

Many Rivers Montessori Middle School Program Features

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Overview

Many Rivers Montessori Middle School encourages adolescents to explore their role in the world and to create a vision for their personal futures. Through engagement in meaningful work, our students gain self-confidence and self-knowledge, find belonging in a community, learn adaptability, develop self-accountability, demonstrate academic competence, and come to appreciate intellectual challenge. Our program provides the academic foundation for success in high school education and beyond, while incorporating unique opportunities for experiential learning, entrepreneurship, travel, and service learning. Upon entering high school, the MRM Middle School graduate has experienced ample opportunities to acquire social, moral, intellectual, and emotional intelligence.

Early Adolescent Outcomes

"The whole life of the adolescent should be organized in such a way that will allow [them], when the time comes, to make a triumphal entry into the life of society, not entering it debilitated, isolated or humiliated, but with head high, sure of [themselves]. Success in life depends on self-confidence born of a true knowledge of one's capacities." - Maria Montessori

The Educational syllabus laid out by Dr. Montessori in *From Childhood to Adolescence*, identifies three parts:

1. Opportunities for self expression
2. "Fulfillment of ... fundamental needs" such as moral development and opportunities to take on central role in the community; and
3. General educational preparation allowing entry into adult life.

This curriculum strives to address the growth of the whole adolescent including their Social, Emotional, Moral, and Cognitive Development. Below you will find a table of the outcomes of such an educational program.

Emotional Development	Social Development	Character Development	Cognitive Development
<p>Has a sense of mission</p> <p>Connects a personal vocation with the larger human purpose</p> <p>Feelings of self-sufficiency</p> <p>Experiences inner harmony based on work and achievement</p> <p>Optimistic about the future</p> <p>Feeling that human life has value</p> <p>Feeling of belonging to the global community and the earth</p> <p>Is self-disciplined</p> <p>Feels in control of and comfortable with change</p> <p>Believes that people can solve problems and overcome diversity</p>	<p>Learns to live and problem solve in a cohesive community</p> <p>Learns what it means to make a meaningful contribution</p> <p>Understands interdependency and the need to cooperate</p> <p>Understands the benefit of taking an active role in society</p> <p>Is beginning to form a social consciousness</p> <p>Understands work as a product of commerce and necessary to community life</p> <p>Balances individual initiatives in relation to community goals</p> <p>Is learning the meaning and context of rules and their importance to social harmony</p>	<p>Respect for others and their roles in the community</p> <p>Believes that work is noble and assumes mature responsibilities</p> <p>Is grappling with social and ethical problems of a global nature</p> <p>Has initiative, motivation, and a commitment to freely chosen work</p> <p>Finds satisfaction through personal accomplishments that contribute to the greater good</p> <p>Develops a service mentality towards the needs of the larger society</p> <p>Maturation of conscience based on community values and responsible dialogue</p>	<p>Ability to express creativity in a variety of modalities</p> <p>Intellectual consideration of questions of nature and cosmos</p> <p>Analysis of scientific causality</p> <p>Increased understanding of mathematics connected to practical applications and scientific observation</p> <p>Increased facility in language(s), both written and spoken</p> <p>Ability to connect the history of civilizations with principles of personal and social evolution</p> <p>A view of the whole of history and humanity's future destiny</p> <p>Understands the nature of interdisciplinary studies</p>

