

# ISTHMUS MONTESSORI ACADEMY

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November 1, 2016

Dear Board of Education:

We submit this proposal to open MMSD's first AMI Montessori school. Isthmus Montessori Academy, Inc. was founded in the goal of providing expanded access to Montessori as a brain-based scientifically developed method of education. We are inspired by MMSD's direction and leadership, and are excited and prepared to join the district in providing vibrant and sustainable learning opportunities to the students of Madison.

Through this proposal, you will explore a method of education that engages families, promotes a culture of inclusion and respect, takes a solution-focused approach to student behavior, and inspires children to love learning and reach their highest potential.

Decades of research and hundreds of public school districts have demonstrated the power of the Montessori method to accelerate academic and social outcomes for students of all backgrounds and abilities.

We appreciate the board members who took the time to observe our learning environments in action, and we welcome other to do the same. Please do not hesitate to contact us with any questions.

In service to the children,

Melissa Droessler and Carrie Marlette, Founders  
Isthmus Montessori Academy, Inc.





Charter School  
Original Proposal  
Application

*Isthmus Montessori Academy  
Charter School*

*November 1, 2016*

# Welcome

*Imagine if you walked into a school that had the familiar components of children, teachers, and classrooms, but that they came together as more than a school, that the children and the teachers and the classrooms, together, made a complete learning community.*

This is what you would see...

A busy hum fills the air in the elementary classroom of an AMI Montessori school. There is chatter and talking, and there is also movement. Children are in small groups, working together in different areas of the classroom environment, focusing on different subject matter.

Five children sit around a table with books and notebooks open, pencils poised. The children talk to one another as they write in their notebooks and show each other pictures and text from within their books. They are each using a different source to research the Maori people. Next to their table they have a timeline unrolled on the floor. Every few minutes a child places a note on the timeline.

In another area six children with notebooks huddle around an outline of the scientific method. They have added a question, “Will one drop of sulfuric acid and one sugar cube (sucrose) create a chemical reaction (making something new)?” The children each record their own unique hypothesis. They record what they observe, discussing their different perspectives of the reaction. These children chose to work with each other, developing their scientific question based on a geography lesson from weeks before.

Four children huddle together around musical ‘tone bars’ humming in unison while one child finds the note matching the instrument. They each document the note on their own staff paper. One child observes two others’ notation and says the note should be a solid black note “without a flag at the top - because it is a little bit longer.” It is a quarter note, but the two children newer to the material hadn’t yet had a lesson on notation. The experienced children bring out boxes kept below the tone bars. These contain disks, sticks and dots to place on green staff boards. The experienced children deliver a lesson in notation, laying out the pieces and explaining the difference between a note with an open circle, a note that is solid black without a flag at the top, and a note with the flag. The learners watch intently.

Two children stand by the sink scrubbing and chopping potatoes while two others gather olive oil and salt. They are preparing the class snack and are debating the quantities and timing for providing snack to the whole class, doubling the recipe from the cookbook they are using. Another child approaches the cooking group and asks to use the oven after the potatoes are out. The group looks at each other and responds “It will take about 20 to 25 minutes for these to bake in the oven. Our oven temperature is 350 degrees. What do you need the oven to be set at? We can adjust it when we’re done.”

An adult sits on the floor with four children. One is speaking and the other three are anxious for their turn. When the child speaking stops talking, the three others put one finger in the air – the class had decided this would be their signal that they want to respond, but will wait their turn. The adult says, “I heard you say that you four read a book together and you thought you all planned to write a play together based on the story” The other children’s hand signals go higher in the air and the adult makes a gentle motion for them to lower. “I also heard that you observed these three writing together when

you arrived, and you felt you were being left out. Is that what you were trying to communicate?" The child nods in agreement. The adult turns to the three and repeats the first child's message. Each listener echoes this statement of feelings. Then the adult motions to another child to begin sharing.

In another area of the room another adult sits with seven children. Four work together with colorful wooden blocks on a felt mat. These children giggle and smile as they build cubes and write numbers in their math books. The adult is leaning towards the three other children; they are using scissors to cut a strip of writing, discussing which part of the sentence is the adverbial phrase and which part is the second part of a complex sentence. They are laughing because the sentence is about them. The adult leans to the children with the blocks, saying, "Oh! I see you built the binomial cube of three and six." The child nods emphatically and then turns their math book towards the adult, saying "This is what it's made from, right? A cube of three, three squared times six, six squared times three, three squared times six, six squared times three, and a cube of six." The adult responds, "Yes, now let's put the groups that are alike together, like this." The other children watch and adjust their math notes.

The children in each working group are different ages, and throughout the class you are unable to distinguish who is in 4<sup>th</sup>, 5<sup>th</sup>, or 6<sup>th</sup> grade. You don't know which child may be an English Language Learner, or who has an IEP. All of the children are engaged in their work, and they are showing kindness and respect to each other. The adult is not the center of the classroom; the children busy at their work are driving the momentum of classroom activity.

In the Adolescent classroom, fifteen children and an adult are discussing food insecurities throughout history, and referencing an economics lesson from the prior week. The children write notes, raise their hands to ask questions, or request information be repeated. They respect each other's talking space without the guidance from the adult.

One child approaches you to if you care for tea and a fresh muffin, made as a part of their baking business. You smile and ask the price. "No. I'm happy to just give this muffin to you." The child says. "Hopefully you'll enjoy it and become a regular customer." The muffin was delicious. When you go to thank the baker and ask about his business, the child shares his detailed business plan including start-up costs, a marketing plan, a logo, and an updated balance sheet. The child explains that several of his classmates are at work all around the school.

A few Adolescents are working in the infant room, making notations in their observation logs. The teens outside have multiple projects. A few hammer together a compost bin and discuss how to paint it. A few are moving chickens out into the yard so that they can clean the coop and look for eggs. A few are cutting back the garden, documenting the yield. These are not chores. Some of the work is part of students' micro-business, and some is part of a service project they have undertaken to improve the school. The gardens reflect botany, zoology, and nutrition lessons while teaching business, math, and physical skills as the students work and learn while providing vegetables to their cafeteria, and to the closest neighboring school as well.

As you leave, a group of children are getting off the city bus that comes from MATC. They head back to school excited to incorporate their research trip into their presentation for New Family Orientation.

You feel enlightened. You feel happy. You feel comforted knowing that the future is in the hands of these children. Exhale.

# I. School Information

## **Mission and Vision**

IMA's mission is to open Madison's first AMI Montessori public school and the first fully inclusive and accessible Montessori school in the Madison community, reflecting the racial and socioeconomic demographics of the school attendance area. After an initial cycle of operating under an instrumentality charter, IMA's vision is for the charter school to eventually be incorporated into MMSD district school offerings, and to expand access to Montessori methods until every child that might benefit has access to a Montessori classroom. By bringing this long-proven world-renowned method of education to the children in MMSD, IMACS can be an agent of major change in this community. For many families this would be the first opportunity to have access to a different method of education, for many children this could be the first chance to discover a love of learning, and for the city of Madison, this would be a chance to invest in student need while, bolstering district offerings, retaining and recapturing district families, and offering MMSD students a proven advantage in their educational and personal development.

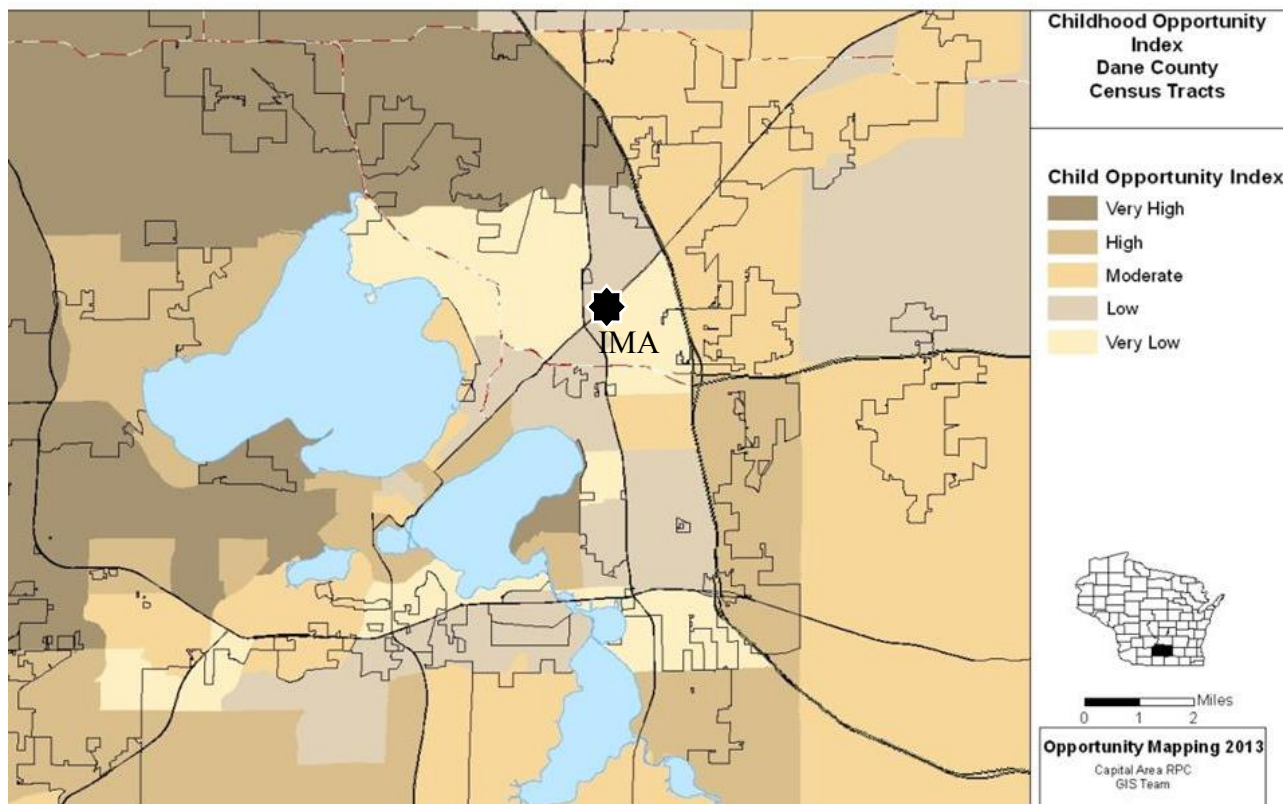
The mission and vision to serve Madison's children with the greatest need dates back to the school's founding, but without operating as a public school, IMA's ability to reach and serve the target families is limited. IMA founders opened the school as a 501(c)(3) nonprofit, located the school in the middle of a community in need, and completed all necessary requirements to be able to accept Wisconsin Shares, a public childcare subsidy for low-income families. The school also engages in targeted fundraising to support expanded access. Since it has been operating as a private school, 40% of families have received some type of financial aid each year, but this does not go far enough towards the mission of inclusivity and equity. AMI Montessori methods are a century old, well-documented, well-supported, and are currently recognized as an effective tool for various US public school districts seeking to address opportunity and achievement gaps; a public Montessori school would be unique among MMSD schools.

While Madison is served by seven popular Montessori schools, collectively educating over 300 students, these schools are tuition-based and families must private pay, sometimes with the help of small scholarships. This is in direct contrast to the philosophic origins of Montessori education as an urban school for poor children. Isthmus Montessori Academy was born of a desire to see Montessori education implemented as a tool to serve any MMSD student who could benefit from this scientific method. Opening up this method of education to families and communities that have historically been excluded by being priced-out is exactly the type of social justice innovation that MMSD should support through the use of school charters.

IMACS Goals	Year 1	Year 2	Year 3	Years 4+
<b>IMACS Students Direct their Academic Career</b>				
Students in grades 3-9 participating in a mentorship project and preparing a presentation for a Responsibility Forum	70%	75%	80%	90%
Students in grades 1-9 keeping a daily work and activity journal	100%	100%	100%	100%
Students in grades 1-9 with monthly child-led work conference	80%	85%	90%	95%
All students will develop a personal mission statement				
50% of students grades 1-9 will conduct research that includes travel off campus to gather information and interview an expert in the field. This is known in Montessori curricula as a “Going Out.”				
<b>IMA Creates and Maintains a Positive School Climate</b>				
Students consistent in 50% of social/emotional development goals by end of year	80%	85%	90%	95%
Student attendance	90%	95%	97%	97%
Children present for classroom activity/instruction related to behavior	95%	96%	97%	97%
Retention rate of continuing students	60%	65%	70%	80%
<b>IMACS Fosters Community Involvement</b>				
Students will complete 1 hour of community service each semester	80%	85%	90%	95%
Students participating in designing a community service project	70%	70%	80%	90%
Community organizations/businesses complete community involvement survey	80%	80%	80%	80%
<b>IMACS Supports Parent Involvement</b>				
Parent attendance at conferences	80%	85%	90%	90%
Parent attendance at school social events	30%	35%	40%	40%

## Approach and Evidence

Montessori is a holistic approach to learning, which offers 100% differentiated curriculum, meaning that every student is challenged and each receives a well-rounded education based in each child's self-initiated exploration of the curriculum. This minimizes personal knowledge gaps between subject areas as well as knowledge and achievement gaps between children with different socioeconomic, ethnic, language, or ability backgrounds.<sup>1</sup>



The Montessori method improves test scores and closes achievement gaps both by making children feel motivated to learn and by providing opportunities for children to follow their own interests and develop deep understanding of the subject matter, while also developing transferrable skills.<sup>2</sup>

Integral to the method is a two-generation approach to education, recognizing that the family home is the first and most-constant educational environment. Montessori education explicitly takes an asset-based approach to differences and aims to create a positive, welcoming, safe environment that honors the individualities of students and their families.<sup>3</sup>

<sup>1</sup> Efimova, V., and F. Ratner. "Integrating the educational principles of Maria Montessori in the process of pedagogical support for pupils with learning disabilities." *International Review of Management and Marketing*. (2016).

<sup>2</sup> "[The Montessori] child-centered classrooms provide for a greater level of student engagement possibly due to more positive teacher-student relationships. It is also possible that students at child-centered classrooms participate at a greater proportion, complexity, and intensity in class work than students in more traditional educational settings do because alternative curricula provides more opportunities to develop higher levels of competency." Franczak, 2016.

<sup>3</sup> "[The] benefits of parental involvement in school... include: improved parent-teacher relationships, teacher morale and school climate; improved school attendance, attitudes, behavior and mental health of children; and, increased parental



As a public AMI Montessori school, IMACS will accelerate outcomes for all its students through customized learning plans and systems of support that allows students, of every ability, to reach their highest potential.<sup>4</sup> An increasing research base has for decades shown that children educated in fully implemented AMI Montessori programs demonstrate enhanced intellectual and social capacities, benefitting from the environment that is highly enriched, student-centered, and structured to support self-regulation, independence, collaboration, creativity, and respect for self and others.<sup>5</sup> The intentional cultivation of community allows for students to navigate conflict resolution as well as support and sustain one another's work.

