>	<p>word problems, Math Insights, command cards, dice</p>

<p>6. NS.C. 7. D Distinguish comparisons of absolute value from statements about order. For example, recognize that an account balance less than -30 dollars represents a debt greater than 30 dollars.</p>	<p>Fraction insets, fraction box</p>	<p>word problems, Math Insights, command cards, dice</p>
<p>6. NS.C. 8 Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.</p>	<p>coordinate grids with all 4 quadrants</p>	
<p>Expressions and Equations</p>		
<p>Apply and extend previous understandings of arithmetic to algebraic expressions.</p>		
<p>6. EE.A.1 Write and evaluate numerical expressions involving whole-number exponents.</p>	<p>Operations with exponents</p>	<p>word problems, Math Insights, command cards, dice</p>
<p>6. EE.A.2 Write, read, and evaluate expressions in which letters stand for numbers.</p>	<p>Algebra</p>	<p>Algebra</p>
<p>6. EE.A.2.A Write expressions that record operations with numbers and with letters standing for numbers. For example, express the calculation "Subtract 5 from 3" as $3 - 5$.</p>	<p>Algebra</p>	<p>Algebra</p>
<p>6. EE.A.2.B Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. For example, describe the expression $2(8 + 7)$ as a product of two factors; view $(8 + 7)$ as both a single entity and a sum of two terms.</p>	<p>Algebra</p>	<p>word problems, command cards</p>

<p>6. EE.A. 2.C Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. 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). For example, use the formulas $V = s^3$ and $A = 6s^2$ to find the volume and surface area of a cube with sides of length $s = 1/2$.</p>	<p>Algebra</p>	<p>word problems, command cards</p>
<p>6. EE.A . 3 Apply the properties of operations to generate equivalent expressions. For example, apply the distributive property to the expression $3(2 + x)$ to produce the equivalent expression $6 + 3x$; apply the distributive property to the expression $24x + 18y$ to produce the equivalent expression $6(4x + 3y)$; apply properties of operations to $y + y + y$ to produce the equivalent expression $3y$.</p>	<p>Algebra, properties of operations</p>	<p>word problems, command cards</p>
<p>6. EE.A. 4 Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them). For example, the expressions $y + y + y$ and $3y$ are equivalent because they name the same number regardless of which number y stands for.</p>	<p>Algebra, properties of operations</p>	
<p>Reason about and solve one-variable equations and inequalities.</p>		

<p>6. EE.B. 5 Understand 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? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.</p>		<p>Command cards, word problems</p>
<p>6. EE. B. 6 Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.</p>	<p>Algebra</p>	<p>Command cards</p>
<p>6. EE.B. 7 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.</p>	<p>Algebra</p>	<p>Command cards, word problems</p>
<p>6. EE.B. 8 Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams.</p>		
<p>Represent and analyze quantitative relationships between dependent and independent variables.</p>		

<p>6. EE.C. 9 Use variables to represent two quantities in a real-world problem that change in relationship to one another; 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. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation $d = 65t$ to represent the relationship between distance and time.</p>	<p>Algebra, graphing</p>	<p>command cards</p>
<p>Geometry</p>		
<p>Solve real-world and mathematical problems involving area, surface area, and volume.</p>		
<p>6. G.A. 1 Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.</p>	<p>Area material, angle measurement, stick box</p>	<p>Volume command cards, measuring materials, word problems</p>
<p>6. G.A. 2 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, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. 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>1000 volume cube</p>	<p>Volume command cards, measuring materials, word problems</p>

<p>6. G.A. 3 Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.</p>	<p>1000 volume cube</p>	<p>Volume command cards, measuring materials, word problems</p>
<p>6. G.A. 4 Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.</p>	<p>solids classification</p>	<p>Volume command cards, measuring materials, word problems</p>
<p>Statistics and Probability</p>		
<p>Develop understanding of statistical variability.</p>		
<p>6. SP.A1 Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. For example, "How old am I?" is not a statistical question, but "How old are the students in my school?" is a statistical question because one anticipates variability in students' ages.</p>		<p>Command cards</p>
<p>6. SP. A.2 Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.</p>	<p>graphing</p>	<p>Command cards, word problems</p>
<p>6. SP. A. 3 Recognize 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.</p>	<p>Range, mean, mode</p>	

<p>Summarize and describe distributions.</p>		
<p>6. SP. B. 4 Display numerical data in plots on a number line, including dot plots, histograms, and box plots.</p>	<p>Plots, number lines</p>	<p>Command cards, word problems</p>
<p>6. SP. B. 5 Summarize numerical data sets in relation to their context, such as by:</p>	<p>Plots, number lines</p>	<p>Word problems, discussion</p>
<p>6. SP. B. 5. A Reporting the number of observations.</p>	<p>Plots, number lines</p>	<p>Word problems, discussion</p>
<p>6. SP. B. 5. B Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.</p>		<p>Word problems, discussion</p>
<p>6. SP. B. 5. C Giving quantitative measures of center (median and/or mean) and variability (interquartile 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.</p>		<p>Word problems, discussion</p>

7th Grade Common Core/Montessori Alignment

Language-Reading Standards for Reading Literature

Anchor Standard for Reading	7th Grade CORE Standards	Learning Activity/Resource
<p>Key Ideas and Details</p> <p>Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.</p>	<p>Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.</p>	<p>Analyze and respond to non-fiction textbooks, literary response and analysis with fiction pieces, via Great Books or *Socratic Seminar readings through discussion and follow-up activities.</p>
<p>Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.</p>	<p>Determine a theme or central idea of a text and analyze its development over the course of the text; provide an objective summary of the text.</p>	<p>After initial assessments, students work with leveled text at their instructional level with fiction text, which focuses on the various literary elements, Readers Workshop discussion and response; continue progression with themed unit's selected passages from the Common Core Curriculum Map.</p>

<p>Analyze how and why individuals, events, or ideas develop and interact over the course of a text.</p>	<p>Analyze how particular elements of a story or drama interact (e.g., how setting shapes the characters or plot).</p>	<p>After initial assessments, students work with leveled text at their instructional level with fiction text, which focuses on the various literary elements, Readers Workshop discussion and response; continue progression with themed unit's selected passages from the Common Core Curriculum Map.</p>
<p>Craft and Structure</p>		
<p>Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.</p>	<p>Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of rhymes and other repetitions of sounds (e.g., alliteration) on a specific verse or stanza of a poem or section of a story or drama.</p>	<p>After initial assessments, students work with leveled text at their instructional level with fiction text, which focuses on the various literary elements, Readers Workshop discussion and response; continue progression with themed unit's selected passages from the Common Core Curriculum Map.</p>

<p>Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.</p>	<p>Analyze how a drama's or poem's form or structure (e.g., soliloquy, sonnet) contributes to its meaning</p>	<p>After initial assessments, students work with leveled text at their instructional level with fiction text, which focuses on the various literary elements, Readers Workshop discussion and response; continue progression with themed unit's selected passages from the Common Core Curriculum Map.</p>
<p>Assess how point of view or purpose shapes the content and style of a text.</p>	<p>Analyze how an author develops and contrasts the points of view of different characters or narrators in a text.</p>	<p>After initial assessments, students work with leveled text at their instructional level with fiction text, which focuses on the various literary elements, Readers Workshop discussion and response; continue progression with themed unit's selected passages from the Common Core Curriculum Map.</p>
<p>Integration of Knowledge and Ideas</p>		

<p>Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.¹</p>	<p>Compare and contrast a written story, drama, or poem to its audio, filmed, staged, or multimedia version, analyzing the effects of techniques unique to each medium (e.g., lighting, sound, color, or camera focus and angles in a film).</p>	<p>This is specifically addressed through various themed unit's lesson plans.</p>
<p>Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.</p>	<p>(RL.7.8 not applicable to literature)</p>	
<p>Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.</p>	<p>Compare and contrast a fictional portrayal of a time, place, or character and a historical account of the same period as a means of understanding how authors of fiction use or alter history.</p>	<p>Previous skills are further reinforced and enhanced via paired fiction and non-fiction readings and activities, as well as through the Common Core aligned Facing History and Ourselves resources.</p>
<p>Range of Reading and Level of Text Complexity</p>		
<p>Read and comprehend complex literary</p>	<p>By the end of the year, read</p>	<p>After initial assessments,</p>
		<p>*Items with asterisk are</p>

7th Grade Common Core/Montessori Alignment

Language-Reading

Standards for Reading Informational Text

Anchor Standard for Reading	7th Grade CORE Standards	Learning Activity/Resource
<p>Key Ideas and Details</p> <p>Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.</p>	<p>Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.</p>	<p>Utilizing textbooks, primary sources, and other ancillary text, students will discuss, respond and cite as appropriate.</p>
<p>Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.</p>	<p>CCSS.ELA-Literacy.RI.7.2 Determine two or more central ideas in a text and analyze their development over the course of the text; provide an objective summary of the text.</p>	<p>Review structure, components, organizational format and graphic elements of textbooks, primary sources, and other ancillary text, to highlight how to access these aspects.</p>
<p>Analyze how and why individuals, events, or ideas develop and interact over the course of a text.</p>	<p>CCSS.ELA-Literacy.RI.7.3 Analyze the interactions between individuals, events, and ideas in a text (e.g., how ideas influence individuals or events, or how individuals influence ideas or events).</p>	<p>After initial reading, students will come together to discuss and respond to the elements and interactions.</p>
<p>Craft and Structure</p> <p>Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.</p>	<p>Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of a specific word choice on meaning and tone.</p>	<p>Utilize traditional reference materials (such as glossary, dictionary, thesaurus, etymology, and other resources), then assess and analyze usage and intent.</p>