Scope & Sequence

Language Arts (3.5 contact hrs/week)	Students Will:	Materials & Resources
The Writing Process	<p>Learn strategies for seeding/brainstorming and pre-writing</p> <p>Carry multiple pieces of writing through the following stages of the writing process:</p> <ul style="list-style-type: none"> ○ Drafting (crafting pieces of increasing length, complexity, & sophistication) ○ Responding (giving critical and significant feedback to others) ○ Revising (accepting and incorporating critical feedback from others) ○ Editing work of self and others (proper use of editor's marks) ○ Publishing 	<p>Individual notes taken during lessons</p> <p>Materials for the publication of polished work, such as report covers, blank books, etc.</p> <p>Response form for self-evaluation and evaluating peer pieces</p> <p>Visuals & handouts describing the writing process</p>
6 (+1) Traits of Effective Writing	<p>Apply to their work the 7 traits of effective writing, which are:</p> <ul style="list-style-type: none"> ○ Ideas ○ Organization ○ Voice ○ Word choice ○ Sentence Fluency ○ Conventions ○ Presentation <p>Evaluate & respond effectively to the work of others using a rubric of the above listed traits</p>	
Research Skills	<p>Map & plan a piece of writing</p> <p>Gather research from multiple sources, including the internet</p> <p>Organize & synthesize information</p> <p>Create original language and work from source material</p> <p>Cite properly</p> <p>Create annotated bibliographies</p>	<p>Cornell note-taking format for print and online sources</p> <p>National History Day resources</p> <p>Institutional public library card for class needs</p>
Structure & Organization	<p>Make narrow & manageable topic choices</p> <p>Craft a focused & concise thesis statement</p>	<p>Write Source reference materials</p>

	<p>Outline expository pieces by:</p> <ul style="list-style-type: none"> ○ Crafting topic sentences in support of thesis ○ Sequencing information logically ○ Isolating topics within individual paragraphs ○ Creating engaging introductions & conclusions 	
Conventions	<p>Apply proper punctuation, capitalization, & grammar to original work</p> <p>Properly use and interpret standard editor's marks</p> <p>Apply word processing technology to identify & correct errors of convention</p>	<p>Response form for peer reviews</p> <p>Wordly Wise workbook</p>
Genre	<p>Explore the structure & convention of multiple genres</p> <p>Read, analyze, & discuss important pieces in each genre</p> <p>Create original pieces of:</p> <ul style="list-style-type: none"> ○ Poetry (inherited & open form) ○ Short story ○ Non-fiction ○ Essay (5 ¶ persuasive) ○ Essay (5 ¶ literary analysis) ○ Letters (personal & business) ○ A resume ○ Speech/public address ○ Biography/autobiography ○ Drama ○ Journalism 	<p>Reading list consisting of culturally significant pieces from each of the named genres. Examples include:</p> <ul style="list-style-type: none"> ● To Kill a Mockingbird ● Lord of the Flies ● I am Malala ● Flowers for Algernon ● Diary of Anne Frank ● Bless me Ultima ● Fresh Ink ● Massacre in Minnesota
Figurative Language & Literary Inquiry	<p>Define, identify in context, and apply to their own written pieces, literary devices such as:</p> <ul style="list-style-type: none"> ○ Simile & metaphor ○ Alliteration & assonance ○ Foreshadowing ○ Irony ○ Personification ○ Rhyme scheme <p>Participate in Socratic seminar and shared inquiry</p> <p>Write original pieces of analytical writing addressing the following elements of literature:</p> <ul style="list-style-type: none"> ○ Character 	

	<ul style="list-style-type: none"> ○ Theme/motif ○ Setting ○ Point of view ○ Plot ○ Author intention ○ Historical context 	
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Mathematics (3.75 contact hrs/wk)	Students Will:	Materials & Resources
Problem Solving Strategies	<p>Learn flexibility and creativity in approaching complex problems</p> <p>Apply such strategies to such mathematical challenges as:</p> <ul style="list-style-type: none"> ○ Solving by making a diagram ○ Solving by making a table ○ Solving by simplifying the problem ○ Solving by working backwards 	
Math 7/8	<p>Understand & implement the language of Algebra including the following:</p> <ul style="list-style-type: none"> ○ Commutative property ○ Operations w/ Integers ○ Exponents ○ Order of operations ○ Associative property ○ Distributive property ○ The symbols of Algebra <p>Translate information into algebraic expressions</p> <p>Evaluate expressions for a given value of x</p> <p>Use variables</p> <p>Simplify expressions</p> <p>Use formulas</p> <p>Manipulate & solve single variable equations & inequalities</p> <p>Solve equations & inequalities in one variable and create equivalent equations & inequalities</p>	<p>Mathematics Course 3 Holt McDougal and accompanying Teacher materials</p>