In a recently published longitudinal study of students in public conventional, public Montessori, and private Montessori schools, students at both the public and private Montessori schools exhibited a greater level of engagement in terms of its intensity than did their peers in the conventional schools studied. Both public and private Montessori students also demonstrated increased capacity in the measured transferable skills of self-control, teamwork, and problem solving.<sup>6</sup> This increased achievement is attributed to the Montessori method creating a more positive teacher-student relationship and offering child-centered environments, both of which contribute to meeting a child's needs more effectively.<sup>7</sup>

IMACS founders have a collective 35 years teaching experience, including Melissa's tenure at the Craig Montessori School, one of ten Montessori schools that are part of the Milwaukee Public School District, at which children with backgrounds identical to some of Madison's hardest-struggling students thrive in an AMI Montessori environment.



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confidence, satisfaction and interest in their own education.” Hornby, Garry, and Rayleen Lafaele. "Barriers to parental involvement in education: An explanatory model." *Educational Review* 63.1 (2011): 37-52.

<sup>4</sup> Abigail Jordan, Bailey Fern, Chelsea Morris, Rebecca Cross, and Smita Mathur, "Critical Thinking in the Elementary Classroom: Exploring Student Engagement in Elementary Science Classrooms through Case-Study Approach" *Journal of Emerging Trends in Educational Research and Policy Studies* 5(2014) 6: 673-678, 665

<sup>5</sup> See: [www.public-montessori.org/sites/default/files/resources/EDCS%20Outcomes%20Charts%20and%20Graphs.pdf](http://www.public-montessori.org/sites/default/files/resources/EDCS%20Outcomes%20Charts%20and%20Graphs.pdf)

<sup>6</sup> Franczak, Iwona. "Comparative Analysis of Behavioral Engagement and Transferable Skills in Conventional and Montessori Schools." *2016 NCUR* (2016).

<sup>7</sup> Sara Rimm-Kaufman and Lia Sandilos, "Improving Students' Relationship with Teachers to Provide Essential Supports for Learning" *American Psychological Association*, (2011).



## II. Governance Council and Leadership Structure

### **Governance Council**

IMACS's Governance Council will be comprised of nine members: the School Principal, two IMACS founders, one teacher, one support staff member, two Community Members, and two Parents/Caregivers of IMACS students. Immediately upon MMSD BOE decision to move toward contract negotiation, the current IMA, Inc. board will establish a 501(c)(3) for the IMACS governance council. IMACS will recruit council members with the intention of ensuring that the demographic make-up reflects that of the Madison community, including gender, sexual orientation, race, ethnicity, income level, and educational achievement. Family and community representatives will be determined by a vote among attending families, if more individuals should volunteer than are spots available. Mid-year vacancies will be filled by appointment by the balance of the council. Members will be asked to make a minimum commitment of one calendar year. Balanced participation and input, diverse group composition, and consistent participation are vital components to ensuring the critical decisions made by the council align to the school's vision and MMSD's Strategic Framework.

Drawing upon the rich background experiences and expertise of its diverse members, the Governance Council will support the school in attaining its vision while operating within the MMSD strategic framework. Monthly meetings will be structured around clearly articulated agendas, which include clear meeting roles (facilitator, timekeeper, note-taker, active participants), specific outcomes, and post-meeting action/follow-up items. Meeting norms will be based on the Montessori philosophy of "Grace and Courtesy" to honor the voices and experiences of all participants. In a Montessori classroom, ongoing Grace and Courtesy lessons provide students with the knowledge and skills needed for peaceful conflict resolution and to cultivate productive environments. Grace and Courtesy will be at the heart of all Governance Council processes.

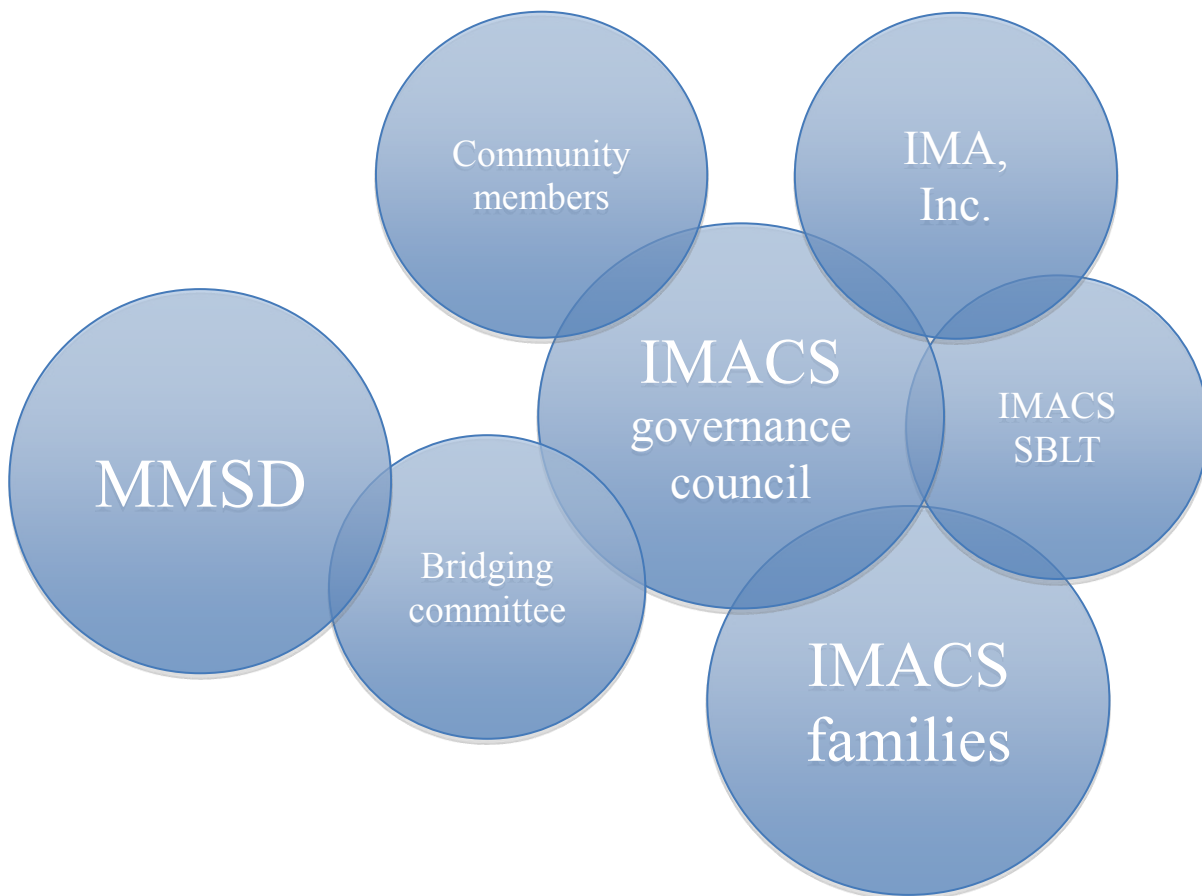
The Governance Council will govern the charter school in accordance with applicable policies of the MMSD Board; local, state, and federal laws and regulations; and a management letter or contract to be executed jointly by IMACS and MMSD. The IMACS Governance Council will create, implement, evaluate, and revise specific policies, procedures, and rules as deemed appropriate.

## Inter-entity relationships

Currently, the Board of Directors of IMA, Inc., a 501(c)(3) nonprofit, advises IMA in all functions of the organization. Upon IMACS receiving an instrumentality charter, this Board will govern the daycare and the community outreach functions of IMA, Inc., while responsibility for operating the Charter School will rest with the school Governance Council. This shift notwithstanding, the Board of IMA, Inc. will conduct an informational evaluation of the school’s administration and Governance Council, specifically with regard to fidelity to AMI principles. This will be in addition to the formal evaluations performed by MMSD.<sup>8</sup>

The Charter Committee sees the value in the Bridging Committee in place in existing charter school relationships, and would also establish a similar work group composed of representatives of IMA, Inc., the charter school administration, and representatives from MMSD’s elementary and secondary school leadership, and the charter school administrative staff. This team will identify and address any issues or opportunities arising from the IMACS/MMSD relationship.

The School Principal (or designee) will serve as the primary communication liaison between stakeholder groups including MMSD district leadership, the MMSD school board, the IMA, Inc. Board of Directors, school staff members, community members, and the Governance Council.



<sup>8</sup> See Appendix for the current board composition

## Leadership Structure

The Principal will manage the day-to-day operations of the school. The work of both the Principal and the Governance Council will be informed and complemented by a school-based leadership team (SBLT), whose primary function will be to develop, implement, and oversee the School Improvement Plan. IMACS's SBLT will utilize the structures, processes, and resources already articulated in the MMSD Strategic Framework. A secondary function of SBLT is the development of leadership capacity within the school's staff.

The SBLT will be comprised of 3-5 staff members including the principal, teachers and support staff. Auxillary team members with particular expertise (school staff, community members) will be invited to participate in meetings on an as needed basis, to address specific issues or agenda items.

Parent committee members will be invited to attend SBLT Meetings as active participants on a voluntary basis. Meetings will occur twice monthly during the school year, and once per month during the summer months (June, July, August). As this important role requires work hours in excess of contracted time, SBLT participants who are employees of the school will be paid for time spent at SBLT meetings that occur outside of regular contracted hours, Non-employee participation will be open to any interested members of the school community. This participation will be voluntary and uncompensated, though transportation and childcare accommodations will be made to facilitate participation and access.

The SBLT will be responsible for the development, implementation, and monitoring of the School Improvement Plan, and may make recommendations concerning the instructional needs and operations of the school, recommend activities designed to increase parent involvement in the school, and recommend the creation of *ad hoc* advisory teams to address specific areas of need.

As part of the continuous improvement process and SIP, SBLT activities will include gathering stakeholder input via various methods including climate surveys and community outreach activities. In order to obtain parent input representative of all IMACS families, one SBLT member will be assigned as family engagement liaison. This person will develop and coordinate a parent committee representative of the demographic make-up of the school. As stated previously, the School Principal will be the main communication liaison between the governance council and SBLT.

# III. Student Body/Demographics

IMACS will enroll students from the neighborhoods surrounding the school. The charter school attendance area is proposed as aligning with the elementary attendance areas of Lakeview, Gompers, Emerson, Mendota, Hawthorne, and Sandburg.

## Enrollment Projections

Isthmus Montessori Academy Charter School will serve children in 3K through 9<sup>th</sup> grade.

<b>Enrollment by multi-year level</b>	<b>2017-2018</b>	<b>2018-2019</b>	<b>2019-2020</b>	<b>2020-2021</b>	<b>2021-2022</b>
Primary/Children’s House (3K*-5K)	102	102	102	102	126
Lower Elementary (grades 1-3)	54	62	70	75	75
Upper Elementary (grades 4-6)	35	60	60	60	65
Junior High (grades 7-9)	32	45	45	45	45
<b>Total</b>	<b>223</b>	<b>269</b>	<b>277</b>	<b>282</b>	<b>311</b>

\* 3K included in enrollment and planning, but not in per-pupil funding assumptions. See Appendix for a discussion of 3K.

## Student recruitment strategy

IMACS is committed to providing expanded access to Montessori education, which means intentionally reconciling a history of exclusion and discrimination based in economic barriers.

Out of this focus, the school has adopted an Inclusivity Action Plan and recruitment strategy to ensure access by populations represented in the immediate neighborhoods, who have not historically had access to Montessori education, including: low income students, students of color, highly-mobile students and unaccompanied minors, students from immigrant and non-English-speaking families, and justice-involved youth.<sup>9</sup> IMACS is located in the immediate vicinity of several low-income housing providers, serving populations including African American communities, Latino and undocumented communities, and refugee communities from Thailand, Vietnam, and Laos. Target school demographics are: 1% AI/AN, 12% Asian 18% Black, 12% Latino, 16% Multiracial, 41% White. Additional goals include 14% Special Ed., 20% ELL, and 57% FRL.<sup>10</sup>

<sup>9</sup> Special education students remain a target group for this school, but are not included in this list because they are not under-served by Montessori offerings. AMI Montessori has long been identified and employed as an effective educational option for students with physical and developmental exceptionalities (“disabilities”), including ASD diagnoses.

<sup>10</sup> Any discussion of MMSD statistics is based on review of those published at <https://accountability.madison.k12.wi.us/stats>

IMACS will recruit through open houses, free parenting seminars (See section IV Family Engagement “DEEP Meetings”), informational booths at resource fairs and festivals, and through existing relationships with organizations with related missions such as 1800 Days, Women in Focus, and GSAFE, and through advertisements in newspapers reaching various groups of students/families.

IMACS will focus its recruitment on the specific target families through a local neighborhood campaign. Administrators and supporters will knock on doors in the neighborhoods surrounding the school, talking to families directly, giving these families information about the strengths of the Montessori method and the most current information about the school, so they can sign up for enrollment or the lottery. IMACS will encourage these families to spread the word to friends and family, as word of mouth often outpaces advertisements and promotional material. IMACS truly aims to be a public school with public school children, and is committed to recruitment to this end.



*A visitor to IMA’s booth at Juneteenth concentrates to pour*

*IMA participates in MMSD’s Early Childhood Parent Resource Fair*

Rather than relying solely on direct recruitment, IMA, Inc. is committed to raising awareness among targeted populations **by acting as meaningful partners in support of these communities’ own initiatives**. A local grassroots organization, Black Girls are Magic, has contracted to use IMA’s facility as a venue for an event focused on networking, leadership and celebration of black women and girls in Madison. IMA, Inc. has also arranged to provide a venue and other supports to a coalition of Madison mothers of color for a discussion series focusing on parenting and wellness topics. The elementary students of IMA will be joining school-age members of the East Side Community Center in an IMA-sponsored movement workshop series facilitated by *Performing Ourselves*. While IMA, Inc.’s relationship with these organizations is rooted in a commitment to community support, it is anticipated that by bringing parents and children into our space we will broaden awareness and demand for the school among those communities.

Isthmus Montessori Academy participates as an exhibitor at the Overture Center’s International Festival, Madison’s Juneteenth Festival, MMSD’s Early Childhood Resource Fair, the Natural Parenting Expo, and recently sponsored a Family Fun Night at the Warner Park Community Recreation Center, which was attended by over 200 residents of the Northside Neighborhoods.

## A “school of choice”

No family will ever be obligated to enroll their student at IMACS. Application and enrollment is entirely voluntary.

**Importance of continuous programming.** Continuous participation throughout primary and secondary school allows children to realize the *full* benefits of this scientific method, though benefits will accrue to children enrolled for shorter terms, as long as a critical mass of classmates are rooted in the method.

**4K - 1<sup>st</sup> Grade enrollment.** Applications will be subject to an annual initial application deadline. If applications exceed available enrollment slots, lottery and waitlist processes will ensue. Siblings and children of founders, staff members, or Charter School students are exempt from lottery and will be granted admission upon timely application. Students admitted through lottery in any year will keep their spot for subsequent years. All references to preferences and lottery are drawn from and refer to the statutory provisions in Wisconsin Statutes 118.40(3)(g)(1) through (3). IMACS will seek no waiver of this or any other statutory requirement.