<p>Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.</p>	<p>CCSS.ELA-Literacy.RI.7.5 Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to the development of the ideas.</p>	<p>After initial reading, students will deconstruct the assigned text, create graphic organizers and thinking maps, and then place the various elements into appropriate category.</p>
<p>Assess how point of view or purpose shapes the content and style of a text.</p>	<p>CCSS.ELA-Literacy.RI.7.6 Determine an author's point of view or purpose in a text and analyze how the author distinguishes his or her position from that of others.</p>	<p>Read several differing versions of one event (i.e. Crusades), compare and contrast the readings.</p>
<p>Integration of Knowledge and Ideas Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.¹</p>	<p>Compare and contrast a text to an audio, video, or multimedia version of the text, analyzing each medium's portrayal of the subject (e.g., how the delivery of a speech affects the impact of the words).</p>	<p>Read, listen and respond to two or more versions via differing media.</p>
<p>Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.</p>	<p>CCSS.ELA-Literacy.RI.7.8 Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims.</p>	<p>Again, through deconstruction of passages, students can trace the theme, development and supporting elements in text, then discuss to determine efficacy.</p>
<p>Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.</p>	<p>CCSS.ELA-Literacy.RI.7.9 Analyze how two or more authors writing about the same topic shape their presentations of key information by emphasizing different evidence or advancing different interpretations of facts.</p>	<p>Read several differing versions of one event (i.e. Black Death), compare and contrast the readings.</p>

Range of Reading and Level of Text Complexity		
Read and comprehend complex	By the end of the year, read and	Students continually respond to

**7th Grade Common Core/Montessori Alignment
Language-Writing
Standards for Writing**

7th Grade CORE Standards	Learning Activity/Resource: *All of these activities can be interchangeably utilized within each of the outlined CORE standards.
CCSS.ELA-Literacy.W.7.1 Write arguments to support claims with clear reasons and relevant evidence.	Please note: Through the process of argument writing, children will develop all the skills outlined in 7.1. Additionally, students work on argument writing assignments in Writers Workshop and History.
CCSS.ELA-Literacy.W.7.1a Introduce claim(s), acknowledge alternate or opposing claims, and organize the reasons and evidence logically.	Please note: Through the process of argument writing, children will develop all the skills outlined in 7.1. Additionally, students work on argument writing assignments in Writers Workshop and History.
CCSS.ELA-Literacy.W.7.1b Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text.	Please note: Through the process of argument writing, children will develop all the skills outlined in 7.1. Additionally, students work on argument writing assignments in Writers Workshop and History.
CCSS.ELA-Literacy.W.7.1c Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), reasons, and evidence.	Please note: Through the process of argument writing, children will develop all the skills outlined in 7.1. Additionally, students work on argument writing assignments in Writers Workshop and History.

<p>CCSS.ELA-Literacy.W.7.1d Establish and maintain a formal style.</p>	<p>Please note: Through the process of argument writing, children will develop all the skills outlined in 7.1. Additionally, students work on argument writing assignments in Writers Workshop and History.</p>
<p>CCSS.ELA-Literacy.W.7.1e Provide a concluding statement or section that follows from and supports the argument presented.</p>	<p>As students prepare the written portion of either the affirmative or negative case in a debate, these skills will come into play.</p>
<p>CCSS.ELA-Literacy.W.7.2 Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.</p>	<p>Students work on expository writing assignments across the curriculum.</p>
<p>CCSS.ELA-Literacy.W.7.2a Introduce a topic clearly, previewing what is to follow; 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>	<p>These elements are woven across the curriculum.</p>
<p>CCSS.ELA-Literacy.W.7.2b Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples.</p>	<p>Ongoing through written responses to the social studies, current events, and science curriculum.</p>
<p>CCSS.ELA-Literacy.W.7.2c Use appropriate transitions to create cohesion and clarify the relationships among ideas and concepts.</p>	<p>Via Writers Workshop and interactive peer editing.</p>
<p>CCSS.ELA-Literacy.W.7.2d Use precise language and domain-specific vocabulary to inform about or explain the topic.</p>	<p>via Social Studies, Science, Current Events, Writers Workshop and choice of The Yearlong Project writing exercises.</p>
<p>CCSS.ELA-Literacy.W.7.2e Establish and maintain a formal style.</p>	<p>particularly The Yearlong Project writing exercises.</p>
<p>CCSS.ELA-Literacy.W.7.2f Provide a concluding statement or section that follows from and supports the information or explanation presented.</p>	<p>via Social Studies, Science, Current Events, Writer's Workshop and The Yearlong Project writing exercises.</p>

CCSS.ELA-Literacy.W.7.3 Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.	through the Writers Workshop sequenced lessons
CCSS.ELA-Literacy.W.7.3a Engage and orient the reader by establishing a context and point of view and introducing a narrator and/or characters; organize an event sequence that unfolds naturally and logically.	through the Writers Workshop sequenced lessons
CCSS.ELA-Literacy.W.7.3b Use narrative techniques, such as dialogue, pacing, and description, to develop experiences, events, and/or characters.	through the Writers Workshop sequenced lessons
CCSS.ELA-Literacy.W.7.3c Use a variety of transition	through the Writers Workshop sequenced
CCSS.ELA-Literacy.W.7.3d Use precise words and	through the Writers Workshop sequenced
CCSS.ELA-Literacy.W.7.3e Provide a conclusion that	through the Writers Workshop sequenced
Production and Distribution of Writing	
CCSS.ELA-Literacy.W.7.4 Produce clear and coherent	via Social Studies, Science, Current Events,
CCSS.ELA-Literacy.W.7.5 With some guidance and	via Social Studies, Science, Current Events,
CCSS.ELA-Literacy.W.7.6 Use technology, including the	via Social Studies, Science, Current Events,
Research to Build and Present Knowledge	
CCSS.ELA-Literacy.W.7.7 Conduct short research	via Social Studies, Science, Current Events,
CCSS.ELA-Literacy.W.7.8 Gather relevant information	via Social Studies, Science, Current Events,
CCSS.ELA-Literacy.W.7.9 Draw evidence from literary or	via Social Studies, Science, Current Events,
CCSS.ELA-Literacy.W.7.9a Apply grade 7 Reading	via Social Studies, Science, Current Events,
CCSS.ELA-Literacy.W.7.9b Apply grade 7 Reading	via Social Studies, Science, Current Events,
Range of Writing	
CCSS.ELA-Literacy.W.7.10 Write routinely over	via Social Studies, Science, Current Events,
	*Items with asterisk are explained in the

7th Grade Common Core/Montessori Alignment	
Language-Speaking/Listening Standards for Speaking and Listening	
7th Grade CORE Standards	
Comprehension and Collaboration	
Learning Activity	
CCSS.ELA-Literacy.SL.7.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 7 topics, texts, and issues, building on others' ideas and expressing their own clearly.	In-class discussions, Community Meeting, Student Presentation to EPMS Board, Writers-Readers Workshop, Socratic Seminars, History-Social Science, Current Events, and The Yearlong Project
CCSS.ELA-Literacy.SL.7.1a Come to discussions prepared, having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.	In-class discussions, Community Meeting, Student Presentation to EPMS Board, Writers-Readers Workshop, Socratic Seminars, History-Social Science, Current Events, and The Yearlong Project
CCSS.ELA-Literacy.SL.7.1b Follow rules for collegial discussions, track progress toward specific goals and deadlines, and define individual roles as needed.	In-class discussions, Community Meeting, Student Presentation to EPMS Board, Writers-Readers Workshop, Socratic Seminars, History-Social Science, Current Events, and The Yearlong Project
CCSS.ELA-Literacy.SL.7.1c Pose questions that elicit elaboration and respond to others' questions and comments with relevant observations and ideas that bring the discussion back on topic as needed.	In-class discussions, Community Meeting, Student Presentation to EPMS Board, Writers-Readers Workshop, Socratic Seminars, History-Social Science, Current Events, and The Yearlong Project
CCSS.ELA-Literacy.SL.7.1d Acknowledge new information expressed by others and, when warranted, modify their own views.	In-class discussions, Community Meeting, Student Presentation to EPMS Board, Writers-Readers Workshop, Socratic Seminars, History-Social Science, Current Events, and The Yearlong Project
CCSS.ELA-Literacy.SL.7.2 Analyze the main ideas and supporting details presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how the ideas clarify a topic, text, or issue under study.	In-class discussions, Community Meeting, Student Presentation to EPMS Board, Writers-Readers Workshop, Socratic Seminars, History-Social Science, Current Events, and The Yearlong Project

<p>CCSS.ELA-Literacy.SL.7.3 Delineate a speaker's argument and specific claims, evaluating the soundness of the reasoning and the relevance and sufficiency of the evidence.</p>	<p>In-class discussions, Community Meeting, Student Presentation to EPMS Board, Writers-Readers Workshop, Socratic Seminars, History-Social Science, Current Events, and The Yearlong Project</p>
<p>Presentation of Knowledge and Ideas</p>	
<p>CCSS.ELA-Literacy.SL.7.4 Present claims and findings, emphasizing salient points in a focused, coherent manner with pertinent descriptions, facts, details, and examples; use appropriate eye contact, adequate volume, and clear pronunciation.</p>	<p>In-class discussions, Community Meeting, Student Presentation to EPMS Board, Writers-Readers Workshop, Socratic Seminars, History-Social Science, Current Events, and The Yearlong Project</p>
<p>CCSS.ELA-Literacy.SL.7.5 Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points.</p>	<p>In-class discussions, Community Meeting, Student Presentation to EPMS Board, Writers-Readers Workshop, Socratic Seminars, History-Social Science, Current Events, and The Yearlong Project</p>
<p>CCSS.ELA-Literacy.SL.7.6 Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See grade 7 Language standards 1 and 3 here for specific expectations.)</p>	<p>In-class discussions, Community Meeting, Student Presentation to EPMS Board, Writers-Readers Workshop, Socratic Seminars, History-Social Science, Current Events, and The Yearlong Project</p>