	<p>Graph on a coordinate plane</p> <p>Navigate the Cartesian coordinate plane</p> <p>Graph functions using multiple strategies</p> <p>Understand and compare slope</p> <p>Recognize the equation of a graphed line</p> <p>Solve systems of equations & inequalities</p> <p>Graph inequalities</p> <p>Solve systems of equations/inequalities using multiple methods/strategies</p> <p>Reflect, translate, rotate, & dilate objects</p> <p>Identify & define geometric objects</p> <p>Understand paths & points</p> <p>Visualize angles</p> <p>Define parallel lines</p> <p>Use standard units to measure length and angles</p> <p>Deduce methods for measuring area & volume</p> <p>Dilate geometric objects</p> <p>Dilate objects</p> <p>Understand dilation as a similarity motion</p> <p>Use measurements within dilated figures</p> <p>Use angles</p> <p>Identify supplementary & vertically opposite angles</p> <p>Define perpendicularity</p>	
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	<p>Understand the relationship of angles created by parallel lines</p> <p>Calculate area & perimeter</p> <p>Discover the formulas for calculating the areas of: triangles, quadrilaterals, other polygons, and circles</p> <p>Apply the pythagorean theorem</p> <p>Be introduced to polynomials</p> <p>Manipulate polynomials</p> <p>Understand the definition & characteristics of polynomials</p> <p>Evaluate and simplify expressions with negative & zero exponents</p> <p>Apply the properties of exponents to mathematical solutions</p> <p>Manipulate rational expressions & equations</p> <p>Define & identify rational algebraic expressions</p> <p>Simplify rational expressions & recognize equivalent expressions</p> <p>Perform operations on rational expressions</p> <p>Use ratios and proportion in Algebra</p>	
<p>Algebra I</p>	<p>Understand & implement the language of Algebra including the following:</p> <ul style="list-style-type: none"> ○ Commutative property ○ Operations w/ Integers ○ Exponents ○ Order of operations ○ Associative property ○ Distributive property ○ The symbols of Algebra <p>Translate information into algebraic expressions</p> <p>Evaluate expressions for a given value of x</p> <p>Use variables</p>	<p><i>Algebra 1</i> Prentice Hall and accompanying Teacher's Materials</p> <p>Desmos Graphing Calculator</p>

	<p>Simplify expressions</p> <p>Use formulas</p> <p>Manipulate & solve single variable equations & inequalities</p> <p>Solve equations & inequalities in one variable</p> <p>Identify and create equivalent equations & inequalities</p> <p>Graph on a coordinate plane</p> <p>Navigate the Cartesian coordinate plane</p> <p>Graph functions using multiple strategies</p> <p>Understand and compare slope</p> <p>Recognize the equation of a graphed line</p> <p>Solve systems of equations & inequalities</p> <p>Graph inequalities</p> <p>Solve systems of equations/inequalities using multiple methods/strategies</p> <p>Compare the equations of parallel and perpendicular lines</p> <p>Manipulate polynomials</p> <p>Understand the definition & characteristics of monomials</p> <p>Perform operations on monomials</p> <p>Factor monomials</p> <p>Understand the definition & characteristics of polynomials</p> <p>Evaluate and simplify expressions with negative & zero exponents</p> <p>Apply the properties of exponents to mathematical solutions</p> <p>Perform operations on polynomials</p>	
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	<p>Factor polynomials</p> <p>Solve quadratic equations</p> <p>Solve quadratics using multiple methods & strategies, including:</p> <ul style="list-style-type: none"> ○ Graphing ○ Factoring ○ Completing the square ○ Applying the quadratic formula <p>Manipulate rational expressions & equations</p> <p>Define & identify rational algebraic expressions</p> <p>Simplify rational expressions & recognize equivalent expressions</p> <p>Perform operations on rational expressions</p> <p>Use ratios and proportion in Algebra</p> <p>Solve complex rational equations</p>	
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Science & Permaculture (3 contact hrs/wk)	Students Will:	Materials & Resources
Scientific Method	<p>Understand & apply all stages of the scientific method:</p> <ul style="list-style-type: none"> ○ Formation of hypothesis ○ Experiment design ○ Identification & control of variables ○ Repeat trial ○ Interpretation & representation of data ○ Application to useful and practical problems 	Integrated iScience, Course 2 McGraw Hill
Chemistry	<p>Explore the history & organization of the periodic table of elements</p> <p>Understand the structure & particles of atoms</p> <p>Learn how atoms bond to form molecules</p> <p>Manipulate basic chemical formulas & equations</p>	<p>Integrated iScience, Course 2 McGraw Hill</p> <p>Visuals of Periodic Table</p> <p>A Brief History of Nearly Everything</p>