**Admission after the start of 1<sup>st</sup> Grade.** In years of expansion or to fill vacancies from departing students, older students may submit an application for enrollment by using the standard MMSD school transfer process whenever IMACS would be an educationally appropriate placement,<sup>11</sup> and when such a transfer would not result in more children in the receiving class having more non-Montessori children than those with experience. This interest in the preservation of culture and climate may be overcome where MMSD and IMACS perform a balancing test and determine that the needs of the student outweigh the risk of temporary disruption – for example if problematic school transitions at 4<sup>th</sup> or 6<sup>th</sup> grade result in an unusually high number of children needing IMACS as an alternate placement or educational intervention

**Enrollment by MMSD referral.** In order to ensure IMACS’s availability as a resource for families that may not matriculate through application and lottery, IMACS will partner with MMSD to establish a process by which a portion of open initial and back-fill seats may be filled by administrative transfer.

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<sup>11</sup> There are no specific thresholds or barriers to entry. AMI Montessori is a whole-child educational approach which is unfamiliar to many families and which is most effective when families and students intend to complete the entire program. IMA is available to provide tours, observations, or home visits to ensure students and/or their families interested in a transfer have a basic understanding of the method and some intentionality around attending. *See Appendix for further discussion of Transfer in Elementary and Secondary.*





## IV. School Data

### Academic Achievement Goals

AMI philosophy is rooted in serving low income, urban, and struggling student populations, and research supports AMI Montessori as an approach that achieves strong academic outcomes for these populations.<sup>12</sup> Additionally, the driving force behind our desire to become a part of MMSD is to assist in closing achievement and opportunity gaps and providing the highest quality education available to Madison's highest need student populations.

For the last thirty years a public Montessori Charter in East Dallas, where the area has a 50% high school drop out rate, has boasted third grade student math and reading scores in the top 36% nationwide graduation rates of 94% of high schoolers, with 88% going on to college. The school has a higher than district-average percentage of ELL students and economically disadvantaged students, and a per-pupil expenditure 14% less than the district level. IMA believes in the power of the method to produce similar results for Madison. For these reasons, our academic achievement goals are ambitious.

As a not-yet-existing school, there is no baseline data for the target measures. For this proposal baselines are projected based on an analysis of school level data for the slate of elementary and middle schools that approximate the IMACS attendance area. This was the basis for proficiency benchmarks for all groups and the growth goals for IMACS initial target subgroups. In order to establish goals for the first year, the charter committee considered the strength of the effect of the method as proven in many other districts discussed throughout this report. In contemplation of possible discrepancies between projected and actual baseline data creating "apples to oranges" data inconsistencies, IMACS SBLT anticipates and plans to commit time and resources in the initial charter year to resolve and re-

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<sup>12</sup> "[U]rban minority students randomly assigned by lottery to a Montessori public school demonstrated significantly superior social, emotional, and cognitive development when compared with students randomly assigned by lottery to regular public school programs."

From Jennings, Patricia A. and Mark T. Greenberg "The Prosocial Classroom: Teacher Social and Emotional Competence in Relation to Student and Classroom Outcomes" Review of Educational Research, Vol. 79, No. 1 (Mar., 2009), pp. 491-525, 497-498.

estimate goals after reviewing Fall assessment data. This will include a thorough data analysis and necessary adjustments to the SIP, ensuring that goals are appropriate and targeted to close any specific achievement gaps identified.

IMA intends to follow the MMSD assessment schedule with regard to the district’s required screening, formative, and summative assessments including PALS, MAP, CogAT, ACCESS for ELLs, Climate Surveys, Forward Exam, and EPAS.

**Proficiency Goals**

<b>PALS (K-2) students who meet Benchmark</b>	<b>Projected Baseline</b>	<b>Fall 2018 Goal</b>
All Students	62%	75%
Male	62%	75.0
Female	63%	75%
Students with Disabilities	47%	60%
English Language Learners	67%	80%
Low Income	46%	75%
American Indian/Alaskan Native	77%	90%
Asian	67%	90%
Black or African American	52%	80%
Hispanic/Latino	55%	75%
Multiracial	67%	85%
White	76%	95%

<b>MAP (Elementary Level) students proficient or advanced in READING</b>	<b>Projected Baseline</b>	<b>Spring 2018 Goal</b>
All Students	38%	65%
Male	35%	60%
Female	39%	65%
Students with Disabilities	21%	40%
English Language Learners	25%	60%
Low Income	18%	40%
American Indian/Alaskan Native	38%	60%
Asian	34%	60%
Black or African American	16%	50%
Hispanic/Latino	28%	40%
Multiracial	31%	60%
White	58%	80%

<b>MAP (Elementary Level) students proficient or advanced in MATH</b>	<b>Projected Baseline</b>	<b>Spring 2018 IMA Goal</b>
All Students	38%	70%
Male	37%	70%
Female	36%	70%
Students with Disabilities	31%	50%
English Language Learners	27%	70%
Low Income	22%	50%
American Indian/Alaskan Native	50%	70%
Asian	29%	70%
Black or African American	17%	60%
Hispanic/Latino	20%	50%

Multiracial	35%	65%
White	62%	80%

<b>MAP (Middle School Level) students proficient or advanced in READING</b>	<b>Projected Baseline</b>	<b>Spring 2018 IMA Goal</b>
All Students	27%	50%
Male	26%	50%
Female	33%	50%
Students with Disabilities	16%	40%
English Language Learners	19%	60%
Low Income	22%	50%
American Indian/Alaskan Native	35%	N/A
Asian	38%	70%
Black or African American	14%	50%
Hispanic/Latino	18%	50%
Multiracial	32%	60%
White	62%	80%

<b>MAP (Middle School Level) students proficient or advanced in MATH</b>	<b>Projected Baseline</b>	<b>Spring 2018 IMA Goal</b>
All Students	32%	75%
Male	31%	70%
Female	29%	70%
Students with Disabilities	13%	30%
English Language Learners	26%	60%
Low Income	18%	40%
American Indian/Alaskan Native	65%	N/A
Asian	48%	80%
Black or African American	11%	60%
Hispanic/Latino	19%	60%
Multiracial	32%	60%
White	58%	80%

### **Growth Goals for SIP Target Groups**

<b>Assessment and Level</b>	<b>Demographic Group</b>	<b>Projected Baseline</b>	<b>IMA 2017-2018 Goal</b>
Students meeting Fall-Spring Growth: Reading Grades 3-5	All Students	53%	70%
	African American	48%	70%
	ELL	39%	70%
Students meeting Fall-Spring Growth: Math Grades 3-5	All Students	58%	75%
	African American	61%	80%
	ELL	68%	80%
Students meeting Fall-Spring Growth: Reading Grades 6-8	All Students	53%	70%
	African American	44%	60%
	ELL	61%	80%
Students meeting Fall-Spring Growth: Math Grades 6-8	All Students	62%	80%
	African American	59%	75%
	ELL	59%	75%

The AMI Montessori curriculum, assessment, and instruction standards, as well as IMA’s current continuous improvement practices align closely with those of the MMSD Strategic Framework. Data at the student, classroom, and school level are housed in the Transparent Classroom™ system, discussed in more detail in Section VII.C. Student learning portfolios, student academic career plans, formal observations, peer reviews, and common-core crosswalk results, are all part of the continuous improvement cycle that are reviewed at regular intervals.

The proposed data review cycle based on IMA’s proposed assessment plan is identified in the chart below. Please note that this is a timeline for formal staff review, discussion, and planning as part of the greater teaching cycle, which will align with the frequency of administering assessments.

<b>Data to be Reviewed</b>	<b>Frequency/Timeline</b>	<b>Level(s)- Student, Classroom, School</b>
Formal Observation	Monthly	Student
Student Portfolio	Quarterly	Student
Student Conferencing	Biweekly	Student
MAP Reading and Math Assessment	Fall, Winter, Spring	Student, Classroom, School
Forward Exam	Spring	Student, Classroom, School
ACCESS for ELLs	Winter	Student
AIMSweb Progress Monitoring	Weekly	Student

### **Access to Opportunities**

All students at IMA, which includes the infants, toddlers, and preschoolers in the private daycare, receive daily access to world language instruction. This instruction is integrated into the daily curriculum, and students with deeper interest may also pursue deeper study, just as all children may elect deeper study of any subject that interests them. This is true for every child regardless race/ethnicity, gender, special education status, ELL status, and advanced learner status. IMACS as a charter school also expects 100% participation in these opportunities.

All students at IMA, which includes the infants, toddlers, and preschoolers in the private daycare, receive daily access fine arts curriculum including music, art, and performance. This instruction is integrated into the daily curriculum, and students with deeper interest may also pursue deeper study, just as all children may elect deeper study of any subject that interests them. This is true for every child regardless race/ethnicity, gender, special education status, ELL status, and advanced learner status. IMACS as a charter school also expects 100% participation in these opportunities.

Consistent with principles of Montessori education, extra-curricular activities are student-driven. Any and all students are encouraged to design programming that aligns with and advances their educational interests. Many will be extensions of the school-day activities with partners discussed in Section IX. Key Partnerships. There will also be a before-school walk/run club for children and families of all athletic and physical abilities, and a weekly after-school movement program for which elementary students join the children of the East Side Community Center for a program with *Performing Ourselves*. Any child expressing an interest in exploration of a sport, language, or activity would be

encouraged to develop an idea to present to other students, and to identify a local resource that might offer opportunities to pursue this interest. This is an identical process that the students currently exercise in pursuing their academic research. IMACS's goal is that 50% of all students will participate in extra-curricular activities, as distinct from before and after-school care to be offered by IMA, Inc., with higher participation among groups with fewer external opportunities.

Assessment and participation are a daily component of a Montessori education, and Elementary and Adolescent students have regular ongoing conferences about their learning goals. Because of this ongoing feedback, the school can be responsive to ongoing indicators, rather than waiting for year-end data. However, year-end data will be reviewed with an eye toward expanding and supporting the curiosity and learning of all students, inspiring increased participation.



## V. School Improvement Planning

IMA intends to utilize the MMSD tools and resources available, including the SBLT Toolkit and district supports such as the School Improvement Partner, to develop and implement the School Improvement Planning process. IMA will utilize the SIP template provided by MMSD to document this process. Although IMA does not yet have an official SBLT, the Charter School Proposal Committee has developed some initial goals (see Section IV: School Data for specific goals) and created a Theory of Action (see Section VII.B. Instruction) as a starting point for the SBLT that will be formed and convened upon the receipt of an MMSD Charter.

### **Target groups and evidence for Montessori as a tool**

The initial target groups for the first year are English Language Learners and African American students, two of the groups currently least likely to be proportionately represented in the community's

private Montessori offerings, despite research supporting the use of Montessori to meet the needs of these students while, and indeed through, honoring their culture.

In a recently published seven-year study, Montessori education at an Arizona public charter school proved to be an extremely effective tool to address the achievement gap faced by impoverished Navajo children. Moreover, the study found that the Montessori method was able to deliver education and interventions in a way that is “congruent with Navajo cultural values.” Children at the beginning of the study were an average of one year behind in both language and math concepts, but by the end of the pre/K program “virtually all” participants were performing at or above grade level in math.<sup>13</sup>

In 2011, the Milwaukee chapter of the NAACP produced a report on the state of Milwaukee public education, and specifically the opportunities and achievement for African American students in Milwaukee. The report concluded:

*"Prospects for educational achievement are brightest for Milwaukee Public School students who are enrolled in Montessori Schools."*

The report drew on 2009-10 numbers:

Math proficiency:

Black students in MPS: 39.4%

Black students in MPS Montessori: 60.2%

Science proficiency

Black students in MPS: 32.4%

Black students in MPS Montessori: 66.1%

Reading proficiency:

Black students in WI: 57.6%

Black students in MPS: 50%

Black students in MPS Montessori: 69%

Latino students in MPS: 60%

Latino students in MPS Montessori: 81.3%

Language arts proficiency

Black students in MPS: 34.3%

Black students in MPS Montessori: 59.3%

Social studies proficiency

Black students in MPS: 47.3%

Black students in MPS Montessori: 82.2%

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<sup>13</sup> Sorensen , Mark and Derek Price “Accelerating the Mathematical Development of Young Navajo Children” Rural Education Research in the United States. 13 October 2016. pp 145-165



Chantilly Montessori, in Charlotte, NC has 305 students who are representative of the CMS school district. Twenty-two percent are identified as economically disadvantage; 30% of students are African American, 6% are Hispanic. The district-wide goal for reading disparities between racial group was set at 19% or lower, but district-wide it remains at 32%. At Chantilly Montessori, this gap is less than 12%. In the district, 76% of children are performing at or above grade level overall, but at Chantilly Montessori, 89% are, and 90.9% of students perform at or above grade level specifically in Math.

### **Review and Revision of SIP**

Final components of the School Improvement Plan will be subject to review and revision upon the receipt of a Charter through MMSD and the creation of the SBLT to ensure the input of all stakeholders.

In addition to addressing the three strategic framework goals required of all MMSD schools, IMACS's School Improvement Plan will include additional goals, strategies, professional learning activities that are reflective of the research-based AMI instructional approach. Examples of additional practices and professional learning include:

Professional development and staff recruitment as required to maintain "AMI Recognized" status (the highest level of certification offered by the Association Montessori Internationale) including:

- Full consultation with AMI once every three years.
- Staff attendance at AMI-Montessori trainings and refresher courses.
- Quarterly AMI In-service Education/Training for Teachers and Staff
- Assigning Mentor teachers to newly-trained Montessori lead teachers
- Staff attendance at the annual Wisconsin Montessori Association Conference

Ongoing formal staff meetings to monitor data, collaborate to address problems and concerns, and maintain integrity to AMI instructional practices including:

- Bi-weekly full staff meetings throughout the school year.
- Bi-weekly Montessori lead teacher meetings throughout the school year
- Weekly program-level teacher and staff team meetings

### ***Note on Professional Development:***

As all public and private AMI Montessori schools do, IMACS will conduct independent Professional Development, rooted in AMI methodology, which will align with MMSD frameworks and the school SIP. See also Section X. Human Resources

## VI. Family Engagement

Under the school's Inclusivity Action Plan, IMACS intends that all attending families feel welcome and empowered to play an active and productive role in the learning community. IMACS recognizes that a school community is strongest when students' families are full participants in the community<sup>14</sup>, and further recognizes that many children in the Madison area have family members with less-than-fond memories of their own schooling. IMACS is committed to outreach and support for all families in the goal that they might grow to see school as a source of freedom for intellectual curiosity, and not as a source of trauma. All employees from support staff to administrators commit to a goal of engaging with parents and communities in authentic and mutually supportive ways, asking families rather than telling them how the school might adapt to serve their needs, fostering a school environment that is comfortable and enjoyable for families. Progress toward these goals is measured by the Governance Council and SBLT biannual customer service survey, through informal feedback such as parent-staff conversations and by measuring family participation rates at school and community events.