7th Grade Common Core/Montessori Alignment

Math

<p>7th Grade CORE Standards</p>	<p>Learning Activity/Resource: Please note: Activities come from Illustrated Mathematics and Montessori Math Albums (MMA). Montessori activities are outlined in detail, starting with the last album of the Upper Elementary sequence, and continuing into the beginning of the Montessori Secondary program's album.</p>	<p>Montessori Material</p>
<p>RATIOS AND PROPORTIONAL RELATIONSHIPS</p>	<p>Illustrated Mathematics MMA: Chapter 1: Ratio and Proportion</p>	
<p>Analyze proportional relationships and use them to solve real-world and mathematical problems.</p> <p>1. Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. For example, if a person walks $\frac{1}{2}$ mile in each $\frac{1}{4}$ hour, compute the unit rate as the complex fraction $\frac{1/2}{1/4}$ miles per hour, equivalently 2 miles per hour</p>	<p>Small-group lessons, in-class follow-up assignments (word problems, equations) and in real-world applications such as micro-business, event/trip and food planning.</p>	<p>Albanesi math cards</p>
<p>2. Recognize and represent proportional relationships between quantities.</p> <p>a. Decide whether two quantities are in a proportional relationship, eg., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.</p>	<p>Small-group lessons, in-class follow-up assignments (word problems, equations) and in real-world applications such as micro-business, event/trip and food planning.</p> <p>Small-group lessons, in-class follow-up assignments (word problems, equations) and in real-world applications such as micro-business, event/trip and food planning.</p>	<p>Charts 1-5, 6,7 Albanesi math cards</p> <p>Proportion Chart</p>

<p>b. Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.</p>	<p>Small-group lessons, in-class follow-up assignments (word problems, equations) and in real-world applications such as micro-business, event/trip and food planning.</p>	<p>prior materials, for reference only, as goal is passing to abstraction</p>
<p>c. Represent proportional relationships by equations. For example: if total cost T is proportional to the number N of items purchased at a constant price P the relationship between the total cost and the number of items can be expressed as $T = PN$.</p>	<p>Small-group lessons, in-class follow-up assignments (word problems, equations) and in real-world applications such as micro-business, event/trip and food planning.</p>	<p>prior materials, for reference only, as goal is passing to abstraction</p>
<p>d. Explain what a point (x,y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points $(0,0)$ and $(1,r)$ where r is the unit rate.</p>	<p>Small-group lessons, in-class follow-up assignments (word problems, equations) and in real-world applications such as micro-business, event/trip and food planning.</p>	<p>prior materials, for reference only, as goal is passing to abstraction</p>
<p>3. Use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.</p>	<p>Small-group lessons, in-class follow-up assignments (word problems, equations) and in real-world applications such as micro-business, event/trip and food planning.</p>	<p>prior materials, for reference only, as goal is passing to abstraction</p>
<p>THE NUMBER SYSTEM</p>		
<p>Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.</p>	<p>Illustrated Mathematics MMA: Chapter 3: A Study of Integers, Chapter 5: Chapter of Inverse Operations</p>	
<p>1. Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.</p>	<p>Small-group lessons, in-class follow-up assignments (word problems, equations) and in real-world applications such as micro-business, event/trip and food planning.</p>	<p>Number Lines: Vertical and Horizontal, thermometers,</p>
<p>a. Describe situations in which opposite quantities combine to make 0. For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged.</p>	<p>Small-group lessons, in-class follow-up assignments (word problems, equations) and in real-world applications such as micro-business, event/trip and food planning.</p>	<p>models and charts of atoms</p>

<p>b. Understand $p+q$ as the number located a distance q from p in the positive or negative direction depending on whether q is a sum of O (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.</p>	<p>Small-group lessons, in-class follow-up assignments (word problems, equations) and in real-world applications such as micro-business, event/trip and food planning.</p>	<p>Integer number line, prepared problems, Albanesi cards; Zero Sum Game, w/green and grey counters</p>
<p>c. Understand subtraction of rational numbers as adding the additive inverse, $p-q=p+(-q)$. Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principal in real-world contexts.</p>	<p>Small-group lessons, in-class follow-up assignments (word problems, equations) and in real-world applications such as micro-business, event/trip and food planning.</p>	<p>"Number Line Street" and toy car; Zero Sum Game, w/green and grey counters</p>
<p>d. Apply properties of operations as strategies to add and subtract rational numbers.</p>	<p>Small-group lessons, in-class follow-up assignments (word problems, equations) and in real-world applications such as micro-business, event/trip and food planning.</p>	<p>Number Line of Integers, Integer Cards, box of signs; green and grey counters, symbols, problem tickets</p>
<p>2. Apply and extend previous understandings of</p>	<p>Small-group lessons, in-class follow-up</p>	<p>Number Line of Integers,</p>
<p>a. Understand that multiplication is</p>	<p>Small-group lessons, in-class follow-up</p>	<p>Number Line of Integers,</p>
<p>b. Understand that integers can be</p>	<p>Small-group lessons, in-class follow-up</p>	<p>Number Line of Integers,</p>
<p>c. Apply properties of operations as</p>	<p>Small-group lessons, in-class follow-up</p>	<p>Number Line of Integers,</p>
<p>d. Convert a rational number to a</p>	<p>Small-group lessons, in-class follow-up</p>	<p>prior materials, for</p>
<p>3. Solve real-world and mathematical problems</p>	<p>Small-group lessons, in-class follow-up</p>	<p>prior materials, for</p>
<p>EXPRESSIONS AND EQUATIONS</p>		
<p>Use properties of operations to generate</p>	<p>Illustrated Mathematics</p>	
<p>1. Apply properties of operations as strategies to</p>	<p>Small-group lessons, in-class follow-up</p>	<p>Algebra Tiles, Special</p>
<p>2. Understand that rewriting an expression in</p>	<p>Small-group lessons, in-class follow-up</p>	<p>prepared abstraction</p>
<p>Solve real-life and mathematical problems using</p>		
<p>3. Solve multi-step real-life and mathematical</p>	<p>Small-group lessons, in-class follow-up</p>	
<p>4. Use variables to represent quantities in a real-</p>	<p>Small-group lessons, in-class follow-up</p>	
<p>a. Solve word problems leading to equations of</p>	<p>Small-group lessons, in-class follow-up</p>	
<p>a. Solve word problems leading to</p>	<p>Small-group lessons, in-class follow-up</p>	

GEOMETRY		
Draw, construct, and describe geometrical figures and describe the relationships between	Illustrated Mathematics MMA: Geometry II album	
1. Solve problems involving scale drawings of	Small-group lessons, in-class follow-up	
2. Draw (freehand, with ruler and protractor, and	Small-group lessons, in-class follow-up	
3. Describe the two-dimensional figures, that result	Small-group lessons, in-class follow-up	Geometric Solids,
Solve real life and mathematical problems	Illustrated Mathematics	
4. Know the formulas for the area and	Small-group lessons, in-class follow-up	Geometry Stick Box &
5. Use facts about supplementary complementary,	Small-group lessons, in-class follow-up	Geometry Stick Box &
6. Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes and right prisms.	Small-group lessons, in-class follow-up assignments (word problems, equations) and in real-world applications such as micro-business, event/trip and food planning.	Geometric Solids, Geometric Cabinet, and various Prisms
Statistics and Probability		
Use random sampling to draw inferences about	Illustrated Mathematics	
1. Understand that statistics can be used to gain	Small-group lessons, in-class follow-up	
2. Use data from a random sample to draw	Small-group lessons, in-class follow-up	
Draw informal comparative inferences about two		
3. Informally assess the degree of visual overlap of	Small-group lessons, in-class follow-up	
4. Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book.	Small-group lessons, in-class follow-up assignments (word problems, equations), in real-world applications such as micro-business, event/trip and food planning and in science and social studies lessons	
Investigate chance processes and develop,		
5. Understand that the probability of a chance event	Small-group lessons, in-class follow-up	
6. Approximate the probability of a chance event by	Small-group lessons, in-class follow-up	
7. Develop a probability model and use it to find	Small-group lessons, in-class follow-up	
a. Develop a uniform probability model by assigning	Small-group lessons, in-class follow-up	

b. Develop a probability model(which may not be	Small-group lessons, in-class follow-up	
8.Find probabilities of compounding events using	Small-group lessons, in-class follow-up	
a. Understand that, just as with simple events, the	Small-group lessons, in-class follow-up	
b. Represent sample spaces for compound events	Small-group lessons, in-class follow-up	
c. Design and use a simulation to generate	Small-group lessons, in-class follow-up	

**7th Grade CA History-Social Science Standards & Framework/Montessori Alignment
World History and Geography: Medieval and Early Modern Times**

<p>Students in grade seven study the social, cultural, and technological changes that occurred in Europe, Africa, and Asia in the years A. D. 500-1789. After reviewing the ancient world and the ways in which archaeologists and historians uncover the past, students study the history and geography of great civilizations that were developing concurrently throughout the world during medieval and early modern times. They examine the growing economic interaction among civilizations as well as the exchange of ideas, beliefs, technologies, and commodities. They learn about the resulting growth of Enlightenment philosophy and the new examination of the concepts of reason and authority, the natural rights of human beings and the divine right of kings, experimentalism in science, and the dogma of belief. Finally, students assess the political forces let loose by the Enlightenment, particularly the rise of democratic ideas, and they learn about the continuing influence of these ideas in the world today.</p>	<p><i>Discovery Education Social Studies TechBook</i> will function as the nexus of the Social Studies program along with ancillary resources: <i>World History for Us All, Facing History and Ourselves</i> Stanford <i>SPICE</i>.</p>	
<p>Standard</p> <p>7.1 Students analyze the causes and effects of the vast expansion and ultimate disintegration of the Roman Empire.</p> <p>1. Study the early strengths and lasting contributions of Rome (e.g., significance of Roman citizenship; rights under Roman law; Roman art, architecture, engineering, and philosophy; preservation and transmission of Christianity) and its ultimate internal weaknesses (e.g., rise of autonomous military powers within the empire, undermining of citizenship by the growth of corruption and slavery, lack of education, and distribution of news).</p> <p>2. Discuss the geographic borders of the empire at its height and the factors that threatened its territorial cohesion.</p>	<p>Learning Activity/Resource</p> <p>Social Studies TechBook: Chapter 1, Connecting the World; Chapter 2, The Roman Republic and Empire</p> <p>see above</p> <p>see above</p>	<p>Material if applicable</p> <p>supplemental primary and secondary sources</p> <p>supplemental primary and secondary sources</p> <p>globes and maps</p>