	<p>Differentiate between physical & chemical changes</p> <p>Understand the properties of acids & bases/test for pH</p>	
Physics	<p>Describe the multiple forms of energy & name examples</p> <p>Understand the ways that energy transforms and transfers</p> <p>Explore the structures, properties, and behaviors of waves</p> <p>Apply knowledge of work, force & motion to practical problems</p> <p>Understand the relationship between electricity & magnetism</p>	<p>Integrated iScience, Course 2 McGraw Hill</p> <p>Science Explorer: Motion, Forces, Energy, Electricity & Magnetism</p>
Life Science	<p>Have knowledge of the structure, function, & division of cells</p> <p>Understand the basis on which scientists classify organisms</p> <p>Recognize photosynthesis & respiration as inverse processes</p> <p>Apply probability to knowledge of genetics & inheritance</p> <p>Discuss changes in populations over time</p>	<p>Integrated iScience, Course 2 McGraw Hill</p> <p>Science Explorer: From Bacteria to Plants, Animals, Cells & Heredity</p> <p>Microscopes</p>
Ecology/ Environmental Science	<p>Apply understanding of the interdependence of elements in an ecosystem to stewardship of the campus</p> <p>Compare cycles of matter and energy in nature to man made systems</p> <p>Demonstrate awareness of the relationships between biotic and abiotic factors</p>	Community Resources
Environmental Issues	<p>Cultivate awareness and understanding of the social, economic, political and personal causes and implications of environmental challenges such as:</p> <ul style="list-style-type: none"> ○ Global warming ○ Pollution ○ Food systems ○ Human activity & the ecosystem <p>Plan, organize & implement personal &/or collective action</p>	<p>Newspaper & periodical subscriptions</p> <p>Community Resources</p>
Permaculture Design	<p>Exercise the strategies of permaculture design, including:</p> <ul style="list-style-type: none"> ○ Deep observation 	

	<ul style="list-style-type: none"> ○ Mapping ○ Capturing & storing of energy ○ “Stacking” of elements in a system ○ Designing to mimic cycles in nature <p>Implement the stages of the design process</p> <p>Demonstrate understanding of the ethics & strategies of permaculture</p> <p>Explore the history of the permaculture movement</p> <p>Research examples of successful permaculture design</p> <p>Create original permaculture installations</p>	
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History & Culture (4 contact hrs/wk)	Students Will:	Materials & Resources
Citizenship and Government	<p>Apply civic reasoning and demonstrate civic skills for the purpose of informed and engaged lifelong civic participation.</p> <p>Explain democratic values and principles that guide governments, societies and communities and analyze the tensions within the United States constitutional government.</p> <p>Explain and evaluate rights, duties and responsibilities in democratic society.</p> <p>Explain and evaluate processes, rules and laws of the United States governmental institutions at local, state and federal levels and within Tribal Nations.</p> <p>Analyze how public policy is shaped by governmental and non-governmental institutions and how people and communities take action to solve problems and shape public policy.</p> <p>Evaluate the unique political status, trust relationships and governing structures of sovereign Tribal Nations and the United States.</p>	