AMI Montessori is a 'whole-child' method of education, and families are an important component of that approach.<sup>15</sup> *The only absolute requirement to which families are held is that they express an actual preference for their children to be educated in the Montessori Method.* As a charter school, IMACS would be a school of choice. Participation would always be voluntary, and so in making the choice to enroll their children, IMACS asks families to consider their decision. In order to facilitate parent understanding and participation IMA has always been committed to reaching families where they are and IMACS will engage with families through whatever methods families prefer or require: email or phone calls, school visits or home visits, or through any of the primary family engagement channels.

*Family liaisons.* Two parents volunteer each year to serve as family liaisons, available to discuss or problem-solve around any needs that could be supported within the school community (meal trains, carpools, hand-me-downs, etc.). These liaisons also provide a

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<sup>14</sup> Hornby, Garry, and Rayleen Lafaele. "Barriers to parental involvement in education: An explanatory model." *Educational Review* 63.1 (2011): 37-52.

<sup>15</sup> A parent's involvement with the school motivates a student by showing the student the value of academics. Pomerantz, Eva M., Elizabeth A. Moorman, and Scott D. Litwack. "The how, whom, and why of parents' involvement in children's academic lives: More is not always better." *Review of educational research* 77.3 (2007): 373-410.

confidential venue for relaying questions or feedback to the administration. Liaisons work with the SBLT and the administration to honor and represent all families of the school community.

*Annual All-Parent Orientations.* The beginning of the school year offers several meetings at various times for families to come to meet other families, hear an overview of the curriculum and instruction, and ask any questions. All parents that are able are strongly encouraged to attend. Families entering after the start of the academic year are provided with several options to receive this information (office hours, home or off-school meetings, phone, emails, etc)

*DEEP Meetings.* Throughout the year, eight free, public seminars provide a forum for **d**iscussion, **e**xploration, and **e**ducation for **p**arents (“DEEP”) about Montessori methods and about tools that families can use to help empower children to meet their personal and academic potential. They also provide a venue for families to ask questions and share experiences about child development, the home environment, and the family’s role in the school community. These meetings are advertised to families of attending children, other MMSD families, interested community members, and education professionals. Past topics include positive discipline, addressing transitions, talking about race, and more.



*A student explains her work to a classmate’s mother*

Most “mandatory,” recommended, and social events are held at the school, which is ADA compliant, accessible by public transit and with free parking. For evening meetings, childcare is provided, which includes a meal, and refreshments are offered to attendees. IMA is committed to using translation or interpretation resources to meet any additional language needs of interested families. For families with unique scheduling or mobility needs, the administration remains committed to finding creative solutions for engagement, including honoring family requests for conferences before or after school hours, and at libraries, coffee houses, or in students’ place of residence.

These alternate venues and arrangements can also be utilized by any parent wanting an opportunity to discuss their child’s progress and academic career plan outside of the baseline framework of biannual conferences and quarterly progress reports. As discussed in Section VII.C., IMA has implemented Transparent Classroom™ to track, retain, and report student progress data, and this tool also provides 24/7 web-based availability for parents to access student progress information and assessment results, including weekly updates, notes, and pictures, and the ongoing report showing the alignment of Montessori and Common Core benchmarks.

*Expectations of Staff participation in Family Engagement are driven by the AMI method and accommodated by flexibility in other areas of scheduling. IMACS will work with MTI to ensure transparency and support.*

# VII. Curriculum, Instruction & Assessment

## A. CURRICULUM

Montessori classrooms are multi-year, multi-age classrooms, designed to allow a single teacher to work with up to 30 students, all with various strengths, needs, and abilities including, but not limited to children who are English Language Learners and children who have different abilities.<sup>16</sup>

Social skills, leadership, and community services are all hallmarks of the program. These attributes lend themselves to fine-tuning the classroom and curriculum to align with inclusion principles and individual child needs. This is why study after study has shown AMI Montessori classrooms as effective tools in addressing challenges such as achievement, behavior, and opportunity gaps.<sup>17</sup>

Montessori education aligns with Common Core standards and state standards for science, mathematics, English, social studies, visual arts, theater, music, world languages, and physical education, all while meeting the objective of teaching to the whole child. In the teaching of all topics and subjects, the focus moves from personal to global, from simple to complex, from concrete to abstract, familiar to unfamiliar. Alongside academics, Montessori focuses on a child's social and personal development, and integrates fine arts, physical education, and developmentally appropriate discussions of each student's place and responsibility within their community. Instructional integration is accomplished by requiring the providers of early and afterschool care to employ Montessori principles, and by welcoming and encouraging families to learn as much about the method as they care to through various discussions, seminars, and activities.

Many Montessori materials and curricular themes resemble those used in certain contexts in MMSD schools. However, an AMI Montessori school requires a full compendium of very specific, precisely designed materials and a very specific approach to curriculum, which is based in the science of brain development. The Montessori curriculum is not structured into "courses." Students have the freedom and responsibility to chart their own education; no two students learn exactly the same material, or access the same information in the same way. The Montessori guide works with an "album" that serves as a base curriculum, a selection of modules that the guide may present along with the Montessori materials in various configurations to ensure all students meet the learning goals for the cycle, while following an Academic Career Plan developed by the student and teacher together.<sup>18</sup> *See Appendix for an explanation of the subject matter covered in each classroom and the method by which it is introduced.*

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<sup>16</sup> See Appendix for a specific exploration of the tools, interventions and outcomes for ELL students and students with exceptionalities ("disabilities") served by the AMI Montessori method.

<sup>17</sup> For a concise overview, see: Lillard, A.S. & Else-Quest, N., "Evaluating Montessori Education," *Science* 131: 1893-94 (Sept. 29, 2006).

<sup>18</sup> See Appendix for a detailed discussion of the use and purpose of Montessori materials.



This is the only method of education that offers 100% differentiated curriculum, allowing each child to learn each subject at exactly their own pace while developing skills in time-management, achieving learning goals by the end of the three-year cycle. This freedom and responsibility fosters a motivation to learn, and keeps them happy, busy and confident in their role and value within their community. These goals within the method also meet or surpass the expectation and requirements established by MMSD for grade advancement and graduation. *See enclosed Curriculum Maps and the Appendix for a crosswalk of Montessori Adolescent benchmarks and MMSD 9<sup>th</sup> grade curriculum and requirements.*

Teachers will be responsible to meet the IMACS version of the FFT, which includes a solid and growing knowledge of human development and brain development. This knowledge, which is considered curriculum and content knowledge provided for students as well as foundation for instructional implementation, allows teachers to deliver the curriculum and content provided in the AMI Montessori albums in the most effective ways to ensure student progress and success.



*A primary student works with the Pink Tower*



*A primary student learns multiplication with the materials*

Teacher and staff development is rooted in the acquisition of knowledge and skills of human development and brain development. For example, a staff in-service for professional development may be about music instruction which includes how the brain responds to the sensorial exploration of matching the diatonic major scale and how the brain then classifies that experience in contrast to matching and grading the pentatonic scale. This teacher development would extend to reviewing possible extensions within the older grades such as the modernization of wind chimes, which often use the pentatonic scale, in China during the 1100s. A further extension for the adolescent students could be metal work to create similar bells without clappers which were primarily used in religious ceremonies. This is just one example of how teacher development around content of curriculum aligns to the mission and values of IMACS guiding each child to a well-rounded educational experience, enabling each child to reach their full potential and maintain a lifelong love of learning.

Curriculum is established in the AMI Montessori written albums. The albums serve as a "base curriculum" and are amended for the individual needs of each student. Each lead AMI teacher participates in annual, monthly, weekly, and daily planning of lesson planning which is different for each child depending on each child's individual developmental, academic, social, emotional, and

physical needs. Although there is only one lead trained teacher in each classroom, teachers from the same level meet weekly to discuss all stages of planning and curriculum and lesson implementation. Curriculum implementation is reviewed at weekly level meetings and biweekly lead teacher meetings.

IMACS will submit to regular evaluation from accrediting bodies such as AMI and WMA to ensure fidelity to the scientific method of education. In addition to ongoing student assessment, governance council, community, and district evaluation will be used to modify the curriculum as necessary to meet the individual developmental needs of each student.

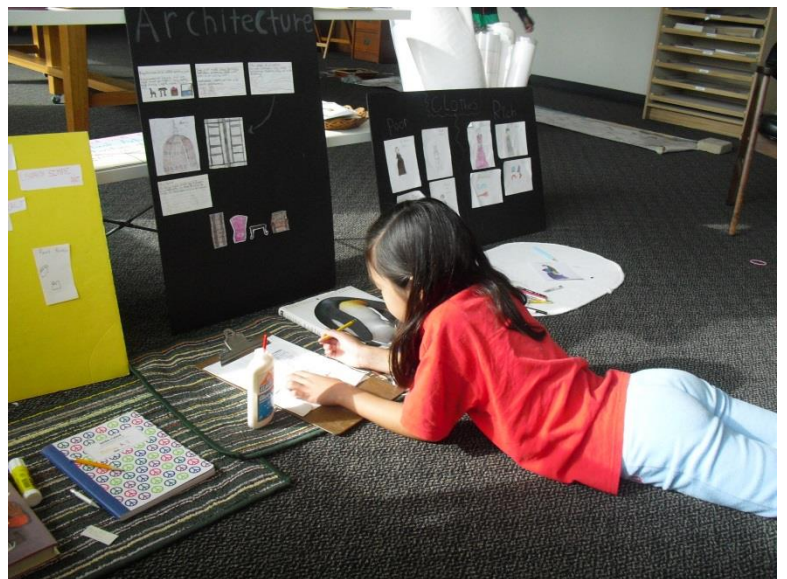
## B. INSTRUCTIONAL DESIGN

The AMI Montessori method provides an individualized education plan for every student, which is possible due to the rigorous training teachers receive in observation, assessment, and response to student needs using intervention techniques and materials from the classroom culture and environment. Student progression from one three-year class to another tends to align with learning benchmarks, but is actually based on stages of psychological development. This “social promotion” keeps students with the teacher, environment, and peer group that meets their developmental needs, while scaffolding to meet academic needs.

### Research and Examples

Research on the advantages and successes of the Montessori Method is referenced throughout this proposal in the corresponding sections, and in the Appendix. For information about the AMI Montessori Method as a whole, recommended reading includes:

- \_\_\_\_\_. "Introduction to Montessori". *American Montessori Society (AMS)*.
- \_\_\_\_\_. "The Montessori Elementary Program". *North American Montessori Teachers Association*.
- \_\_\_\_\_. "The Montessori Preschool Program". *North American Montessori Teachers Association*.
- \_\_\_\_\_. "AMI School Standards". *Association Montessori Internationale-USA (AMI-USA)*.



*An elementary student prepares a poster to present her research*

Dohrmann KR, Nishida TK, Gartner A, Lipsky DK, Grimm KJ (2007). "High school outcomes for students previously in a public Montessori program", *Journal of Research in Childhood Education* 22/2, pp. 205-217



- Lillard, Paula Polk. *Montessori Today: A Comprehensive Approach to Education from Birth to Adulthood*.(2011).
- Lopata, Christopher; Wallace, Nancy V; Finn, Kristin V (2005). "Comparison of Academic Achievement Between Montessori and Traditional Education Programs", *Journal of Research in Childhood Education* 20/1, pp. 5-13
- Montessori, Maria. *"The Four Planes of Development"*. (1969).
- Montessori, Maria. *Education and Peace*. (1992).
- Montessori, Maria. *From Childhood to Adolescence*. (1994)
- Montessori, Maria. *The Absorbent Mind*. (1967).
- Montessori, Mario *The Human Tendencies and Montessori Education*. (1966).

For available examples of implementation of a Montessori school within a public school district, and to evaluate the value such a school brings to district students, the reader may refer to the following cities that have public Montessori schools as part of their district offerings (district schools, not charter schools). By state, these include: AK: Juneau, St. Paul Island. AZ: Chandler, Mesa, Phoenix, Sedona, Teec Nos Pos, Tempe. CA: Carmichael, Castella, Elk Grove, Fair Oaks, Irvine, Irvine, Merced, Merced, Orangevale, Ramona, Sacramento, San Diego, San Francisco, San Geronimo, Santa Barbara, Shasta, Shingle Springs. CO: Black Hawk, Brighton, Colorado Springs, Denver. CT: Hartford. Washington, DC. FL: Gulfport, Hialeah, Jacksonville, Lauderhill, Palm Beach Gardens, Saint Augustine. GA: Atlanta, Chamblee, Savannah, Savannah. IA: Windsor Heights. ID: Boise, Pocatello. IL: Chicago, Rockford. KY: Ashland, Ashland, Cattlesburg. LA: Hammond, Kenner, Lafayette, Roseland. MA: Cambridge, Holliston. MD: Landover, Oxon Hill. MI: Auburn Hills, Benton, Harbor, Dearborn, Eaton Rapids, Grand Rapids, Holland, Jackson, Okemos, Petosky, Rockford, Shelby Township, Sterling Heights, Traverse City, Ypsilanti. MN: Forest, Lake, Owatona, Rochester. MO: Columbia, Kansas, City. MS: Jackson, MT, Bozeman, Helena, Kalispell. NC: Charlotte, Fayetteville, Greensboro. NE: Norfolk, Omaha. NJ: Tinton Falls. NY: Rochester, Rochester. OH: Cleveland, Dayton, Loraine. OR: Portland. PA: Erie, Pittsburgh, Guaynabo. SC: Barnwell, Belton, Blacksburg, Bluffton, Charleston, Columbia, Fairfax, Florence, Gadsden, Gaffney, Gray, Court, Greenwood, Latta, Laurens, McCormick, Moncks, Corner, Newberry, Pendleton, Rock Hill, Spartanburg, St. Matthews, Swansea, Trenton, York. TN: Memphis, Nashville. TX: Houston, Longview, Marfa. VA: Arlington. WA: Bremerton, Monroe, Olympia, Seattle, Snohomish, Spokane, Tacoma. WI: Burlington, Milwaukee, River Falls, Wauwatosa.

## **Implementation**

Through the cycle, of work and learning, the teacher and student customize the instructional plan, with student need being the driving focus. In every year of operation, IMA has had students who are English Language Learners and students with special needs whose families had received an IEP through MMSD processes. Despite exemption as a private school, IMA has honored the MMSD IEPs as well and language learning needs, and have met student needs within the framework of the inclusive classroom environment, and by the teacher following this cycle of work and learning.

## **AMI MONTESSORI CYCLE OF WORK AND LEARNING FOR TEACHERS AND STUDENTS**

1. Teacher begins with careful and thorough observation.
2. From these observations, the teacher forms a developmental goal and learning objective.
3. The teacher makes an action plan to meet the needs of the child. This may include planning necessary lessons, adapting the environment, adapting the instructional presentation, and/or collaboration with other school or community or family resources.
4. The teacher implements the action plan.
5. Teacher observes, reflecting on the goal and the action plan, and setting a continuation or a new goal and action plan, as necessary

Each day begins with the students enjoying each other and the outdoor environment. During this first segment of the day, children may play, participate in the run/walk club, visit and care for the school chickens, tend the gardens, socialize, or meditate. After a time outdoors, students enter the classroom environment for the work period.