<p>3. Describe the establishment by Constantine of the new capital in Constantinople and the development of the Byzantine Empire, with an emphasis on the consequences of the development of two distinct European civilizations, Eastern Orthodox and Roman Catholic, and their two distinct views on church-state relations.</p>	<p>see above</p>	<p>supplemental primary and secondary sources</p>
<p>7.2 Students analyze the geographic, political, economic, religious, and social structures of the civilizations of Islam in the Middle Ages.</p>	<p>Social Studies TechBook: Chapter 3, Medieval Europe; Chapter 4, Early Islamic Empires</p>	<p>supplemental primary and secondary sources</p>
<p>1. Identify the physical features and describe the climate of the Arabian peninsula, its relationship to surrounding bodies of land and water, and nomadic and sedentary ways of life.</p>	<p>see above</p>	<p>globes, atlases and maps</p>
<p>2. Trace the origins of Islam and the life and teachings of Muhammad, including Islamic teachings on the connection with Judaism and Christianity.</p>	<p>see above</p>	<p>supplemental primary and secondary sources</p>
<p>3. Explain the significance of the Qur'an and the Sunnah as the primary sources of Islamic beliefs, practice, and law, and their influence in Muslims' daily life.</p>	<p>see above</p>	<p>supplemental primary and secondary sources</p>
<p>4. Discuss the expansion of Muslim rule through military conquests and treaties, emphasizing the cultural blending within Muslim civilization and the spread and acceptance of Islam and the Arabic language.</p>	<p>see above</p>	<p>supplemental primary and secondary sources</p>
<p>5. Describe the growth of cities and the establishment of trade routes among Asia, Africa, and Europe, the products and inventions that traveled along these routes (e.g., spices, textiles, paper, steel, new crops), and the role of merchants in Arab society.</p>	<p>see above</p>	<p>supplemental primary and secondary sources</p>
<p>6. Understand the intellectual exchanges among Muslim scholars of Eurasia and Africa and the contributions Muslim scholars made to later civilizations in the areas of science, geography, mathematics, philosophy, medicine, art, and literature.</p>	<p>see above</p>	<p>supplemental primary and secondary sources</p>
<p>7.3 Students analyze the geographic, political, economic, religious, and social structures of the civilizations of China in the Middle Ages.</p>	<p>Social Studies TechBook: Chapter 5, South Asia and China</p>	<p>supplemental primary and secondary sources</p>

1. Describe the reunification of China under the Tang Dynasty and	see above	supplemental
2. Describe agricultural, technological, and commercial developments	see above	supplemental
3. Analyze the influences of Confucianism and changes in Confucian	see above	supplemental
4. Understand the importance of both overland trade and maritime	see above	supplemental
5. Trace the historic influence of such discoveries as tea, the	see above	supplemental
6. Describe the development of the imperial state and the scholar-	see above	supplemental
7.4 Students analyze the geographic, political, economic,	Social Studies TechBook: Chapter 8,	supplemental
1. Study the Niger River and the relationship of vegetation zones of	see above	globes, maps and
2. Analyze the importance of family, labor specialization, and regional	see above	supplemental
3. Describe the role of the trans-Saharan caravan trade in the	see above	supplemental
4. Trace the growth of the Arabic language in government, trade, and	see above	supplemental
5. Describe the importance of written and oral traditions in the	see above	supplemental
7.5 Students analyze the geographic, political, economic,	Social Studies TechBook: Chapter 6,	supplemental
1. Describe the significance of Japan's proximity to China and Korea	see above	supplemental
2. Discuss the reign of Prince Shotoku of Japan and the characteristics	see above	supplemental
3. Describe the values, social customs, and traditions prescribed by	see above	supplemental
4. Trace the development of distinctive forms of Japanese Buddhism.	see above	supplemental
5. Study the ninth and tenth centuries' golden age of literature, art, and	see above	supplemental
6. Analyze the rise of a military society in the late twelfth century and	see above	supplemental
7.6 Students analyze the geographic, political, economic,	Social Studies TechBook: Chapter 3,	supplemental
1. Study the geography of the Europe and the Eurasian land mass,	see above	globes, maps and
2. Describe the spread of Christianity north of the Alps and the roles	see above	supplemental
3. Understand the development of feudalism, its role in the medieval	see above	supplemental
4. Demonstrate an understanding of the conflict and cooperation	see above	supplemental
5. Know the significance of developments in medieval English legal	see above	supplemental
6. Discuss the causes and course of the religious Crusades and their	see above	supplemental
7. Map the spread of the bubonic plague from Central Asia to China,	see above	supplemental
8. Understand the importance of the Catholic church as a political,	see above	supplemental
9. Know the history of the decline of Muslim rule in the Iberian	see above	supplemental
7.7 Students compare and contrast the geographic, political,	Social Studies TechBook: Chapter 7,	supplemental
1. Study the locations, landforms, and climates of Mexico, Central	see above	globes, maps and
2. Study the roles of people in each society, including class structures,	see above	supplemental
3. Explain how and where each empire arose and how the Aztec and	see above	supplemental
4. Describe the artistic and oral traditions and architecture in the three	see above	supplemental
5. Describe the Meso-American achievements in astronomy and	see above	supplemental

7.8 Students analyze the origins, accomplishments, and	Social Studies TechBook: Chapter 9,	
1. Describe the way in which the revival of classical learning and the	see above	supplemental
2. Explain the importance of Florence in the early stages of the	see above	supplemental
3. Understand the effects of the reopening of the ancient "Silk Road"	see above	globes, maps, and
4. Describe the growth and effects of new ways of disseminating	see above	supplemental
5. Detail advances made in literature, the arts, science, mathematics,	see above	supplemental
7.9 Students analyze the historical developments of the	Social Studies TechBook: Chapter 11,	supplemental
1. List the causes for the internal turmoil in and weakening of the	see above	supplemental
2. Describe the theological, political, and economic ideas of the major	see above	supplemental
3. Explain Protestants' new practices of church self-government and	see above	supplemental
4. Identify and locate the European regions that remained Catholic and	see above	supplemental
5. Analyze how the Counter-Reformation revitalized the Catholic	see above	supplemental
6. Understand the institution and impact of missionaries on Christianity	see above	supplemental
7. Describe the Golden Age of cooperation between Jews and Muslims	see above	supplemental
7.10 Students analyze the historical developments of the	Social Studies TechBook: Chapter 11,	supplemental
1. Discuss the roots of the Scientific Revolution (e.g., Greek	see above	supplemental
2. Understand the significance of the new scientific theories (e.g.,	see above	supplemental
3. Understand the scientific method advanced by Bacon and	see above	supplemental
7.11 Students analyze political and economic change in the	Social Studies TechBook: Chapter 11,	supplemental
1. Know the great voyages of discovery, the locations of the routes,	see above	globes, maps, and
2. Discuss the exchanges of plants, animals, technology, culture, and	see above	supplemental
3. Examine the origins of modern capitalism; the influence of	see above	supplemental
4. Explain how the main ideas of the Enlightenment can be traced	see above	supplemental
5. Describe how democratic thought and institutions were influenced	see above	supplemental
6. Discuss how the principles in the Magna Carta were embodied in	see above	supplemental

Next Generation Science Standards

NGSS

3rd, 6th and 7th Grade

NGSS - Third Grade: Life Science

<p>3 –LS1 From Molecules to Organisms: Structures an Processes</p> <p>Students who demonstrate understanding can:</p> <p>3-LS1-1. Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death. [Clarification Statement: Changes organisms go through during their life form a pattern.] [Assessment Boundary: Assessment of plant life cycles is limited to those of flowering plants. Assessment does not include details of human reproduction.]</p>		
<u>Disciplinary Core Idea</u>	<u>Montessori Lesson</u>	<u>Supplemental</u>
<p>LS1.B: Growth and Development of Organisms</p> <ul style="list-style-type: none"> ▪ Reproduction is essential to the continued existence ▪ of every kind of organism. Plants and animals have unique and diverse life cycles. (3-LS1-1) 	<p><u>Cultural Studies:</u></p> <ul style="list-style-type: none"> -Botany- -Plants and Animals -Parts of plants -Needs of plants Zoology- -Invertebrate Families -Vertebrate Families 	<p><u>F OSS:</u></p> <ul style="list-style-type: none"> -Structures of Life <p><u>EiE:</u></p> <ul style="list-style-type: none"> -The Best of Bugs- Designing Hand- Pollinators
<p>3-LS2 Ecosystems: Interactions, energy and Dynamics</p> <p>Students who demonstrate understanding can:</p> <p>3-LS2-1. Construct an argument that some animals form groups that help members survive.</p> <p>LS2.D: Social Interactions and Group Behavior</p> <p>Being part of a group helps animals obtain food, defend themselves, and cope with changes. Groups may serve different functions and vary dramatically in size.</p>		
	<p><u>Cultural Studies:</u></p> <ul style="list-style-type: none"> Zoology- -Invertebrate Families -Vertebrate Families 	<p><u>F OSS:</u></p> <ul style="list-style-type: none"> -Structures of Life