<p>Economics</p>	<p>Use economic models/reasoning and data analysis to construct an argument and propose a solution related to an economic question. Evaluate the impact of the proposed solution on various communities that would be affected.</p> <p>Analyze how Scarcity and artificial shortages force individuals, organizations, communities and governments to make choices and incur opportunity costs. Analyze how their decisions affect economic equity and efficiency.</p> <p>Apply economic concepts and models to develop individual and collective financial goals and strategies for achieving these goals, taking into consideration historical and contemporary conditions that either inhibit or advance the creation of individual and generational wealth.</p> <p>Explain and evaluate how resources are used and how goods and services are distributed within different economic systems. Analyze how incentives influence the decisions of consumers, producers and governments. Evaluate the intended and unintended consequences of these decisions from multiple perspectives.</p> <p>Measure and evaluate the well-being of nations and communities using a variety of indicators. Explain the causes of economic ups and downs. Evaluate how government actions affect individuals' well-being within an economy.</p> <p>Explain why people trade and why nations encourage or limit trade. Analyze the costs and benefits of international trade and globalization on communities and the environment.</p>	
<p>Geography</p>	<p>Apply geographic tools, including geospatial technologies and geographic inquiry to solve spatial problems.</p> <p>Describe places and regions, explaining how they are influenced by power structures.</p> <p>Analyze patterns of movement and interconnectedness within and between cultural, economic and political systems from a local to global scale.</p> <p>Evaluate the relationship between humans and the environment, including climate change.</p> <p>Investigate how sense of place is impacted by different cultural perspectives.</p>	

<p>History</p>	<p>Ask historical questions about context, change and continuity in order to identify and analyze dominant and non-dominant narratives about the past.</p> <p>Identify diverse points of view and describe how one's frame of reference influences historical perspective.</p> <p>Investigate a variety of historical sources by: a) analyzing primary and secondary sources, b) identifying perspectives and narratives that are absent from the available sources and c) interpreting the historical context, intended audience, purpose and author's point of view of these sources.</p> <p>Integrate evidence from multiple historical sources and interpretations into a reasoned argument and/or compelling narrative about the past.</p> <p>Use historical methods and sources to identify and analyze the roots of a contemporary issue. Design a plan to address it.</p>	
<p>Ethnic Studies</p>	<p>Analyze the ways power and language construct the social identities of race, religion, geography, ethnicity and gender. Apply these understandings to one's own social identities and other groups living in Minnesota, centering those whose stories and histories have been marginalized, erased or ignored.</p> <p>Describe how individuals and communities have fought for freedom and liberation against systemic and coordinated exercises of power locally and globally. Identify strategies or times that have resulted in lasting change. Organize with others to engage in activities that could further the rights and dignity of all.</p> <p>Use ethnic and Indigenous studies methods and sources in order to understand the roots of contemporary systems of oppression and apply lessons from the past in order to eliminate historical and contemporary injustices.</p>	