During each three-hour work period, students move about the classroom choosing their own work and completing lessons at their own pace, and in the order best suited to their own development. After this first work period, students lunch and participate in recess/physical education in the outdoor environment, and then return to the class where the youngest children nap or rest and 5K-9 children engage in a second work period.

As the students in a Montessori environment guide their own education, and because of the holistic subject matters, all portions of the day may accurately be categorized as academic instructional time.

The staffing model for an AMI Montessori school relies on one lead teacher for each classroom, each of which serves between 28-34 students. The classroom may be supported by an educational assistant, bilingual professional, and/or a special education professional, as necessary to meet the needs of the students. Whenever possible, all staff that interact with students will undertake some level of training in the Montessori method, and all services and supports should be delivered within the framework of the Montessori environment. The staffing model prizes staff who demonstrate multiple capabilities – for example those qualified to teach both math and science, lead teachers who also have ELL or Special Ed certifications, EAs who speak a non-English language or who are part of “grow our own,” or staff with particular knowledge or experience that reflects the life experiences of the students served. *For details on Staffing, including staffing formula for teachers and support staff, see Section X: Human Resources.*

# IMACS Theory of Action - 2017-2018

*All students receive a holistic AMI Montessori Education in order to reach their highest and unique potentialities.*

**If we focus on...helping children achieve their greatest success, develop independence, and live with genuine kindness toward others and toward the world.**

## Content

Mathematics and Language & Literacy, content and materials matched to individual student needs and developmental levels based on frequent structured teacher observation.

### Challenging & Well-Rounded Participation

Integration of the following curriculum areas embedded throughout the instructional day: Practical Life, Grace and Courtesy, Music, Art, and World Languages.

### Family & Community Engagement

Family engagement through D.E.E.P Meetings, "Go To School" Nights, Parent-Teacher Conferences, classroom involvement as volunteers, mentors, and/or "Expert Speakers," Community Partner engagement through fundraising partnerships, "Going Outs," Adolescent Field Work in the community, Invitations to present as "Expert Speakers."

### and we support professional learning by...

PD consistent with AMI certification, including:

- Full consultation with AMI every three years.
- Staff attendance at AMI trainings and refresher
- Quarterly AMI In-service Education/Training
- Assigning Mentor teachers to new lead teachers
- Staff attend annual WMA Conference

Monitor data, collaborate to address problems and concerns, and maintain integrity to AMI practices, via:

- Bi-weekly full staff meetings
- Bi-weekly lead teacher meetings
- Weekly program-level teacher and staff meetings

## School Culture & Climate

Modeling and teaching peaceful behavior; Teaching and Practicing creative, open-minded, and kind problem-solving.

### Instructional Practice

Instructional delivery of the AMI model with integrity and fidelity.

### School Structure

Adherence to the MMSD BEP and the IMA Code of Conduct

### using these assessments and data to track progress...

PALS, MAP, EPAS, Forward Exam, Formal daily and weekly student observations, AMI Classroom Checklist for "walkthrough" data, Student Portfolios, Climate Survey, Family Participation Data (DEEP Meetings, Parent-Teacher Conferences, Volunteer opportunities), Fundraiser Data.

### then we will achieve these goals.

80% of English Language Learners and 80% of African American Students in grades K-2 will meet PALS reading benchmarks. 60% of English Language Learners and 50% of African American students in grades 3-5 will meet Spring MAP proficiency in Reading. 70% of English Language Learners and 60% of African American students in grades 3-5 will meet Spring MAP proficiency in Math. 60% of English Language Learners and 50% of African American students in grades 6-8 will meet Spring MAP proficiency in Reading. 60% of English Language Learners and 60% of African American students in grades 6-8 will meet Spring MAP proficiency in Math. 70% of English Language Learners and 70% of African American students in grades 3-5 will meet individual MAP Reading Growth Targets. 80% of English Language Learners and 80% of African American students in grades 3-5 will meet individual MAP Math Growth Targets. 80% of English Language Learners and 60% of African American students in grades 6-8 will meet their individual MAP Reading Growth Targets. 75% of English Language Learners and 75% of African American students in grades 6-8 will meet individual MAP Math Growth Targets. 100% of students will participate in Practical Life, Grace and Courtesy, Music, Art, and World Languages Curriculum and Instruction. 80% of parent ratings in each climate survey dimension (relationships, teaching and learning, safety, institutional environment, school improvement, family engagement) will be positive.

## C. ASSESSMENT

In addition to the standardized tests , the Montessori Method requires that IMACS implement regular ongoing assessments. This begins with a student’s first entry into school, or after transitions between classroom levels or after periods of absence.

### Assessment Schedule

		Fall	Winter	Spring
Summative	Literacy	MAP Reading (Grades 3-8)	MAP Reading (Grades 3-8)	PALS (Grades 4K-2) MAP Reading (Grades 3-8) Forward Literacy 3-8 (Grades 3-8) ACT/Aspire Reading (Grade 9) ACT/Aspire English (Grade 9)
	Math	MAP Math (Grades 3-8)		MAP Math (Grades 3-8) Forward Exam Math (Grades 3-9) ACT/Aspire Math (Grade 9)
	Science			Forward Exam Science (Grade 4, 8) ACT/Aspire Science (Grade 9)
	Social Studies			Forward Exam Social Studies (Grade 4, 8)
	Social-Emotional-Behavioral	CBITS (Grade 6)		
	Other		ACCESS for ELLs (all grades, all ELLs)	K-Model for ELLS
Interim: Screening Benchmark	Literacy	MAP Reading (Grades 3-9)	MAP Reading (Grades 3-8)	MAP Reading (Grades 3-8)
	Math	MAP Math (Grades 3-8)		MAP Math (Grades 3-8)
	Science			
	Social Studies			
	Social-Emotional-Behavioral	CBITS (Grade 6)		
	Other	CogAT (Grades 2, 5) Columbia Depression Screener (Grade 9)	Climate Survey (all grades) Columbia Depression Screener (Grade 9)	K-Model for ELLS
Formative	Daily and weekly formal student observations, questioning and learning logs, biweekly conferences, peer reviews, journaling; phonogram, blend-based, and sight word spelling practice and quizzes, book group work projects, and presentation and performance review, portfolio assessment			

## The embedded nature of Montessori assessments

Montessori-specific formative and summative assessments are embedded within the curriculum and environment, and serve as a constant and continuous guide to goal setting, instruction, and review and evaluation. A baseline assessment in a Montessori classroom reveals a student's academic, social, and physical abilities. In the course of the assessments, the AMI Montessori instructor may rely on preliminary exercises, sandpaper letters, sensorial materials, the numeration section, and Grace and Courtesy lessons. These occur at each level in different formats, and are presented in the way and order best suited to the child being assessed. As the materials used in an assessment are familiar components of the classroom environment, the act of assessment is invisible to the child being assessed, as well as to the child's classmates.



Continuous progress monitoring occurs with daily and weekly observations, questioning and learning logs, biweekly conferences (for all students at or above first grade), as well as the specific tools of a peer review process, journaling, phonogram, blend-based, and sight word spelling practice and quizzes, book group work projects, and presentation and performance review. Children participate in continuous self-assessment. Within the physical environment, children can review, based on the layout of the classroom materials, what they have mastered and what is yet to come. The children set goals and ask questions about their progress. At the elementary and secondary levels, the children join their instructor for biweekly conferences to discuss their progress as well as instructional planning.

Summative assessments gather data on an individual child's, a particular level's, or the entire school's overall progress in multiple areas, including school climate. Children beginning in K5 throughout High School develop annual and cumulative learning portfolios that are presented to the instructor, peer-reviewed, and then scanned and stored online through the Transparent Classroom,<sup>TM</sup> described below. Class-level and school-level data from all assessment tools become part of the school's profile, and is reviewed monthly by each level, prioritizing formal observations and student work.

### **Use of assessments and data**

It is communicated with children and families that assessments are used as important and valuable tools to continue the path of learning, communicating, and self-reflection. Families are provided an assessment calendar and examples of continuous, formative assessments in the school handbook, on the website, in the school entryway, and it is discussed at parent teacher conferences as well as during office hours, if scheduled with families.

Teachers communicate regularly with support staff, ELL teachers, and families throughout a student's progress towards learning objectives and academic goals. Students from 3K-9 receive quarterly descriptive report cards, similar to MMSD elementary and middle schools, which include information on student work, assessments, weekly conferences (with elementary and secondary students), and presentation evaluations. Additionally, teachers administer state and national assessments and regular formative and summative tests throughout each year.

IMA has implemented Transparent Classroom<sup>TM</sup> as a third-party application that serves as a repository of assessment information as well as a tool for creating and distributing assessment reports on the student-, class-, and school-level. The tool has features that mirror Career Cruising functionality so that progress reports can easily be cross-walked with the MMSD ACP and High School Pathways. This system also provides 24/7 availability for parents to access student progress information and assessment results, including a report showing the alignment of Montessori and Common Core benchmarks.<sup>20</sup>

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<sup>20</sup> See Appendix for samples Progress Reports from Transparent Classroom



Isthmus Montessori Academy

Profile Meetings Progress Photos Portfolio Conference Reports Immunizations Forms Standards 3rd Grade

's CCSS Math

Operations & Algebraic Thinking

Represent and solve problems involving multiplication and division.

**3.OA.A.1** Interpret products of whole numbers, e.g., interpret  $5 \times 7$  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 expressed as  $5 \times 7$ .

**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 which a number of shares or a number of groups can be expressed as  $56 \div 8$ .

**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 represent the problem.<sup>1</sup>

**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  $8 \times ? = 48$ ,  $5 = \_ \div 3$ ,  $6 \times 6 = ?$

Further investigation of multiples using the bead bars  
Further investigation with multiples-of-numbers paper  
Racks and tubes: Single digit divisor  
Area  
Word problems: Solving for distance (sensorial, arithmetic, algebraic)  
Word problems: Solving for interest (sensorial, arithmetic, algebraic)  
Word problems: Solving for time (sensorial, arithmetic, algebraic)  
Word problems: Solving for rate, Principal and time (algebraic)

*Screenshot showing Montessori lessons and the related Common Core benchmarks - Math*

Isthmus Montessori Academy

's CCSS ELA-Literacy

Reading: Literature

Grade 3

**RL.3.1** Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.

**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.

Interpretive reading cards  
Literature: Interpretation of cover and illustrations  
Literature: Vocabulary  
Literature: Spelling  
Literature: Punctuation conventions  
Literature: Literary devices  
Drama  
Literature: Comprehension  
Literature: Setting  
Literature: Characterization  
Literature: Plot  
Literature: Theme  
Literature: Point of view  
Literature: Style & voice  
Interpretive reading cards  
Literature: Vocabulary  
Literature: Spelling

*Screenshot showing Montessori lessons and the related Common Core benchmarks- Literacy*

A monthly level review is reported to the Data Review Team, a workgroup comprised of one lead teacher from each classroom level, who consolidates the data to report to the whole staff quarterly. This quarterly report is used to develop school-wide goals and plans which are shared with the SBLT to be considered for the SIP. Climate surveys are also presented to families and students at the beginning of the year to assist in the planning and implementation of the SIP.

School-wide data is used to guide a continuous cycle of teacher practice improvement, to guide children in reflecting and reviewing their learning objectives, and to guide the school towards progress on the SIP.

# VIII. Student Behavior Management

IMA supports MMSD's BEP, and understands that adoption and compliance with the BEP is a fundamental requirement of receiving and retaining an instrumentality charter. Attendance, attrition, and classroom behavior will be measured and documented monthly to be included in an annual report created by the principal.

The AMI Montessori curriculum and instructional methods emphasize personal freedom and personal responsibility, and this focus leads to a strong culture and climate of peace, respect, inclusion, and accountability. This is identified as the principle of 'Grace and Courtesy.' Students are instructed in positive behavior, conflict resolution, consensus-building, and the importance of taking care of themselves, their environment, and each other.

The AMI Montessori method is founded upon recognizing and honoring each child's journey to become a productive member of their community. This is a strength that can be leveraged in applying the BEP in a careful and deliberate way to the benefit of the entire school community.

*IMA already conducts trainings on positive discipline and nonviolent communication, and will serve the district as a resource for technical assistance in promoting positive behavior.*

IMA already conducts staff and family trainings on positive discipline and nonviolent communication, which are open to the public, and is willing to serve the rest of the district as a resource for technical assistance in this area.

Younger children that might engage in unwelcome behaviors are redirected towards positive choices. When more advanced children with increased expectations of personal responsibility are involved in incidents that disrupt the school culture of safety and respect, the response is community-based and collaborative, consistent with restorative justice principles.<sup>21</sup> *In the four years that the IMACS founders have run their existing school, not one student has been restrained, secluded, suspended or expelled, because the model is successful in addressing behaviors before they escalate, and because it does not support educational exclusion in any but the most urgent circumstances. Where a child must be removed from the classroom environment, IMA recognizes that learning and development is not suspended, and is committed to ensure continued access to services in a way that maximizes education during the child's absence from the classroom, and supports the child's healthy reentry into the learning environment.*

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<sup>21</sup> See Appendix for examples of the Montessori approach to various disciplinary situations.

## BEHAVIOR MANAGEMENT ROLES AND RESPONSIBILITIES

**During an incident:** Lead teachers of the student or students involved in the incidents implement the immediate response with the students while educational assistants maintain the integrity of the work period in the prepared environment. Support staff including SEA, psychologist, nurse, or social worker may be called in as needed to meet the needs either of students involved in an incident, or any classmates that may experience negative impacts of the incident.

**After an incident:** Staff that observed the incident first-hand are responsible for writing observations in the classroom log and in student files and complete incident reporting documents. Lead teachers and assistants, whether or not they were the first-hand observers assist in gathering information and conducting follow-up.

**Tracking:** Lead Teachers review all reports for their classes; Principal reviews all reports and confirms all follow-up and reporting requirements are met.

Family involvement is integral to the Montessori method, and is especially important with regards to maintaining a safe, welcoming school. Families are included from the earliest onset of behavior concerns, are asked for input as to what might be prompting a child's actions, are consulted as to the plan of addressing the situation, and are provided with tools and strategies to maintain a consistent response between school and home. Whatever circumstances and responses occur at school, adult guides observe, document, communicate with children and families, and make plans for continued success.<sup>22</sup>

The AMI Montessori method is founded upon recognizing and honoring each child's journey and story; it is a trauma-informed educational environment, supportive and responsive of each member of the community. This is a strength that can be leveraged in applying the BEP in a careful and deliberate way to the benefit of the entire school community. IMA already conducts staff and family trainings on positive discipline and nonviolent communication, which are open to the public, and would also be available to provide such trainings to interested MMSD staff from other schools.