<p>3LS3. Hereditary: Inheritance and Variations of Traits</p> <p>Students who demonstrate understanding can:</p> <p>3-LS3-1. Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms. [Clarification Statement: Patterns are the similarities and differences in traits shared between offspring and their parents, or among siblings. Emphasis is on organisms other than humans.] [Assessment Boundary: Assessment does not include genetic mechanisms of inheritance and prediction of traits. Assessment is limited to non-human examples.]</p> <p>3-LS3-2. Use evidence to support the explanation that traits can be influenced by the environment. [Clarification Statement: Examples of the environment affecting a trait could include normally tall plants grown with insufficient water are stunted; and, a pet dog that is given too much food and little exercise may become overweight.]</p>	<p>3-LS3-1. Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms. [Clarification Statement: Patterns are the similarities and differences in traits shared between offspring and their parents, or among siblings. Emphasis is on organisms other than humans.] [Assessment Boundary: Assessment does not include genetic mechanisms of inheritance and prediction of traits. Assessment is limited to non-human examples.]</p> <p>3-LS3-2. Use evidence to support the explanation that traits can be influenced by the environment. [Clarification Statement: Examples of the environment affecting a trait could include normally tall plants grown with insufficient water are stunted; and, a pet dog that is given too much food and little exercise may become overweight.]</p>	<p>3-LS3-1. Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms. [Clarification Statement: Patterns are the similarities and differences in traits shared between offspring and their parents, or among siblings. Emphasis is on organisms other than humans.] [Assessment Boundary: Assessment does not include genetic mechanisms of inheritance and prediction of traits. Assessment is limited to non-human examples.]</p> <p>3-LS3-2. Use evidence to support the explanation that traits can be influenced by the environment. [Clarification Statement: Examples of the environment affecting a trait could include normally tall plants grown with insufficient water are stunted; and, a pet dog that is given too much food and little exercise may become overweight.]</p>
<p>Disciplinary Core Ideas</p>	<p>LS3.A: Inheritance of Traits</p> <ul style="list-style-type: none"> -Many characteristics of organisms are inherited from their parents. (3-LS3-1) -Other characteristics result from individuals' interactions with the environment, which can range from diet to learning. -Many characteristics involve both inheritance and environment. (3-LS3-2) 	<p>Montessori Lesson</p> <p><u>Cultural Studies:</u></p> <ul style="list-style-type: none"> Botany- <ul style="list-style-type: none"> -Plants and Animals -Parts of plants -Needs of plants Zoology- <ul style="list-style-type: none"> -Invertebrate Families -Vertebrate Families
<p>LS3.B: Variation of Traits</p> <ul style="list-style-type: none"> ▪ Different organisms vary in how they look and function because they have different inherited information. (3-LS3-1) ▪ The environment also affects the traits that an organism develops. (3-LS3-2) 	<p>Supplemental</p> <p><u>FOSS:</u></p> <ul style="list-style-type: none"> -Structures of Life <p><u>EiE:</u></p> <ul style="list-style-type: none"> -The Best of Bugs- Designing Hand-Pollinators 	<p>Supplemental</p> <p><u>FOSS:</u></p> <ul style="list-style-type: none"> -Structures of Life <p><u>EiE:</u></p> <ul style="list-style-type: none"> -The Best of Bugs- Designing Hand-Pollinators
<p>3-LS4 Biological Evolution: Unity and Diversity</p>		

Students who demonstrate understanding can:

- 3-LS4-1.** Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago. [Clarification Statement: Examples of data could include type, size, and distributions of fossil organisms. Examples of fossils and environments could include marine fossils found on dry land, tropical plant fossils found in Arctic areas, and fossils of extinct organisms.] [Assessment Boundary: Assessment does not include identification of specific fossils or present plants and animals. Assessment is limited to major fossil types and relative ages.]
- 3-LS4-2.** Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing. [Clarification Statement: Examples of cause and effect relationships could be plants that have larger thorns than other plants may be less likely to be eaten by predators; and, animals that have better camouflage coloration than other animals may be more likely to survive and therefore more likely to leave offspring.]
- 3-LS4-3.** Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all. [Clarification Statement: Examples of evidence could include needs and characteristics of the organisms and habitats involved. The organisms and their habitat make up a system in which the parts depend on each other.]
- 3-LS4-4.** Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.* [Clarification Statement: Examples of environmental changes could include changes in land characteristics, water distribution, temperature, food, and other organisms.] [Assessment Boundary: Assessment is limited to a single environmental change. Assessment does not include the greenhouse effect or climate change.]

Disciplinary Core Idea

LS2.C: Ecosystem Dynamics, Functioning, and Resilience

- When the environment changes in ways that affect a place's physical characteristics, temperature, or availability of resources, some organisms survive and reproduce, others move to new locations, yet others move into the transformed environment, and some die.

Montessori Lesson

Cultural Studies:

- Botany-
 - Plants and Animals
 - Parts of plants
 - Needs of plants
- Zoology-
 - Invertebrate Families
 - Vertebrate Families
- Cosmic Education
 - Montessori First Great Lesson-The Story of the Universe
 - Montessori Second

Supplemental

F OSS:

- Structures of Life
- #### EIE:
- The Best of Bugs-
 - Designing Hand-Pollinators

<p>LS4.A: Evidence of Common Ancestry and Diversity</p> <ul style="list-style-type: none"> ▪ Some kinds of plants and animals that once lived on Earth are no longer found anywhere. (Note: Moved from K-2) (3-LS4-1) ▪ Fossils provide evidence about the types of organisms that lived long ago and also about the nature of their environments. (3-LS4-1) 	<p>Great Lesson-The Coming of Life-Evolution</p>	
<p>LS4.B: Natural Selection</p> <p>Sometimes the differences in characteristics between individuals of the same species provide advantages in surviving, finding mates, and reproducing. (3-LS4-2)</p>	<p><u>Cosmic Education</u></p> <ul style="list-style-type: none"> -Montessori Second Great Lesson-The Coming of Life-Evolution <p><u>Cultural Studies:</u></p> <ul style="list-style-type: none"> Botany- -Plants and Animals -Parts of plants -Needs of plants Zoology- -Invertebrate Families -Vertebrate Families <u>Cosmic Education</u> -Montessori Second Great Lesson-The Coming of Life-Evolution 	<p><u>FOSS:</u></p> <ul style="list-style-type: none"> -Structures of Life <p><u>EiE:</u></p> <ul style="list-style-type: none"> -The Best of Bugs- Designing Hand- Pollinators
<p>LS4.C: Adaptation</p> <ul style="list-style-type: none"> ▪ For any particular environment, some kinds of organisms survive well, some survive less well, and some cannot survive at all. (3-LS4-3) 	<p><u>Cosmic Education</u></p> <ul style="list-style-type: none"> -Montessori Second Great Lesson-The Coming of Life-Evolution <p><u>Cultural Studies:</u></p> <ul style="list-style-type: none"> Zoology <p><u>Cosmic Education</u></p> <ul style="list-style-type: none"> -Montessori Second Great Lesson-The Coming of Life-Evolution 	<p><u>FOSS:</u></p> <ul style="list-style-type: none"> -Structures of Life
<p>LS4.D: Biodiversity and Humans</p> <p>Populations live in a variety of habitats, and change in those habitats affects the organisms living there. (3-LS4-4)</p>	<p><u>Cosmic Education</u></p> <ul style="list-style-type: none"> -Montessori Second Great Lesson-The Coming of Life-Evolution -Montessori Third Great Lesson-Civilizations -Fundamental Needs of Humans 	<p><u>FOSS:</u></p> <ul style="list-style-type: none"> -Structures of Life

NGSS - Third Grade: Earth and Space Science

3 -ESS2 Earth's Systems

Students who demonstrate understanding can:

- 3-ESS2-1. Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.** [Clarification Statement: Examples of data at this grade level could include average temperature, precipitation, and wind direction.] [Assessment Boundary: Assessment of graphical displays is limited to pictographs and bar graphs. Assessment does not include climate change.]
- 3-ESS2-2. Obtain and combine information to describe climates in different regions of the world.**
- 3-ESS3-1. Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.*** [Clarification Statement: Examples of design solutions to weather-related hazards could include barriers to prevent flooding, wind resistant roofs, and lightning rods.]

Disciplinary Core Idea

Montessori Lesson

Supplemental

ESS2.D: Weather and Climate

- Scientists record patterns of the weather across different times and areas so that they can make predictions about what kind of weather might happen next. (3-ESS2-1)
- Climate describes a range of an area's typical weather conditions and the extent to which those conditions vary over years. (3-ESS2-2)

Cultural Studies:
 Geography Lessons and
 Impressionistic Charts:
 -Movements of the Earth
 -Climate Zone

FOSS:
 Water and
 Climate

3-ESS3 Earth and Human Activity

Students who demonstrate understanding can:

- 3-ESS3-1. Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.*** [Clarification Statement: Examples of design solutions to weather-related hazards could include barriers to prevent flooding, wind resistant roofs, and lightning rods.]
- ESS3.B: Natural Hazards**
 A variety of natural hazards result from natural processes. Humans cannot eliminate natural hazards but can take steps to reduce their impacts. (3-ESS3-1)

3-PS2 Motion and Stability: Forces and Interactions

Students who demonstrate understanding can:

- 3-PS2-1. Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.** [Clarification Statement: Examples could include an unbalanced force on one side of a ball can make it start moving; and, balanced forces pushing on a box from both sides will not produce any motion at all.] [Assessment Boundary: Assessment is limited to one variable at a time: number, size, or direction of forces. Assessment does not include quantitative force size, only qualitative and relative. Assessment is limited to gravity being addressed as a force that pulls objects down.]
- 3-PS2-2. Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.** [Clarification Statement: Examples of motion with a predictable pattern could include a child swinging in a swing, a ball rolling back and forth in a bowl, and two children on a see-saw.] [Assessment Boundary: Assessment does not include technical terms such as period and frequency.]
- 3-PS2-3. Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other.** [Clarification Statement: Examples of an electric force could include the force on hair from an electrically charged balloon and the electrical forces between a charged rod and pieces of paper; examples of a magnetic force could include the force between two permanent magnets, the force between an electromagnet and steel paperclips, and the force exerted by one magnet versus the force exerted by two magnets. Examples of cause and effect relationships could include how the distance between objects affects strength of the force and how the orientation of magnets affects the direction of the magnetic force.] [Assessment Boundary: Assessment is limited to forces produced by objects that can be manipulated by students, and electrical interactions are limited to static electricity.]
- 3-PS2-4. Define a simple design problem that can be solved by applying scientific ideas about magnets.*** [Clarification Statement: Examples of problems could include constructing a latch to keep a door shut and creating a device to keep two moving objects from touching each other.]