Music & Art (2.25 contact hrs/wk)	Students Will:	Materials & Resources
Art	<p>Understand, use, and evaluate the use of the Elements of Art</p> <ul style="list-style-type: none"> ○ Line ○ Shape ○ Form ○ Space ○ Color ○ Texture <p>Understand, use, and evaluate the Principles of Design</p> <ul style="list-style-type: none"> ○ Balance ○ Emphasis ○ Movement ○ Pattern ○ Repetition ○ Pattern ○ Rhythm ○ Variety ○ Unity <p>Use the Four Step Critical Analysis to evaluate art</p> <ul style="list-style-type: none"> ○ Describe ○ Analyze ○ Interpret ○ Judge <p>Create: Generate, conceptualize, organize, and develop artistic ideas and work in various visual media</p> <p>Connect: Relate artistic ideas and works with societal, cultural, and historical context to deepen understanding.</p> <p>Respond: Interpret intent and meaning in artistic work</p>	<p>Paints: acrylic and watercolor</p> <p>Charcoal</p> <p>Clay</p> <p>Glass</p> <p>Printmaking Supplies</p> <p>Oil Pastels</p> <p>Beads</p> <p><i>Duluth Public Library</i></p> <p><i>Duluth Art Institute</i></p> <p><i>Tweed Museum</i></p>
Music	<p>Gain exposure to ensemble performance while focusing on the offered string instrument of their choice</p> <p>Learn beginning music theory which includes topics like note reading, rhythms, composition and appreciation</p> <p>Work to perform various works of classical and folk music</p>	<p><i>Alfred's Essentials of Music Theory</i></p> <p><i>Essential Elements for Strings</i></p>

Changes & Choices (1.5 contact hours/wk)	Students Will:	Materials & Resources
Personal Financial Literacy	<p>Identify needs vs wants in life</p> <p>Learn how to create and maintain a personal budget</p> <p>Begin to develop strong saving and spending habits</p> <p>Learn how to interpret pay stubs</p> <p>Begin to develop an understanding of what deductions are and the place they have in most pay structures</p>	Next Gen Personal Finance Middle School Curriculum
Self-awareness/ Self-inventory	<p>Identify personal strengths & weaknesses</p> <p>Develop awareness of learning styles & preferences</p> <p>Explore the multiple dimensions of wellness</p> <p>Discuss the successful "habits of mind"</p> <p>Work to cultivate positive character traits</p>	The 7 Habits of Highly Effective Teens Sean Covey
Self-care	<p>Demonstrate awareness of habits & practices of:</p> <ul style="list-style-type: none"> o Nutrition o Hygiene o Exercise o Emotional, social & spiritual wellness 	
Teen Issues	<p>Practice decision making & communication regarding:</p> <ul style="list-style-type: none"> o Drugs & alcohol o Sexual activity o Healthy relationships <p>Work to develop a sense of self-respect/self-regard</p> <p>Explore issues of body image</p> <p>Learn ideal care of self (diet, rest, exercise, hygiene, stress management)</p> <p>Discuss self-harm (eating disorders, mutilation, etc.)</p>	

<p>Sexuality</p>	<p>Strengthen knowledge of reproductive anatomy</p> <p>Understand the physical & emotional aspects of puberty</p> <p>Explore gender, gender roles, and stereotypes</p> <p>Develop an awareness of potential sexual consequences:</p> <ul style="list-style-type: none"> ○ Pregnancy ○ STDs ○ Emotional, social, financial, etc <p>Compare the relative advantages and disadvantages of various means of protection (both abstinence & contraception)</p> <p>Broaden their understanding of sexual orientation & gender identify</p>	
<p>Peer Counseling</p>	<p>Cultivate active listening skills</p> <p>Practice sending effective messages</p> <p>Strengthen helping skills</p> <p>Develop effective questioning</p> <p>Explore personal value systems & apply them to decision making</p> <p>Broaden awareness of available community resources</p>	
<p>Peace Talks</p>	<p>Practice effective communication</p> <p>Engage in a practice of conflict resolution</p> <p>Engage in meaningful community and small group discussions about the value of empathy, humanizing those around us and other interpersonal topics</p>	

Experiential Learning/Leadership/Entrepreneurship

Experiential Learning: Through experiential and hands-on learning, the students of Many Rivers Montessori Middle School apply academic, practical, and interpersonal skills to real life situations and tangible problems in need of solving. Academic studies (particularly in History & Culture and Science & Permaculture) often revolve around very real challenges faced by the class, the school, and the larger community. Past examples have been:

- *Empty Bowl Fundraiser:* As the Microeconomy grew, students decided it was time to increase their charitable giving. They recognized the need in our community to combat food insecurity and researched local organizations that aim to stop hunger. They had to decide which organization they would like to support and how they might raise the funds they hoped to donate. An Empty Bowl fundraiser seemed the perfect solution: students could hone their pottery skills and then entice the community to contribute to the cause in exchange for a hand-crafted bowl and a delicious meal. In the two years of the event, over \$2000 has been raised for Hunger Solutions and Community Action Duluth's Mobile Market.
- *Community Art Show:* At the start of the COVID pandemic, when the world shut down, the students identified the need to connect with the community. How could people safely build community when they weren't allowed to be in the same room? Students investigated community initiatives across the globe, contributed their own ideas, and decided to host an art show on the porches, yards, and sidewalks of our community. They learned how to get their message out, create and display art outside, and document their efforts.
- *Spring Trip:* Each year the students discuss the goals of the spring trip and consider the types of activities that meet these goals. Then, they learn what goes into planning a trip, including securing transportation, lodging, and activity reservations, and maintaining a budget. Students learn how to reach consensus when selecting a trip and practice meeting individual goals and needs in the context of the larger community.

Entrepreneurship: Students own and operate a cooperative business known as "Microeconomy." Microeconomy is a mission-guided exercise in socially responsible entrepreneurship, and has several branches under its umbrella. Included are the lunch program, annual craft fair, and a variety of charitable fundraising events. Students manage these endeavors with a high degree of autonomy, guided and advised by their adult mentors. Students are allowed to take risks and make mistakes with their investments and spending, and to experience the real-world consequences of those mistakes, be they positive or negative. Profits are used to fund things like celebrations, field trips and the annual 10-day year-end trip.

Leadership Opportunities: At the start of each school year, students interview and are hired into influential leadership positions responsible for making decisions that will affect themselves and the class as a whole. Positions are typically filled by one student, however

partnerships of two students for certain positions are common. Student managers keep in regular contact with their adult mentors to carry out the work of planning, executing, and delegating the work that falls within their specific job description. Current managerial positions include:

- **Business Manager:** Acts as head of Microeconomy to help plan/create/distribute product; works with Assistant Business Manager to lead Council and to oversee planning of class events (ie fundraisers/holiday parties/white elephant/etc)
- **Assistant Business Manager:** Works with Business Manager to lead Council and to help oversee planning of class events (ie fundraiser/holiday parties/white elephant/etc); managing products documentation binder
- **STEM Room Manager:** Oversees the overall operations of the STEM Room; works closely with the Business Manager and must be in regular communication with laser/clay/CNC/etc managers to ensure protocols are being followed, schedules are in order, equipment is being maintained, etc.
- **Treasurer:** Establishes and maintains budgets for activities and events; keeps records of financial transactions and communicates the budget and account balance to guides and classmates, receives and organizes financial reports from event managers; works closely with the Business Manager and Guides.
- **Laser Machine Manager:** Manages and orders materials/supplies; maintains schedule; maintains tools; acts as a resource for other students
- **Clay Manager:** Manages wheels/clay/materials/etc; orders materials/supplies; schedules firings; maintains tools; acts as a resource for other students
- **CNC Manager:** Manages and orders materials/supplies; maintains schedule; maintains of tools; acts as a resource for other students
- **Lunch Manager:** Oversees the lunch program by regularly communicating with the various lunch groups to ensure the following are in order:
 - menu/shopping/ordering/scheduling/cleaning/etc;
 - communicates regularly with the Business Manager and Treasurer to update financial/logistic/etc information.

Systems and Processes

Cycles of work: The educational syllabus follows a two year curricular cycle and provides opportunities to learn theoretical knowledge as well as gain practical experience in the core subjects of Math, Science, Social Studies, and Language Arts. Personal

development and creative expression are given focus in the core subjects as well as in elective courses. Seminar experiences help students develop their logic and reasoning skills across disciplines. The curriculum is thematic, with five six-week cycles per year. Core content is woven together by these themes and students work with a small group for the duration of the cycle and collaborate on a shared learning project. The themes central to this work include systems and structures, forces and power, connections and interdependence, balance and change, and identity and exploration. State and National curriculum standards are guideposts for the curriculum.