The Montessori method includes education of all staff in the process of proactively preventing and, if necessary, deescalating behavioral situations. For the most extreme situations, the school, like all other MMSD schools, will participate in training and compliance in accordance with MMSD Policies and Procedures 4221, with an emphasis on always using the minimum intervention possible to ensure the safety and security of the students. Whenever an incident would require the use of restraint or seclusion, the school would make all reasonable efforts to accomplish notice requirements within the school day of the incident, but in all circumstances within the time period prescribed by board policy.

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<sup>22</sup> Lillard, A. S. (2011). Mindfulness practices in education: Montessori's approach. *Mindfulness*, 2(2), 78-85

## IX. Key Partnerships

IMA values its developing and continuing partnerships with multiple community organizations. IMA works directly with the Montessori Institute of Milwaukee in connecting interested candidates with the AMI Montessori training. IMA works in partnership with GSAFE to create further learning opportunities and genuine service work with the intention of increasing leadership opportunities for LGBTQ youth and youth of color as well as continuing to strive for greater racial, gender, and trans social justice. IMA continues to deepen relationships with neighborhood community organizations. Most recently, IMA has partnered with East Madison Community Center and Performing Ourselves for an extracurricular movement program for elementary aged students. The theme of their work and eventual performance will be ‘Connections and Collaboration’

Community engagement, micro-entrepreneurship and environmental responsibility are all components of an AMI Adolescent Program. In furtherance of these goals of preparing adolescents for leadership in their communities and careers, new partnerships have been established for 2016 that will provide adolescents with skills, knowledge, and opportunities for service. The teens themselves will help shape the partnership relationship with these entities including Community Groundworks, Wisconsin School of Music Association, Wild Rumpus Circus, the Chazen Museum of Art, and the Central Library’s Bubbler.



*Visiting IMA's partner, Scotch Hill Farm*

IMA will continue valuable learning and service partnerships with Scotch Hill Farms, Gaelic Fusion Dance Company, Henry Vilas Zoo, and the Northside Council.



# X. Human Resources

## **Staff Recruitment: Maintaining our Success**

IMA employees currently reflect the diversity of the district. Not only that, but because IMA Inc.'s Inclusivity Action Plan specifies that children perform best when their demographics are reflected among senior and leadership staff, IMA has successfully recruited and maintained a highly-qualified diverse staff to fill these positions. IMACS will likewise reflect a commitment to hiring, recruitment, and training practices that will maintain this level of representation.

One strategy that has proven successful in overcoming the barriers that often prevent individuals from underrepresented communities from pursuing education and certification as AMI Lead Teachers, is to pair inclusive recruitment policies with a fine-tuned “Grow Our Own” program, designed to develop talent and provide support in helping candidates with diverse backgrounds achieve teacher licensure. Every person inquiring about employment with IMA – regardless of the positions sought – is advised about potential flexibility and support that the school can provide if candidates would like to explore professional development towards senior or leadership roles. To support recruits and advancing staff in obtaining the necessary training and credentials to become full members of the faculty, IMA offers opportunities for flexible work scheduling, for reduced childcare tuition for the candidate’s own children, and for assistance financing the necessary training. It is the goal of IMA to develop capacity and leadership among under-represented populations, increasing the diversity of teachers qualified to teach and to lead within the national field of Montessori education.

Another advantage of this well-honed “Grow Our Own” model is the ability it allows to adjust to changing Human Resource needs. Where specific certifications or competencies are scarce, the model can be applied to developing the necessary credentials among motivated candidates. For example, a job candidate with Hmong-English bilingual fluency can be supported in their pathway to licensure as a BRT, or an enthusiastic EA who works well with children with exceptionalities can be sponsored in pursuing Special Education Certification.

## **Employment Criteria**

As the School Board will employ all personnel for the school, all MMSD human resource policies will apply.<sup>23</sup> IMA embraces all MMSD policies with respect to:

- hiring practices,
- employment requirements,
- core competencies,
- certifications,
- employment standards

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<sup>23</sup> AMI Montessori teacher training is recognized as a pathway to licensure under Wis Stat 118.194(1)(b); no waiver of certification or competency requirements is needed or requested.

No additional school-specific competencies are required, though the following staff credentials are required to implement AMI standards with fidelity:

- **School Administrators** shall have Wisconsin DPI certification as a principal, professional experience as a school administrator, experience at an AMI Montessori school, and AMI Montessori training at the Primary and/or Elementary level, or a willingness to obtain such training prior to the beginning of the school year. A careful review of the country's public Montessori landscape reveals that the most successful schools are those whose leaders are thoroughly steeped in the AMI methodology, and have seen cohorts of students pass through multiple three-year age groupings. In order to further success of IMACS's specific vision, candidates with experience at a Charter School and professional experience working with diverse student and family populations will be encouraged to apply. As with our instructional staff, Educational Leaders with multiple licenses and a wide range of professional experiences are preferred.
- **Lead Teachers** shall be either AMI certified for the specific age range they teach or have completed more than 50% of the training, with full completion expected by the beginning of the second year. Teachers with multiple licenses, certifications, or experiences are desired.
- **Educational Assistants** shall have received a Montessori Theory course.
- **Support Staff**, working in special education, psychology, diagnostics, social work, art, music, gym, or library science shall attend workshops and have opportunities for observation and discussion to support their understanding, practice and implementation of AMI principles.
- All **employees and volunteers** at the school shall commit to developing and maintaining genuine, positive connections with children, families, and the local community.

## Staffing Plan

For years in which a class is “growing,” phasing in one or two of the grades in a three-year group, and in any other year where practical, there will be a hiring emphasis on recruiting and hiring qualified staff demonstrating multiple capabilities – those qualified to teach both math and science, lead teachers who also have ELL or special Ed certifications, EAs who speak a non-English language or who are part of “grow our own,” etc. This will better allow the school to meet all student needs with somewhat lower staffing levels and somewhat higher flexibility.

Staffing is based on one lead teacher for each classroom, each of which serves between 28-34 students. In primary classes, each classroom requires an additional instructor, which may be an educational assistant or a bilingual or special education professional. In elementary classrooms, an educational assistant is not necessary, but bilingual and special education instructors will be allocated based on formulas provided by MMSD's Department of Student Services.<sup>24</sup> Information from this office also guides the staffing of student services professionals. Aggregate counts are displayed according to district formulas, but specific distribution of resources will depend on student need.

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<sup>24</sup> For budget purposes, this proposal incorporates the formula of 14% of Students will have IEPs, and for each 10.5 of these students, IMACS will require one Special Education teacher and 34 weekly hours of SEA. The proposal further assumes an ELL population of 20%, with the majority of these students speaking either Hmong or Spanish at home.

## Staff Retention

An AMI Montessori school is most successful when academic and support staff are a consistent presence throughout a child’s education. Montessori schools typically outperform conventional schools in staff retention because the Montessori environment is vibrant and inspiring in its ability to educate and guide each child to reaching his or her fullest potential.<sup>25</sup> In addition to desirable working conditions, IMA is committed to supporting professional growth and development and staff advancement, and works with each member of staff to identify and track an annual personal professional development plan, which is included in the annual report. As described above, this includes supporting staff in developing additional competencies and credentials. It is the goal that 80% of staff would be retained from one year to the next, for the duration of the charter.

## Staff Evaluation Plan

AMI Montessori Guides (teachers) are evaluated using a structure like the Educator Effectiveness Model (EE). Where the IMACS educator evaluation model differs is in the EE Cycle Milestones and the order of and additional components of the Framework for Teaching (FfT) Domains. The following is a side-by-side comparison of the existing FfT Domains and the IMACS FfT Domains.

<b>FRAMEWORK FOR TEACHING</b>	
<b>Domain 1: Planning and Preparation</b>	
<b>DPI FfT</b>	<b>IMACS FfT</b>
1a Demonstrating Knowledge of Content and Pedagogy	1a Demonstrating Knowledge of the continuum of Human Development
1b Demonstrating Knowledge of Students	1b Demonstrating Knowledge of the Plane of Development in which the educator is practicing
	1c Demonstrating Knowledge of Content and Pedagogy
1c Setting Instructional Outcomes	1d Demonstrating Knowledge of Students
1d Demonstrating Knowledge of Resources	1e Setting Instructional Outcomes
1e Designing Coherent Instruction	1f Demonstrating Knowledge of Resources
	1g Designing Coherent Instruction (Proper use of AMI Montessori Albums)
1f Designing Student Assessments	1h Use of prepared environment and materials to assess student progress

<sup>25</sup> Klinker, Joan M., Dave Riley, and Mary A. Roach. "Organizational climate as a tool for child care staff retention." *YC Young Children* 60.6 (2005): 90.



# FRAMEWORK FOR TEACHING

## Domain 2: Classroom Environment

**DPI FFT**

- 2a Creating an Environment of Respect and Rapport
- 2b Establishing a Culture for Learning
- 2c Managing Classroom Procedures
- 2d Managing Student Behavior
- 2e Organizing Physical Space

**IMACS FFT**

- 2a Observes student and performance and classroom daily
- 2b Prepare environment to the AMI Montessori standards (order, beauty, child-size, completeness, teacher-made)
- 2c Model Grace and Courtesy with students and throughout environment at all times
- 2d Use a quiet, kind, effective tone with all students, staff, and families
- 2e Use positive language and objective statements to encourage intrinsic motivation
- 2f Creating an Environment of Respect and Rapport
- 2g Establishing a Culture for Learning
- 2h Managing Classroom Procedures
- 2i Managing Student Behaviors

## Domain 3: Instruction

**DPI FFT**

- 3a Communicating With Students
- 3b Using Questioning and Discussion Techniques
- 3c Engaging Students in Learning
- 3d Using Assessment in Instruction
- 3e Demonstrating Flexibility and Responsiveness

**IMACS FFT**

- 3a Encourage a love of learning
- 3b Use Observations and AMI Montessori Albums and Assessments to guide instruction
- 3c Communicating With Students
- 3d Using Questioning and Discussion Techniques
- 3e Engaging Students in Learning
- 3f Using Assessment in Instruction

## FRAMEWORK FOR TEACHING

### Domain 4: Professional Responsibilities

#### DPI FFT

- 4a Reflecting on Teaching
- 4b Maintaining Accurate Records
- 4c Communicating with Families
- 4d Participating in a Professional Community
- 4e Growing and Developing Professionally
- 4f Showing Professionalism

#### IMACS FFT

- 4a Observe different classrooms and at different levels
- 4b Reflecting on Teaching
- 4c Maintaining Accurate Records
- 4d Communicating with Families
- 4e Participating in a Professional Community
- 4f Growing and Developing Professionally
- 4e Showing Professionalism

The Educator Effectiveness Cycle for IMACS will modify the standard MMSD cycle, by adding two additional peer and instructional leader review sessions, one between the start of the year and the midyear review and the other between the midyear review and the end of year meeting. Any IMACS amendments to the current Educator Effectiveness model would align with the district timeline and goals.

Any staff new to AMI Montessori or IMACS participate in an orientation that includes an open discussion of standards, evaluative measures, staff and school goals, and the purpose of the evaluation process to implement a continuous cycle of improvement.

During initial meetings each year, staff and administration meet to discuss possible goals and expectations. While overall student safety, well being, and love of learning may never be compromised; all educators are encouraged to expand their practice, to take professional risks, and to use honest self-reflection as a guide to helping students reach their highest potential, helping the education team implement best practices, and to improve overall teaching practices.

Each educator's starting point with the school and each year are assessed in different ways. As a returning educator, the previous years of experience will be reviewed to establish reasonable yet high expectations for the year ahead. For educators new to the IMACS team, each educator's training and value are assessed to begin their teaching experience. For example, IMACS believes that it is imperative that children learn from people within their community and by people with whom they relate. This will necessitate a holistic review that includes factors such as the staff members' social and cultural knowledge, experience, and history and capacity for creating strong relationships with the students they serve.

# XI. Transportation

The driving principle in developing the attendance area and the Transportation Plan is access. The attendance area intentionally includes many neighborhoods and many specific housing structures whose children have historically not had access to Montessori education and who could most benefit. A critical component of this access is continuity. Within our proposed attendance area reside many families marked by housing insecurity and high residential mobility. These families could especially benefit from the culture and continuity of a Montessori environment. IMACS is committed to supporting the Transportation Plan through targeted fundraising and through a flexible approach to school scheduling. Day-to-day implementation of the school's transportation services will be the responsibility of the Administrative Assistant to the Principal. IMA will inform the parents of potential students of the school's transportation services policy as part its student enrollment outreach programs, so students and their families will be fully informed of their transportation rights and choices when considering our charter school.

To provide the highest support to students in the immediate neighborhood who will access the school by walking, older students will have leadership opportunities in supporting the physical education and social science benefits of walking to school. Under Section 121.54(2) Wisconsin Statutes and in alignment with the Madison Metro School District's (MMSD) transportation policy, elementary students (4k – 5<sup>th</sup> Grade) who live more than 1.5 miles from the school, or for whom district-determined needs so require, will be provided with transportation services for which they are eligible, in order to ensure unrestricted access to the school. Because IMA will be operating as an instrumentality charter school, the school will have more flexibility around its daily schedule and can adjust the daily start and end times in order to work more fluidly within the district's broader transportation scheme. Buses that are currently operating below capacity could make an additional stop at IMA, or IMA could stagger its internal start times such that one busload of students could begin their school day while the bus does another circuit.

IMACS will align with MMSD policy that secondary students (6<sup>th</sup>–9<sup>th</sup> Grade) utilize Madison Metro Transit. Students demonstrating financial need who reside more than 1.5 miles from IMA will receive a free bus pass. This should meet the needs of all expected students, but should any students in the attendance area reside in neighborhoods where public transportation is unavailable, the school will work with the district office to provide direct transportation. Special education students often have different eligibility for transportation as well. Their eligibility is dictated by their Individual Education Plan (IEP). Transportation for special education students will be provided in accordance with all applicable State and Federal laws.

If a student is not eligible for transportation, such as students attending as internal transfers or through open enrollment, the child's parents or guardian assumes responsibility for transportation. The school is intentionally located to be accessible by public transportation, along Metro Routes 20 and 21. Both of these routes and their connecting routes allow for arrival and departure times consistent with the scheduled school day.

## XII. Waivers

The Committee has reviewed the possibility for statutory waivers as outlined in Wis. Stat 118.38(1)(a), and does not believe any waivers of Wis. Stat. chs. 115 to 121 or in the administrative rules or waivers of any federal statutory or regulatory provisions are necessary for the successful operation of the charter school.



IMA does not believe any waivers of Board Policy are necessary for the successful operation of the charter school, unless BOE would prefer to address identified variances through a waiver. Within the flexibility of certain Board policies, IMA expects to demonstrate variance from typical presentation of policy as to the following handbook sections:

### 3450 Class Size

Over the course of the charter, IMA intends to gradually expand the number of classrooms. During the process of expansion, some classes may have enrollment lower than the stated minimum. For example, a new Lower Elementary class may begin with only grade 1, then the next year serve grades 1&2, and only reach full capacity the third year of the class.