Disciplinary Core Idea

PS2.A: Forces and Motion

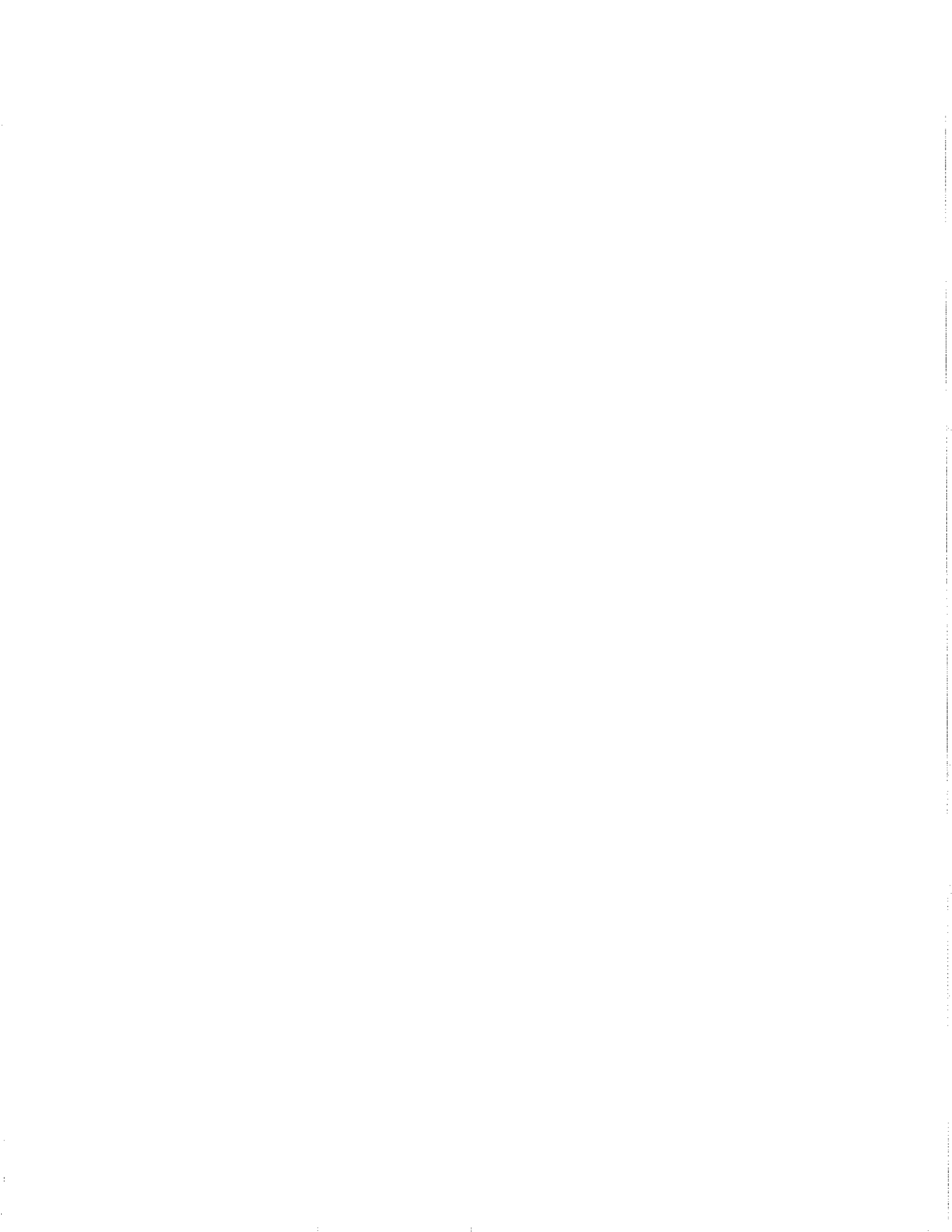
- Each force acts on one particular object and has both strength and a direction. An object at rest typically has multiple forces acting on it, but they add to give zero net force on the object. Forces that do not sum to zero can cause changes in the object's speed or direction of motion. (Boundary: Qualitative and conceptual, but not quantitative addition of forces are used at this level.) (3-PS2-1)
- The patterns of an object's motion in various situations can be observed and measured; when that past motion exhibits a regular pattern, future motion can be predicted from it. (Boundary: Technical terms, such as magnitude, velocity, momentum, and vector quantity, are not introduced at this level, but the concept that some quantities need both size and direction to be described is developed.) (3-PS2-2)

Montessori Lesson

Supplemental

FOSS:
Motion and Matter

<p>PS2.B: Types of Interactions</p> <ul style="list-style-type: none">▪ Objects in contact exert forces on each other. (3-PS2-1)▪ Electric and magnetic forces between a pair of objects do not require that the objects be in contact. The sizes of the forces in each situation depend on the properties of the objects and their distances apart and, for forces between two magnets, on their orientation relative to each other. (3-PS2-3), (3-PS2-4)		<p>FOSS: Motion and Matter</p>
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NGSS 3 - 5 ETS1 Engineering Design

<p>3-5-ETS1 Engineering Design Students who demonstrate understanding can: 3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. 3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem. 3-5-ETS1-3. Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.</p>		
<u>Disciplinary Core Idea</u>	<u>Montessori Lesson</u>	<u>Supplemental</u>
<p>ETS1.A: Defining and Delimiting Engineering Problems</p> <ul style="list-style-type: none"> ▪ Possible solutions to a problem are limited by available materials and resources (constraints). The success of a designed solution is determined by considering the desired features of a solution (criteria). Different proposals for solutions can be compared on the basis of how well each one meets the specified criteria for success or how well each takes the constraints into account. (3-5-ETS1-1) 		<p><u>EiE:</u> -The Best of Bugs- Designing Hand- Pollinators</p>
<p>ETS1.B: Developing Possible Solutions</p> <ul style="list-style-type: none"> ▪ Research on a problem should be carried out before beginning to design a solution. Testing a solution involves investigating how well it performs under a range of likely conditions. (3-5-ETS1-2) ▪ At whatever stage, communicating with peers about proposed solutions is an important part of the design process, and shared ideas can lead to improved designs. (3-5-ETS1-2) ▪ Tests are often designed to identify failure points or difficulties, which suggest the elements of the design that need to be improved. (3-5-ETS1-3) 		<p><u>EiE:</u> -The Best of Bugs- Designing Hand- Pollinators</p>
<p>ETS1.C: Optimizing the Design Solution</p> <p>Different solutions need to be tested in order to determine which of them best solves the problem, given the criteria and the constraints. (3-5-ETS1-3)</p>		<p><u>EiE:</u> -The Best of Bugs- Designing Hand- Pollinators</p>

NGSS – Sixth Grade: Life Science

MS-LS1 From Molecules to Organisms: Structures and Processes

Students who demonstrate understanding can:

- MS-LS1-1.** Conduct an investigation to provide evidence that living things are made of cells; either one cell or many different numbers and types of cells. [Clarification Statement: Emphasis is on developing evidence that living things (**including Bacteria, Archaea, and Eukarya) are made of cells, distinguishing between living and non-living things, and understanding that living things may be made of one cell or many and varied cells. **Viruses, while not cells, have features that are both common with, and distinct from, cellular life.)]
- MS-LS1-2.** Develop and use a model to describe the function of a cell as a whole and ways parts of cells contribute to the function. [Clarification Statement: Emphasis is on the cell functioning as a whole system and the primary role of identified parts of the cell, specifically the nucleus, chloroplasts, mitochondria, cell membrane, and cell wall.] [Assessment Boundary: Assessment of organelle structure/function relationships is limited to the cell wall and cell membrane. Assessment of the function of the other organelles is limited to their relationship to the whole cell. Assessment does not include the biochemical function of cells or cell parts.]
- MS-LS1-3.** Use argument supported by evidence for how the body is a system of interacting subsystems composed of groups of cells. [Clarification Statement: Emphasis is on the conceptual understanding that cells form tissues and tissues form organs specialized for particular body functions. Examples could include the interaction of subsystems within a system and the normal functioning of those systems.] [Assessment Boundary: Assessment does not include the mechanism of one body system independent of others. Assessment is limited to the circulatory, excretory, digestive, respiratory, muscular, and nervous systems.]
- MS-LS1-4.** Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively. [Clarification Statement: Examples of behaviors that affect the probability of animal reproduction could include nest building to protect young from cold, herding of animals to protect young from predators, and vocalization of animals and colorful plumage to attract mates for breeding. Examples of animal behaviors that affect the probability of plant reproduction could include transferring pollen or seeds; and, creating conditions for seed germination and growth. Examples of plant structures could include bright flowers attracting butterflies that transfer pollen, flower nectar and odors that attract insects that transfer pollen, and hard shells on nuts that squirrels bury.]
- MS-LS1-5.** Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms. [Clarification Statement: Examples of local environmental conditions could include availability of food, light, space, and water. Examples of genetic factors could include large breed cattle and species of grass affecting growth of organisms. Examples of evidence could include drought decreasing plant growth, fertilizer increasing plant growth, different varieties of plant seeds growing at different rates in different conditions, and fish growing larger in large ponds than they do in small ponds.] [Assessment Boundary: Assessment does not include genetic mechanisms, gene regulation, or biochemical processes.]
- MS-LS1-8.** Gather and synthesize information that sensory receptors respond to stimuli by sending messages to the brain for immediate behavior or storage as memories. [Assessment Boundary: Assessment does not include mechanisms for the transmission of this information.]