Three-Period Learning Cycle

Many Rivers Montessori uses the three period learning cycle in the adolescent community. *The first period* includes presentations by adults in the community providing key concepts and skills that will be needed for further study. It engages the imagination and connects the adolescent with the area of study for further independent discovery. *The second period* provides opportunities for independent and group work and study. It is during this period that adolescents are given freedom to select their work. This is where the learning really begins! They are able to choose their research and their work products and expressions. Montessori reminds us, "we ought to remember that there is one thing that education can take as a sure guide, and that is the *personality of the children* who are to be educated" (*From Childhood to Adolescence*). We will know that the environment and activities are appropriate and that self-construction is happening when students are engaged in meaningful work. During *the third period* students present their learning to the community. The individual work is considered and shared in context of the work of the group: individual self-construction within a social framework. Within the overarching three period lesson are multiple smaller, daily or weekly, learning cycles.

Creative Expression: Opportunities for creative expression are both integrated into the other disciplines, and an area of study in their own right. Through creative writing, music, drama, movement, visual arts, cooking, and creative/expressive uses of technology, students explore avenues through which to communicate their thoughts, feelings, and ideas with a larger audience. Students are given the opportunity to enroll at the start of the year in either Orchestra or Visual Arts. Additionally, frequent opportunities are sought for students to use creative expression as a mode of communication for their academic work as well.

Diversity of Learners

Many Rivers strives to meet the needs of all learners by providing choice in many aspects of the curriculum to engage learners, by providing various levels of instructional support based on the needs of the student, and by providing meaningful work promoting individual development at any stage within a supportive social context. Guides engage students, parents, and additional support staff or community partners as needed to best meet the needs of the student

Assessment/Evaluation

In the middle school at Many Rivers Montessori, we focus on ongoing, lesson-embedded strategies of formative assessment designed to inform our teaching and to give our students opportunities to practice their skills of metacognition. Formative assessment is carried out frequently in a variety of ways in which students are monitored for their level of participation as well as for the depth and sophistication of their understanding. Students' learning is also gauged by analyzing the demonstration of their understanding through a range of hands-on performance-related assessments, such as experiential projects, oral presentations, and the execution of experiments or procedures. Records are kept by both the student and adult guide(s) throughout the course of a student's cycle, year, and middle school career to track individual progression.

Additionally, students also undergo summative assessments across the curriculum in the form of final presentations, written or oral examinations, and annual standardized testing.

Observations, descriptions of habits and behaviors, assessment results, scores, and progress towards benchmarks are reported two times annually through student-led conferences and once annually on narrative and summative-based progress reports. In order to prepare students for high school in traditional settings, all courses are graded using letters (A-F) with an added narrative recommending advanced placement for high-school bound students with qualifying Advanced Work.

Parent Communication

We believe that strongly invested parents play a critical role in the overall well being of student success. While we vigorously encourage and teach students to take ownership of their schooling, parental communication is still necessary. Students of this age undergo a marked cognitive leap, finding themselves quite suddenly capable of challenging, abstract, higher-level academic work. However, the corresponding development of their executive functioning skills is relatively gradual and slow. This can often lead to a sizable gap between their academic capacities and their ability to plan, organize, and discipline themselves sufficiently to fully reach their potential. We work to address early struggles directly with individual students and assist them in mapping out a strategic plan to overcome whatever difficulty they are facing. These plans are typically shared by students directly to their parents. Additionally we communicate with parents:

- Biweekly newsletters showcasing middle school academic work, microeconomy activities, and service
- Twice annually, for fall and spring student-led conferences
- As needed via email, phone, and face-to-face meetings when questions, issues or challenges arise