### 3611 Evaluation of Learning Materials

IMA does not request a waiver to 3611, but acknowledges that a Board review of the entire compendium of AMI Montessori materials and curricula is a burdensome undertaking. IMA seeks to establish a plan whereby MMSD will either 1) determine to grant blanket approval for all materials that align with and are approved by AMI and its auditors, or 2) will indicate whether they would prefer to conduct a specific review of each material, either by reviewing a) the Juliana Group, Inc. or Nienhuis Montessori USA catalogues of materials or b) by coming to the school to

be introduced to each of the thousands of materials individually. If this last option is preferred, MMSD should identify a two-day period to devote to this.

#### 4011 Entrance into Four-Year-Old Kindergarten, Five-Year-Old-Kindergarten, and First Grade

An AMI Montessori primary classroom includes children at 3K-5K ages. IMA would like to draw on Wisconsin's 150-year history of public 3K and 4K in communities throughout the state, and serve all primary students in the room as MMSD Kindergarten students. There is increasing research and focus on the value of high-quality educational interventions for the youngest children, an option often inaccessible to families without sufficient means. This is an opportunity for board policy to evolve to encompass this data-supported, research-based innovation. Otherwise, under current policies, 3K students in this type of mixed-age class would be private day care students, and 4K/5K would be MMSD students.

#### 4615 Animals on School Premises

IMA is not requesting a waiver to 4615 as it pertains to the school building, animal education, and class pets, but would like to alert MMSD to the educational goal of early exposure to the biology curriculum, as well as internship-level education in the agricultural/culinary skills. IMA intends to expand its current gardens to a micro-farm and orchard and possibly farm animals, which would all be located on the lands surrounding the school, accessed for these purposes, and not inside the school itself.

IMA does not believe any waivers of the Employee Handbook are necessary for the successful operation of the charter school, unless BOE would prefer to address identified variances through a waiver. IMA expects to demonstrate variance from typical presentation as to the following handbook sections:

#### 4.02 Early Release Monday

IMACS will not release students early on Mondays. The Montessori method depends on a consistent daily schedule, and also depends on consideration of the 'whole child,' which includes the needs and schedules of parents and caregivers. These hours of instructional time also afford IMACS some flexibility in scheduling school-day conferences and PD. While maintaining a consistent school schedule, IMACS will still ensure staff have the required 4.5 hours of weekly planning time, in increments of no less than 30 minutes each, and will also receive Team Teaching planning time for each program level. The all-lead teacher meetings and all-staff meetings will be conducted during the standard work day, 7:15am-4:15pm daily.

#### 4.03 Family Conferences

The increased student to staff ratios in an AMI Montessori environment result in a high number of family conferences to schedule during the conference period. The employee handbook contemplates two evening shifts for a total of eight conference hours per year. However, with Montessori class sizes, accommodating 100% conference participation at 15 minutes per conference, lead teachers from the IMACS community will need closer to 17 hours to complete two

conferences per year with each family. Conferences each semester are scheduled in the evening of one day, and during the workday hours of the following day, which is a day school is not in session.

Since AMI Montessori is a wholly different, scientific method of education than those familiar to most families in Madison, Isthmus Montessori Academy has developed an effective and comprehensive method of orienting new and continuing families to the features and culture of a Montessori School.

Families have many opportunities to learn about the specific methods at use in the school as well as the history behind the methods, and the specific developmental need that they meet. This is explored one-on-one during a tour, classroom visitation, office hour, or personal email exchange, in a group setting such as at the all-parent meetings or D.E.E.P. Meetings (See Section VI. Family Engagement), a special optional day-seminar during which parents spend the day in the role of a child receiving orientation and instruction, and clearly explained in the parent handbook, as well as on the IMA website, which links to even more resources for deeper explanation.

It is a fundamental component of a Montessori school that students and families in the school community understand the methods and the reasons for those methods. As one example, today's parents have been accustomed to associate large class sizes with tight resources, a lack of commitment, or poorer outcomes. To these families, a Montessori administrator would explain that the large class sizes in a Montessori classroom support the developmental needs of the children by including a critical mass of children who are at the same developmental level (usually correlated to age) as well as enough children with similar capacity. These class sizes of 25-32 students also allow for students to form small groups around their own research interests, and for students to teach each other and learn from each other. As another example, to families and children accustomed to worksheets and textbooks, a Montessori guide would explain the method of introducing children to materials one at a time, and then allowing the children to use the materials as they choose in order to develop the skills and knowledge needed to pursue their studies.

Pertaining specifically to any waivers or variance from Statutory requirements, MMSD policy, or the MMSD Employee Handbook, any waivers or variance will be clearly outlined on the IMA website, published and distributed in the Parent Handbook at the beginning of the term, and addressed verbally at the All-Parent meeting.

## XIII. Financial Operations

### **Budget development**

The budget for Isthmus Montessori Academy Charter School will be developed by the school's governance council, for inclusion in an annual report to Madison Metropolitan School District. Before inclusion in the report, the board of directors of Isthmus Montessori Academy, Inc. will have an

opportunity to provide an advisory review, as will the SBLT. The focus of the former will be appropriate consideration of AMI Montessori fidelity, and the review of the latter is to confirm that the budget reflects the priorities and goal outlined in the SIP. The principal of IMACS is responsible for maintaining the budget during the school year, and reporting all observations to the balance of the governance council. This will require due diligence for accounting as well as effective communication and action with teachers and staff of IMACS.

## **Funding streams**

The attached budget presumes the ‘open enrollment’ base funding amounts for all pupils 5K-9, and .6 of that sum for 4K, with expenses also reduced accordingly. Because IMACS enrollment goals, if met, would make the school eligible for Title I funding, this funding source is assumed for year 3-5, but these funds, if received, would be allocated to Title I related expenditures.

This budget does not reflect the debt currently held by IMA, Inc. or by the organizations founders. Payments on this debt will at all times be made by IMA, Inc., the borrower. IMACS will play no role in that loan, and likewise will play no role in the payment of any expenses made or debts incurred by IMA, Inc. that are in furtherance of converting additional sections of the existing facility into suitable educational spaces. MMSD will only be responsible for the rent and utilities of the space used, 2/3 of the total expenses in these categories.

The charter committee understands that MMSD is not at this time going to explore the option of serving 3K students through public education. Therefore, this budget does not reflect revenues or expenses for this population. Those revenues and expenses will rest with IMA, Inc., which adopts MMSD assumptions about expected/target demographics, Human Resources, etc.

From funds received for childcare for children aged 0-3, 4K wrap-around, and before and aftercare, as well as from community programming, **IMA, Inc. will pledge ongoing financial support to IMACS.** The assumed amount of this ongoing aid has been conservatively estimated at \$60,000 per year, with an anticipated larger award in years of expansion- years 1 and 3 of the charter. This is in addition to funds necessary for staffing 3K and for the 1/3 ongoing facility costs.

The Governance Council for IMACS will be charged with identifying and pursuing funding opportunities, but IMA, Inc. also remains committed to leveraging existing relationships as well as its own committed resources, and identifying and pursuing ongoing opportunities.

## **Value Considerations**

School leadership participates in information-sharing and referral networks with the home-birth, home-schooling, and private Montessori school communities, and expects those channels may result in interest. IMA represents the following opportunities to add value to the district:

Current clients. 20% students attending the private school run by IMACS founders live outside the MMSD attendance area, representing the potential to add open enrollment revenues to MMSD. The private school families that do reside within MMSD are committed to providing a



Montessori education to their children. By holding an instrumentality charter, IMA can bring these families back into MMSD, and capture future families with similar interests. This adds both revenue, and additional committed and involved families to the MMSD community.

Relief of pressure. IMA believes that it can serve the district by diverting certain families from district schools marked by excessive demand. Many district families will see IMA as an alternate source of ‘added value’ they see in schools offering dual language immersion, arts emphasis, or Advance Placement courses. By offering a similar added value, IMA can divert some enrollment interest from these programs with excess demand, opening more slots at these schools to MMSD families. Additionally, due to the IMA attendance area, many children who do have access to these ‘added value’ options will for the first time have the choice between multiple such options.

Limited “vacuum effect” in other elementary schools. Given the focus on admission among 3K-1, loss by other schools would primarily be in siblings of enrollees, and as resulting from MMSD referral.

Competitive advantage. IMA believes it can compete with a number of Madison’s private schools for additional families who reside inside and outside Madison, that are not attending MMSD. Schools such as Madison Community Montessori, Madison Country Day School, Preschool of the Arts, Wingra School, and virtual and homeschooling options all offer alternative methods of education that are currently popular. While MMSD has excellent schools, these alternative methods are not currently offered within the district, and the private offerings are costly. Families currently attending or considering these and similar schools will be drawn to IMA as a charter because of the high fidelity to the AMI method, the larger student body, the wider range of ages served, the diversity the school will represent, and the opportunity to participate in public education in their community.

Select enrollment projections.

	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
Open Enrollment from outside MMSD	15 (existing)	10	12	15	20
Recapturing MMSD –area students currently in private or home-schools	50 (existing)	30	30	35	40
Administrative transfer	10	10	12	12	15

**Calculations:**

<< See attached budget on MMSD template >>

	2017-18 Year #1	2018-19 Year #2	2019-20 Year #3	2020-21 Year #4	2021-22 Year #5
<b>Revenue Generators</b>					
Per Student Multiplier	6,739	6,806	6,874	6,943	7,013
4K adjusted Enrollment	175	221	229	234	252
3K students (not funded through State Authority)	34	34	34	34	42
<b>Revenue Sources</b>					
State Authority	1,182,020.60	1,506,934.75	1,576,999.72	1,627,485.71	1,768,585.39
Allowable School Fee (\$40 - assume waived for 15% pupils)	7,119.60	8,683.60	8,955.60	9,125.60	10,002.80
State & Federal Grants					
SAGE					
Title I-A (*= includes TI funding, if received)			67,341.85	95,822.46	122,623.64
Financial support from the parent organization, IMA, Inc.	120,000.00	60,000.00	61,200.00	62,424.00	100,000.00
Fundraising and Foundation support	60,000.00	60,900.00	61,813.50	62,740.70	63,681.81
Field Trip fees (from paying students only)	8,770.00	11,070.00	11,470.00	11,720.00	12,610.00
<b>Total Revenue</b>	<b>1,377,910.20</b>	<b>1,647,588.35</b>	<b>1,787,780.67</b>	<b>1,869,318.48</b>	<b>2,077,503.65</b>
<b>Instructional Expenditures</b>					
<b>Staffing Expenditures (expressed in Full Time Equivalents)</b>					
Classroom Teacher (incl. BRT)	5.8	7.3	7.6	7.8	8.4
Educational Assistant (incl. BRS)	1.0	1.0	1.0	1.0	1.0
Special Ed Teacher	2.3	2.9	3.0	3.1	3.3
Special Education Assistant	0.8	1.0	1.0	1.0	1.1
* Add'l SEA/BEA services for Title I-A		51,324.15	52,350.63	53,397.64	59,912.15
Student Services (Guidance, Psych, Social Work, Nurse)	1.5	1.8	1.9	1.9	2.0
* Add'l Student Services for Title I-A		156,711.52	168,726.07	172,100.59	184,781.69
School Administrator(s)	1.0	1.0	1.0	1.0	1.0
Clerical Support	0.4	0.4	0.4	0.6	0.6
Custodian(s)					
Other Staffing Cost (Professional Development)	6,000.00	6,120.00	6,242.40	6,367.25	6,494.59
Other Staffing Cost (Recruitment & Training)	3,500.00	3,500.00	3,641.40	3,714.23	3,788.51
SIP	2,500.00	2,550.00	2,601.00	2,653.02	2,706.08
Other					
<b>Purchased Services</b>					
Services (Equipment Repair, Conferences, Mileage)					
Licensing and accreditation (IB, AMI)	1,440.00	1,454.40	1,468.94	1,483.63	1,498.47
Rent	116,699.00	119,032.98	121,413.64	151,708.70	154,742.87
Utilities	33,733.33	34,408.00	35,096.16	35,798.08	36,514.04
Pupil Travel (research trips, field trips)	8,770.00	11,070.00	11,470.00	11,720.00	12,610.00
Construction (funded by IMA, Inc., not IMACS)	donated		donated	donated	
Supplemental Bus Route (above assumed)	30,000.00	30,000.00	30,000.00	30,000.00	30,000.00
<b>Supplies</b>					
General Supplies	1,000.00	1,020.00	1,040.40	1,061.21	1,082.43
Classroom Supplies Rental	42,000.00	48,960.00	49,939.20	57,305.23	64,945.93
Curriculum and Programming (* incl TI)	87,700.00	110,700.00	114,700.00	117,200.00	126,100.00
Other					
<b>Meal Program Sub-Budget - Breakfast, Snack, Lunch</b>					
Food Service Staff	0.60	0.60	0.75	0.75	0.75
Meal revenues from paying pupils	(27,609.76)	(28,161.95)	(35,906.49)	(36,624.62)	(37,357.11)
NSLP Breakfast and Lunch reimbursements	63,144.00	69,458.40	76,404.24	84,044.66	92,449.13
Food Service Supplies	126,288.00	159,408.00	165,168.00	168,768.00	181,584.00
Food	(1,000.00)	(1,020.00)	(1,040.40)	(1,061.21)	(1,082.43)
	(189,432.00)	(228,866.40)	(241,572.24)	(252,812.66)	(274,033.13)
<b>Total Cost</b>	<b>1,373,967.02</b>	<b>1,642,704.09</b>	<b>1,794,625.93</b>	<b>1,930,773.49</b>	<b>2,076,712.17</b>
<b>Net Revenue to Expenditures</b>	<b>\$ 3,943.18</b>	<b>\$ 4,884.26</b>	<b>\$ (6,845.26)</b>	<b>\$ (61,455.01)</b>	<b>\$ 791.47</b>

# XIV. Facility/Safety Plan

IMA is currently located at 1402 Pankratz Street, near the intersection of Aberg and Packers Avenues. The facility is located in the heart of a community that might most benefit from new and expanded access to Montessori methods. It is accessible by public transit, is stable, secure, and offers easy free parking to families and staff. It includes an expansive green space currently in use as the school’s “outdoor environment,” the Montessori term for a space to observe and interact with the natural world. IMA has developed a child’s playground, mico-orchard, school gardens, the new chicken project, and outdoor physical education.



IMA, Inc. holds a five-year lease with the exclusive option to expand into the entire building, 35,000 square feet, when enrollment supports expansion. IMA, Inc. currently leases only 10,000 sq ft of the building; 9,000 is in use by students. The development of this space from its former office use into functional classrooms was accomplished with a construction loan to IMA, Inc., which is additionally secured by IMA’s founders as individuals. IMA, Inc. is paying this debt ahead of projections, and will continue to pay it with revenues from non-school operations. **Under no circumstances would service of this debt transfer to MMSD or to any other party. It remains the responsibility of IMA, Inc. as distinct from the proposed IMACS, a separate legal entity.** In addition to retaining the debt burden for all expenditures to date, IMA, Inc. will retain 2,500 sq ft of the facility which will continue to be occupied solely by the infant and toddler programs and would not be part of the charter school.