<u>Disciplinary Core Idea</u>	<u>Montessori Lesson</u>	<u>Supplemental</u>
<p>LS1.A: Structure and Function</p> <ul style="list-style-type: none"> ▪ All living things are made up of cells, which is the smallest unit that can be said to be alive. An organism may consist of one single cell (unicellular) or many different numbers and types of cells (multicellular). (MS-LS1-1) ▪ Within cells, special structures are responsible for particular functions, and the cell membrane forms the boundary that controls what enters and leaves the cell. (MS-LS1-2) ▪ In multicellular organisms, the body is a system of multiple interacting subsystems. These subsystems are groups of cells that work together to form tissues and organs that are specialized for particular body functions. (MS-LS1-3) 	<p><u>Cultural Studies:</u></p> <ul style="list-style-type: none"> -Botany- -Parts of plants -Needs of plants -Botany Impressionistic Charts Zoology- -Invertebrate Families -Vertebrate Families 	<p><u>FOSS:</u></p> <ul style="list-style-type: none"> -Structures of Life -Diversity of Life <p><u>SRA:</u> Life Science</p>
<p>LS1.B: Growth and Development of Organisms</p> <ul style="list-style-type: none"> ▪ Animals engage in characteristic behaviors that increase the odds of reproduction. (MS-LS1-4) ▪ Plants reproduce in a variety of ways, sometimes depending on animal behavior and specialized features for reproduction. (MS-LS1-4) ▪ Genetic factors as well as local conditions affect the growth of the adult plant. (MS-LS1-5) 	<p><u>Cultural Studies:</u></p> <ul style="list-style-type: none"> -Botany- -Parts of plants -Needs of plants -Botany Impressionistic Charts Zoology- -Invertebrate Families -Vertebrate Families 	<p><u>FOSS:</u></p> <ul style="list-style-type: none"> -Structures of Life -Diversity of Life <p><u>SRA:</u> Life Science</p>
<p>LS1.D: Information Processing</p> <ul style="list-style-type: none"> ▪ Each sense receptor responds to different inputs (electromagnetic, mechanical, chemical), transmitting them as signals that travel along nerve cells to the brain. The signals are then processed in the brain, resulting in immediate behaviors or memories. (MS-LS1-8) 	<p><u>Cultural Studies:</u></p> <ul style="list-style-type: none"> Zoology- -Invertebrate Families -Vertebrate Families Anatomy 	<p><u>FOSS:</u></p> <ul style="list-style-type: none"> -Structures of Life -Diversity of Life <p><u>SRA:</u> Life Science</p>
<p>MS-LS3 Heredity: Inheritance and Variation of Traits</p> <p>Students who demonstrate understanding can:</p>		
<p>MS-LS3-2. Develop and use a model to describe why asexual reproduction results in offspring with identical genetic information and sexual reproduction results in offspring with genetic variation. [Clarification Statement: Emphasis is on using models such as Punnett squares, diagrams, and simulations to describe the cause and effect relationship of gene transmission from parent(s) to offspring and resulting genetic variation.]</p>		

<p>LS1.B: Growth and Development of Organisms</p> <ul style="list-style-type: none"> Organisms reproduce, either sexually or asexually, and transfer their genetic information to their offspring. (secondary to MS-LS3-2) 	<p><u>Cultural Studies:</u></p> <ul style="list-style-type: none"> Botany- -Parts of plants -Needs of plants -Botany Charts Zoology- -Invertebrate Families -Vertebrate Families Anatomy 	<p><u>FOSS:</u></p> <ul style="list-style-type: none"> -Structures of Life -Diversity of Life SRA: Life Science
<p>LS3.A: Inheritance of Traits</p> <ul style="list-style-type: none"> Variations of inherited traits between parent and offspring arise from genetic differences that result from the subset of chromosomes (and therefore genes) inherited. (MS-LS3-2) 	<p><u>Cultural Studies:</u></p> <ul style="list-style-type: none"> Botany- -Parts of plants -Needs of plants -Botany Charts Zoology- -Invertebrate Families -Vertebrate Families Anatomy 	<p><u>FOSS:</u></p> <ul style="list-style-type: none"> -Structures of Life -Diversity of Life SRA: Life Science
<p>LS3.B: Variation of Traits</p> <p>In sexually reproducing organisms, each parent contributes half of the genes acquired (at random) by the offspring. Individuals have two of each chromosome and hence two alleles of each gene, one acquired from each parent. These versions may be identical or may differ from each other. (MS-LS3-2)</p>	<p><u>Cultural Studies:</u></p> <ul style="list-style-type: none"> Zoology- -Invertebrate Families -Vertebrate Families Anatomy 	<p><u>FOSS:</u></p> <ul style="list-style-type: none"> -Structures of Life -Diversity of Life SRA: Life Science

NGSS - Sixth Grade: Earth and Space Science

MS -ESS2 Earth's Systems

Students who demonstrate understanding can:

MS-ESS2-4. Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity. [Clarification Statement: Emphasis is on the ways water changes its state as it moves through the multiple pathways of the hydrologic cycle. Examples of models can be conceptual or physical.] [Assessment Boundary: A quantitative understanding of the latent heats of vaporization and fusion is not assessed.]

MS-ESS2-5. Collect data to provide evidence for how the motions and complex interactions of air masses results in changes in weather conditions. [Clarification Statement: Emphasis is on how air masses flow from regions of high pressure to low pressure, causing weather (defined by temperature, pressure, humidity, precipitation, and wind) at a fixed location to change over time, and how sudden changes in weather can result when different air masses collide. Emphasis is on how weather can be predicted within probabilistic ranges. Examples of data can be provided to students (such as weather maps, diagrams, and visualizations) or obtained through laboratory experiments (such as with condensation).] [Assessment Boundary: Assessment does not include recalling the names of cloud types or weather symbols used on weather maps or the reported diagrams from weather stations.]

MS-ESS2-6. Develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates. [Clarification Statement: Emphasis is on how patterns vary by latitude, altitude, and geographic land distribution. Emphasis of atmospheric circulation is on the sunlight-driven latitudinal banding, the Coriolis effect, and resulting prevailing winds; emphasis of ocean circulation is on the transfer of heat by the global ocean convection cycle, which is constrained by the Coriolis effect and the outlines of continents. Examples of models can be diagrams, maps and globes, or digital representations.] [Assessment Boundary: Assessment does not include the dynamics of the Coriolis effect.]

Disciplinary Core Idea

ESS2.C: The Roles of Water in Earth's Surface Processes

- Water continually cycles among land, ocean, and atmosphere via transpiration, evaporation, condensation and crystallization, and precipitation, as well as downhill flows on land. (MS-ESS2-4)
- The complex patterns of the changes and the movement of water in the atmosphere, determined by winds, landforms, and ocean temperatures and currents, are major determinants of local weather patterns. (MS-ESS2-5)
- Global movements of water and its changes in form are propelled by sunlight and gravity. (MS-ESS2-4)
- Variations in density due to variations in temperature and salinity drive a global pattern of interconnected ocean currents. (MS-ESS2-6)

Montessori Lesson

Cultural Studies:

Geography Lessons and Impressionistic Charts:
 -The Universe, Solar System and Earth;
 -Solar Energy and Earth;
 -Movements of the Earth and their Consequences:
 Climatic Zones
 -The Atmosphere and its Phenomena;

Supplemental

F OSS:

-Water and Climate
 -Earth History

<p>-The Work of Water; -The Hydrosphere and its Phenomena</p>	<p><u>Cultural Studies:</u> Geography Lessons and Impressionistic Charts: -The Universe, Solar System and Earth; -Solar Energy and Earth; -Movements of the Earth and their Consequences: Climatic Zones -The Atmosphere and its Phenomena; -The Work of Water; -The Hydrosphere and its Phenomena</p>		<p>FOSS: -Water and Climate -Earth History -Population and Ecosystem</p>
<p>ESS2.D: Weather and Climate</p>			
<p>Weather and climate are influenced by interactions involving sunlight, the ocean, the atmosphere, ice, landforms, and living things. These interactions vary with latitude, altitude, and local and regional geography, all of which can affect oceanic and atmospheric flow patterns. (MS-ESS2-6)</p> <ul style="list-style-type: none"> ▪ Because these patterns are so complex, weather can only be predicted probabilistically. (MS-ESS2-5) ▪ The ocean exerts a major influence on weather and climate by absorbing energy from the sun, releasing it over time, and globally redistributing it through ocean currents. (MS-ESS2-6) 			
<p>MS3-ESS3 Earth and Human Activity</p>			
<p>Students who demonstrate understanding can:</p>			
<p>MS-ESS3-3. Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.* [Clarification Statement: Examples of the design process include examining human environmental impacts, assessing the kinds of solutions that are feasible, and designing and evaluating solutions that could reduce that impact. Examples of human impacts can include water usage (such as the withdrawal of water from streams and aquifers or the construction of dams and levees), land usage (such as urban development, agriculture, or the removal of wetlands), and pollution (such as of the air, water, or land).]</p>			
<p>MS-ESS3-5. Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century. [Clarification Statement: Examples of factors include human activities (such as fossil fuel combustion, cement production, and agricultural activity) and natural processes (such as changes in incoming solar radiation or volcanic activity). Examples of evidence can include tables, graphs, and maps of global and regional temperatures, atmospheric levels of gases such as carbon dioxide and methane, and the rates of human activities. Emphasis is on the major role that human activities play in causing the rise in global temperatures.]</p>			
<p>Disciplinary Core Idea</p>		<p><u>Montessori Lesson</u></p>	<p><u>Supplemental</u></p>
<p>ESS3.C: Human Impacts on Earth Systems Human activities have significantly altered the biosphere, sometimes damaging or destroying natural habitats and causing the extinction of other species. But changes to</p>		<p><u>Cultural Studies:</u> History: First Great Lesson-The Universe;</p>	<p><u>FOSS:</u> -Earth History -Water and</p>

<p>Earth's environments can have different impacts (negative and positive) for different living things. (MS-ESS3-3)</p>	<p>Second Great Lesson- The Coming of Life; Third Great Lesson- Civilizations Geography Lessons and Impressionistic Charts: -Movements of the Earth and their Consequences: Climatic Zones -The Atmosphere and its Phenomenon</p>	<p>Climate -Population and Ecosystem</p>
<p>ESS3.D: Global Climate Change Human activities, such as the release of greenhouse gases from burning fossil fuels, are major factors in the current rise in Earth's mean surface temperature (global warming). Reducing the level of climate change and reducing human vulnerability to whatever climate changes do occur depend on the understanding of climate science, engineering capabilities, and other kinds of knowledge, such as understanding of human behavior and on applying that knowledge wisely in decisions and activities. (MS-E SS3-5)</p>	<p><u>Cultural Studies:</u> Geography Lessons and Impressionistic Charts: -Movements of the Earth and their Consequences: Climatic Zones -The Atmosphere and its Phenomena</p>	<p><u>FOSS:</u> -Earth History -Water and Climate -Population and Ecosystem</p>

NGSS - Sixth Grade: Physical Science

<p>MS-PS3 Energy Students who demonstrate understanding can:</p> <p>MS-PS3-3. Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.* [Clarification Statement: Examples of devices could include an insulated box, a solar cooker, and a Styrofoam cup.] [Assessment Boundary: Assessment does not include calculating the total amount of thermal energy transferred.]</p> <p>MS-PS3-4. Plan an investigation to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy of the particles as measured by the temperature of the sample. [Clarification Statement: Examples of experiments could include comparing final water temperatures after different masses of ice melted in the same volume of water with the same initial temperature, the temperature change of samples of different materials with the same mass as they cool or heat in the environment, or the same material with different masses when a specific amount of energy is added.] [Assessment Boundary: Assessment does not include calculating the total amount of thermal energy transferred.]</p> <p>MS-PS3-5. Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object. [Clarification Statement: Examples of empirical evidence used in arguments could include an inventory or other representation of the energy before and after the transfer in the form of temperature changes or motion of object.] [Assessment Boundary: Assessment does not include calculations of energy.]</p>	<p style="text-align: center;"><u>Disciplinary Core Idea</u></p> <p>PS3.A: Definitions of Energy</p> <ul style="list-style-type: none"> ▪ Temperature is a measure of the average kinetic energy of particles of matter. The relationship between the temperature and the total energy of a system depends on the types, states, and amounts of matter present. (MS-PS3-3),(MS-PS3-4) <p>PS3.B: Conservation of Energy and Energy Transfer</p> <ul style="list-style-type: none"> ▪ When the motion energy of an object changes, there is inevitably some other change in energy at the same time. (MS-PS3-5) ▪ The amount of energy transfer needed to change the temperature of a matter sample by a given amount depends on the nature of the matter, the size of the sample, and the environment. (MS-PS3-4) ▪ Energy is spontaneously transferred out of hotter regions or objects and into colder ones. (MS-PS3-3) 	<p style="text-align: center;"><u>Montessori Lesson</u></p>	<p style="text-align: center;"><u>Supplemental</u></p> <p>FOSS: -Motion and Matter -Matter and Energy -Force and Motion</p> <p>FOSS: -Motion and Matter -Matter and Energy -Force and Motion</p>
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NGSS Sixth Grade: Engineering Design

<p>MS-ETS1 Engineering Design Students who demonstrate understanding can:</p> <p>MS-ETS1-1. Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.</p> <p>MS-ETS1-2. Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.</p> <p>MS-ETS1-3. Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.</p> <p>MS-ETS1-4. Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.</p>	<p style="text-align: center;"><u>Supplemental</u></p>	<p style="text-align: center;"><u>Montessori Lesson</u></p>	<p><u>EiE:</u> -The Best of Bugs- Designing Hand- Pollinators</p>
<p>Disciplinary Core Idea</p> <p>ETS1.A: Defining and Delimiting Engineering Problems</p> <ul style="list-style-type: none"> ▪ The more precisely a design task's criteria and constraints can be defined, the more likely it is that the designed solution will be successful. Specification of constraints includes consideration of scientific principles and other relevant knowledge that are likely to limit possible solutions. (MS-ETS1-1) <p>ETS1.B: Developing Possible Solutions</p> <ul style="list-style-type: none"> ▪ Research on a problem should be carried out before beginning to design a solution. Testing a solution involves investigating how well it performs under a range of likely conditions. (3-5-ETS1-2) ▪ At whatever stage, communicating with peers about proposed solutions is an important part of the design process, and shared ideas can lead to improved designs. (3-5-ETS1-2) ▪ Tests are often designed to identify failure points or difficulties, which suggest the elements of the design that need to be improved. (3-5-ETS1-3) <p>ETS1.C: Optimizing the Design Solution</p> <ul style="list-style-type: none"> ▪ Although one design may not perform the best across all tests, identifying the characteristics of the design that performed the best in each test can provide useful information for the redesign process—that is, some of those characteristics may be incorporated into the new design. (MS-ETS1-3) <p>The iterative process of testing the most promising solutions and modifying what is proposed on the basis of the test results leads to greater refinement and ultimately to an optimal solution. (MS-ETS1-4)</p>	<p style="text-align: center;"><u>Supplemental</u></p>	<p style="text-align: center;"><u>Montessori Lesson</u></p>	<p><u>EiE:</u> -The Best of Bugs- Designing Hand- Pollinators</p>

7th Grade Common Core/Montessori Alignment

Next Generation Science Standards

7th Grade CORE Standards	Learning Activity/Resource
PHYSICAL SCIENCE	<p>Note: Each of the PS Standards are all met through sample activities outlined below.</p>
<p>PS1-1. Develop models to describe the atomic composition of simple molecules and extended structures.</p>	<p>* Lesson on "Atomic Structure" * Hands on activities with "Atomic Models"</p>
<p>PS1-2. Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.</p>	<p>Students watch three exciting demonstrations that allow them to come up with signs of a chemical reaction on their own! The demonstrations include Elephant's Toothpaste, The Iodine Clock, and Rocket Engine.</p>
<p>PS1-3. Gather and make sense of information to describe that synthetic materials come from natural resources and impact society.</p>	<p>thewonderofscience.com/</p>
<p>PS2-1. Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects.</p>	<p>i) Veritasium: Best Film on Newton's Third Law ii) Physlet Physics: Newton's Third Law – Contact Forces iii) McMillan Space Centre: Newton's Third Law of Motion iv) http://www.physicsclassroom.com/class/newtlaws/Lesson-4/Newton-s-Third-Law v) https://www.physicsclassroom.com/Teacher-Toolkits/Newton-s-Third-Law</p>
<p>PS2-2. Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object.</p>	<p>PPT Lesson on Stability and Change Explanations of stability and change in natural or designed systems can be constructed by examining the changes over time and forces at different scales.</p>

<p>PS3-1. Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object.</p>	<p>Students explore kinetic energy in a Science class rotation by creating spool racers, creating 'craters' with marbles and flour, and measuring how different types of matter heat up at different rates!</p>
<p>PS3-2. Develop a model to describe that when the arrangement of objects interacting at a distance changes, different amounts of potential energy are stored in the system.</p>	<p>Students use their understanding of kinetic and potential energy to design catapults using easily accessible materials that launch marshmallows!</p>
<p>PS4-1. Use mathematical representations to describe a simple model for waves that includes how the amplitude of a wave is related to the energy in a wave.</p>	<p>Use slinkies, tuning forks, and rope strings to model waves and their properties. Create a graphic representation of electromagnetic waves and their uses by looking at the poster of Electromagnetic Spectrum.</p>
<p>ETS -1. Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.</p>	<p>Pollution Lab Station: Students investigate the advantages, limitations, and consequences of new technologies as they utilize a water treatment and desalination process to purify water. !</p>
<p>ETS -2. Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.</p>	<p>Thermal protection System: Use knowledge of radiation, convection to design thermal protection systems for NASA that will protect a spacecraft from burning up in the atmosphere</p>
<p>EARTH SCIENCE</p>	<p>Note: Each of the ES Standards are all met through sample activities outlined below.</p>
<p>ESS1-1. Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.</p>	<p>Through a series of flexible activities using simple materials from science room students will be creating different models to explain, lunar phases, eclipses of the sun and moon and seasons.</p>
<p>ESS1-2. Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system.</p>	<p>Design Egg Drop Engineering Project in Science class. Watch Space Travel Documentary on youtube.com</p>

ESS2-1. Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.	Watch "Rock Cycle Song" on youtube *Build a Thermos using recycled materials. Observing different types of rocks.
ESS2-2. Construct an explanation based on	Observe different types of rocks, minerals,
ESS2-3. Analyze and interpret data on the	Pangaea - Wegener's Puzzling Evidence
ESS3-1. Construct a scientific explanation based on	(Project Work) Measuring Energy in the
ESS3-2. Analyze and interpret data on natural	Lesson on: What is Climate and what causes it
ESS3-3. Apply scientific principles to design a	Project Work: i) The Great Pacific Garbage
LIFE SCIENCE	Note: Each of the LS Standards are all met
LS1-1. Conduct an investigation to provide evidence	*PPT lesson on "Cells the basic unit of life"
LS1-2. Develop and use a model to describe the	*Compare models of prokaryotes and eukaryotes
LS1-3. Use argument supported by evidence for	* Observe cells to tissues poster in the science
LS1-4. Use argument based on empirical evidence	https://thewonderofscience.com/msls14
LS2-1. Analyze and interpret data to provide	Project Work: Ecosystem Match-up
LS2-2. Construct an explanation that predicts	PPT Lesson on "Relationships Between
LS2-3. Develop a model to describe the cycling of	* https://betterlesson.com/.../ngss-ms-1s2-3-
LS3-1. Develop and use a model to describe why	*PPT on " Mutations"
LS4-1. Analyze and interpret data for patterns in the	*Careful observation of "Fossil Record"
LS4-2. Apply scientific ideas to construct an	* Evolution- Homologous Structures and
LS4-3. Analyze displays of pictorial data to compare	https://thewonderofscience.com/msls43
ENGINEERING PRACTICES	Note: Each of the ES Standards are all met
Asking Questions and Defining Problems	http://www.bozemanscience.com/ngs-asking-
Developing and Using Models	https://www.youtube.com/watch?v=Gn26g5RFxpQ
Planning and Carrying Out Investigations	https://www.calacademy.org/educators/planning-
Analyzing and Interpreting Data	https://www.rsc.org/cpd/resource/RES00001448/
Using Mathematics and Computational Thinking	http://www.bozemanscience.com/ngs-using-
Constructing Explanations and Designing Solutions	http://www.mtscienceducation.org/toolkit-
Engaging in Argument From Evidence	https://www.carolina.com/teacher-
Obtaining, Evaluating, and Communicating	https://www.youtube.com/watch?time_continue=1

Appendix B

Common Core and
Next Generation Science Standards
Alignment with Montessori Curriculum
(Sample documents)