## Facility Plan

In order to procure a facility with adequate room for growth, IMA, Inc. and its legal and financial advisors worked with the building owner to develop a cost structure that is fully supported by the private tuition currently being charged to enrolled families, and which would be easily supported at enrollment levels even below those projected for the charter school. The capacity for the portion of the building currently leased and in use is 153 in the current configuration, 193 without expanding the leased area. To accommodate expected year 1 enrollment, one current non-classroom space would be converted to classroom space and one additional classroom would be constructed in currently undeveloped space. As the school expands to capacity, and the IMA, Inc. childcare and community functions also expand, the increase of additional classes and spaces requires doubling the current space leased for year three and beyond. This will represent significant build-out costs, but is the only alternative to denying access to interested families in need, and IMA, Inc. is prepared to make this investment in furtherance of its vision.



In addition to IMA, Inc.'s option to expand into unused portions of the building, it also has contractual permission to make broader use of the grounds surrounding the building, allowing for enhanced curriculum in the areas of botany, zoology, math, land use planning, animal husbandry, geography, history and environmental studies, as well as business studies as the adolescents leverage the micro-farm in their entrepreneurial work and in service learning, such as by producing and providing fresh foods to enhances the lunch programs of surrounding MMSD schools.

Unless MMSD chooses an alternate facility, IMA, Inc. is prepared to maintain its role as lease-holder, to whom MMSD might become a sub-lessor for charter school classrooms and for access to common areas shared by the school, the private day care, and the family and community resource functions. The attached budget contemplates IMA, Inc. paying 1/3 of total rent, with MMSD as a sub-lessor paying the remaining 2/3.

Alternatively, should MMSD identify an alternate facility which would accommodate the charter school, and have leasable space available for the other functionalities of IMA, Inc., IMA, Inc. can exercise the termination clause and terminate the existing lease, with no costs for this borne by IMACS. An alternate facility decision should give due weight to the interests of IMA, Inc., which include being located as centrally as practical in the city of Madison, accessible by public transit, and with sufficient space to serve all interested children that might benefit from a method of education from which they have historically been excluded. A facility plan that could only accommodate the numbers currently enrolled would be insufficient to meet this imperative of equitable access.

### **Ensuring Health and Safety**

The physical well-being of every student, visitor, and employee will be a primary consideration in every school activity, including the designing of facilities, the planning for school functions, or the performance of a task.

A safety plan has already been developed for the facility's current functionality, and the changes that will be made upon the receipt of an instrumentality charter have been identified. Current and identified plans dictate that fire drills are held monthly, tornado drills are held monthly during tornado season, and drills for lockdown and other emergency scenarios are held annually.

Several principles and approaches within AMI curriculum and instructional design serve as preventative measures that support an environment that ensures the physical wellbeing of all students.

The AMI Montessori focus on grace, courtesy, responsibility and service result in a learning environment that is safe both physically and psychologically. IMA, Inc. has since 2012 operated a private school and childcare center at the current facility, and since that time has only had to report 1 incident to the licensing agency. The same principles and policies should result in low rates of incidents for IMACS. Additionally, the teaching practice of providing a "Prepared Environment" for students to learn ensures that the physical set-up of the classroom and instructional materials provide the safest possible learning environment.

IMA will utilize the resources currently available through MMSD in order to comply with School Board Policy 4147. This includes Emergency Procedures, staff training, accident reporting, and bullying/harassment reporting. The School Based Leadership Team, led by the school principal, will be responsible for the development and implementation of Emergency Procedures in collaboration with the MMSD Coordinator of School Safety and other staff members as appropriate such as the school nurse, food service staff.

## XV. Legal Requirements

For the last four years, since IMA opened its doors, Carrie Marlette and Melissa Droessler have maintained an understanding of the laws and policies governing public schools in general and charter schools in particular. They have been instrumental in creating new legislation around Montessori training as a pathway to licensure for public school teachers. With regards to the statutory requirements surrounding voluntary attendance, non-sectarian education, and education of students with disabilities, the Heads of School have voluntarily complied, within the framework of running a private school. They already follow district-supported practices in serving students who are English Language Learners, and they currently honor all IEPs and assist their pupils in pursuing an evaluation for IEP if needs present. All of this is voluntary for Wisconsin private schools, but undertaken by IMA founders out of a commitment to access and a vision to join MMSD.

School operators have a strong record of legal and regulatory compliance under their current operating structure, and have developed a highly transferrable skill set that will serve them in assuring compliance with the letter and spirit of Wisconsin Statutes 115-121. In maintaining compliance with all federal and state laws and regulations, as well as local requirements and MMSD policy, the Governance Council will be supported by the IMA, Inc. Board of directors, by designating a member of the Governance Council as the legal compliance coordinator, through the existing relationship with the organization's attorney specializing in WI childcare and K-12 law.

In addition to federal and state laws and regulation, the Association Montessori Internationale has very stringent expectations and requirements that are required for any AMI school. It is the presence of an official standard that differentiates an AMI Montessori school as a school operating with fidelity to the Montessori methods. Annual reviews of the facility, curriculum, instruction, and student work are a component of ongoing approval of operations.

### **Ensuring Equitable Access**

IMA, Inc. acknowledges the disproportionate barriers to opportunity faced by Madison's families of color, and the fact that these opportunity gaps result in a high correlation between race and income, and a correlation of both these factors with residential patterns. (For additional information on ensuring access, please refer back to the Student Recruitment Plan in Section III.A.)

In seeking to serve the community and MMSD as a resource for change, IMA, Inc.'s founders began by siting their organization in a transit-oriented location in a neighborhood of need.

In pursuit of equitable access by demographic measures, IMA has committed to economic diversity, and has a proven record of addressing economic barriers. Today 40% of attending families in the school currently operated by IMACS founders receive some sort of financial assistance to attend. This



is possible because the school founders elected to research, pursue, and maintain state licensure as a childcare provider over four years. Private schools providing childcare services on the site of the school are completely exempt from all of these licensing requirements. School leadership nonetheless undertook this process out of a belief in operational transparency, out of deference to the State administration, and in pursuit of their broader vision of expanding access to Montessori education among underserved populations and disinvested communities. By voluntarily complying with the federal, state and local rules, laws and regulations, IMA became eligible for ranking in the Department of Children and Families Youngstar rating system for childcare providers. This allows IMA, Inc. to accept Wisconsin Shares, and the families who participate.<sup>26</sup> Because IMA has consistently met the highest standards of quality childcare, as well as fidelity to the legal requirements, IMA boasts a 5-star rating, which entitles the organization to an additional 25% of the standard reimbursement. Rather than keep this performance bonus, IMA has elected, out of a commitment to equity, to apply this additional payment towards the families' portion of the bill. The charter committee knows of no other childcare provider in the Madison area that uses this additional Youngstar incentive to reduce the family liability below what they would be legally liable to pay.

Every year in operation, IMA, Inc. has instructed children presenting special needs who have gone through the IEP referral process, and who now receive full IEP services at IMA, and to the extent possible without ever removing the children from the classroom environment. Compliance with an IEP is not required for operators of a private school; this is a voluntary undertaking driven by a commitment to equitable access. A preeminent expert in Special Education for Montessori schools, Anita Koenig, who is not herself Montessori trained, has developed specific approaches and practices after years of experience implementing special education policies within the nation's public Montessori schools. IMACS would seek to partner with Ms. Koenig, or a similar expert in her methods to develop a specific, thoughtful, and targeted plan to recruit, onboard and serve all children's needs within the Montessori framework.

Likewise, in each year of operation, IMA, Inc. has served children who are English language learners of varying abilities, but skewing most heavily toward children who are wholly new to an English-speaking environment because they have only recently attained school-age. As a private school and care provider, IMA voluntarily complies with and exceeds requirements to recruit, admit, enroll, or serve these children and families. Over the course of the school's operation, IMA has at various times employed teaching staff fluent in Arabic, French, German, Korean, Mandarin, and Spanish. Montessori takes an asset-based approach to personal differences, which includes a child's physical, cultural, and linguistic competencies.

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<sup>26</sup> Wisconsin Shares is a means-tested public benefit program that provides eligible families with a childcare voucher that pays the majority of costs, leaving the family with a co-pay. Readers may be familiar with the similarly-structured Section 8 housing program.

# XVI. Additional Considerations

One critical component of the AMI Montessori Method that is not specifically contemplated by the sections in the application template is the role played by a Montessori child in his/her/their education. For this reason, the charter committee would like to use this section to discuss the Student Engagement Plan.

## **Student Engagement Plan**

### **Honoring differences**

Montessori takes an asset-based approach to individual and cultural differences, and teachers are trained to incorporate culturally relevant vocabulary and practices into the classroom. This principle, combined with the visual nature of a Montessori classroom and Montessori instruction, and the use of peer-partnership in learning, supports English Language Learners, or other students with diverse language and communication needs.

### **Meeting students where they are**

Interventions, whether for remediation or advanced learners, are immediate, constant, and invisible. Each AMI Montessori classroom includes learning materials from both the classes ahead and before, allowing teachers to offer advanced or remedial coursework without revealing individual student progress relative to the rest of the class either to the student receiving the intervention or to the classmates. Because each material has multiple uses and can be included in numerous lessons, students' use of a specific material provides no indication to themselves or their peers that they may be receiving remediation or advanced learning. It is only an AMI-trained teacher or guide who can recognize and monitor student progress.

For example, the teacher may observe a first grader expressing difficulty with multiplication using a three-digit multiplier using the large bead frame. The teacher documents the observation, assesses the child's understanding of the mathematical practice and concept, and may introduce a new material or a new use for a familiar material to teach the target concept an alternate way (about a dozen Montessori materials offer concrete representation of dynamic multiplication), or the teacher may connect the student with a compatible peer who has a stronger grasp of the concept, furthering both students' understanding through working together, and allowing the students to access and develop skills in leadership and collaboration.

### **Empowering students with freedom and responsibility**

While all assessments, assessment results, and interventions rooted in the Montessori method are invisible to the students, students in the AMI Montessori environment are, from the earliest ages, engaged in the process of self-reflection, goal setting, community connections, and academic career planning.

Beginning in the Lower Elementary Program (grades 1-3), students join their instructor for biweekly individual conferences, at which they determine academic and social goals for the year as well as for the more immediate two-week period. The conference process is implemented with an inquiry-based guidance connecting the child to their place in the classroom community, the school community, and the wider community. This is extended in the direction provided for service work projects. 5K-12 students participate in curating their individual portfolios by choosing work to present for peer review and for inclusion in their ongoing cumulative proposal.

In addition to setting their own academic goals, Montessori students also guide their own learning. 3K-5K students explore through concrete experiential lessons, and beginning in elementary school, this is accompanied with story lessons, which establish a foundation for research-based education. The children in first grade are presented with experiments and demonstrations that they can repeat or use as a foundation for further questioning to design their own experiments. Throughout the year, students conduct independent and small-group research and create presentations for their academic community.

At the secondary level, the children participate in micro-entrepreneurship and additional service work, designed and launched independently. In this as with academic pursuits the students identify and draw on experts and resources. The children participate in a constant reflection process for each micro economy and service work that they plan. This reflection and evaluation is documented in each project's case-study and discussed during the cycle of interim presentation, status conferences, and final presentation.



*Isthmus Montessori Academy*

# APPENDIX

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## GLOSSARY

As in any field of science, the AMI Montessori method is associated with a specific lexicon and cannot be explained or discussed without the use of some terms of art. While every attempt has been made to define these terms when used in the charter application, IMA has adapted this glossary of key Montessori terms and concepts for reference by the review panel

### **Absorbent mind**

A mind able to absorb knowledge quickly and effortlessly. Montessori said the child from birth to six years has an “absorbent mind.”

### **Adaptation**

Related to the idea of an absorbent mind (Haines, 1993) is a special power of the young child that can be called the power of adaptation. This power is a process whereby the young child absorbs the culture of her time and place, taking in all the spirit, the customs, the ambitions and attitudes of a society simply by living in that society.

### **Analysis of movement**

A technique used by Montessori teachers. The adult, when showing a complex action to a child, breaks it down into its parts and shows one step at a time, executing each movement slowly and exactly. The action thus becomes a sequence of simple movements and the child has a greater chance of success when “given the liberty to make use of them.” (Montessori, 1996, p. 108)

### **Children’s House**

The English name for Montessori’s “Casa dei Bambini” (Italian). A place for children from 3-6 years to live and grow. Everything necessary for optimal human development is included in a safe and secure environment.

### **Classification**

Sorting. Allocating or distributing according to common characteristics. The young child engages in classification activities because the

process is essential for the construction of the intellect. The Montessori classroom offers many opportunities for classification.

### **Concentration**

Deep engagement. The young child focuses attention on aspects of the environment essential for development. From a Montessori perspective, concentration is “a consistent activity concentrated on a single work –an exercise on some external object, where the movements of the hands are guided by the mind.” (1983, p. 149).

### **Concrete to abstract**

A progression both logical and developmentally appropriate. The child is introduced to a concrete material that embodies an abstract idea such as size or color. With hands-on experience, the child’s mind grasps the idea inherent in the material and forms an abstraction. Only as the child develops is he or she gradually able to comprehend the same idea in symbolic form.

### **Control of error**

A way of providing instant feedback. Every Montessori activity provides the child with some way of assessing his own progress. This puts the control in the hands of the learner and protects the young child’s self-esteem and self-motivation. Control of error is an essential aspect of auto-education.

### **Coordination of movement**

One of the major accomplishments of early childhood. Through the child’s own activity,

she refines muscular coordination and consequently acquires increasingly higher levels of independent functioning. Because of this developmental need, children are drawn to activities which involve movement and especially to pastimes which demand a certain level of exactitude and precision.

### **Creativity/imagination**

Imagination involves the forming of a mental concept of what is not actually present to the senses. Creativity is a product of the imagination and results from the mental recombining of imagined ideas in new and inventive ways. Both are dependent mental imagery formed through sensorial experience.

### **Cycle of activity**

Little children, when engaged in an activity that interests them, will repeat it many times and for no apparent reason, stopping suddenly only when the inner need which compelled the child to activity has been satisfied. To allow for the possibility of long, concentrated work cycles, Montessori advocates a 3-hour uninterrupted work period.

### **Development of the will**

The ability to will, or choose to do something with conscious intent, develops gradually during the first phase of life and is strengthened through practice. The Montessori environment offers many opportunities for the child to choose. Willpower, or self-control, results from the many little choices of daily life in a Montessori school.

### **Deviations**

Behavior commonly seen in children that is the result of some obstacle to normal development. Such behavior may be commonly understood as negative, (a timid child, a destructive child, etc.) or positive (a

passive, quiet child). Both positive and negative deviations disappear once the child begins to concentrate on a piece of work freely chosen.

### **Discipline from within**

Self-discipline. The discipline in a well-run Montessori classroom is not a result of the teacher's control or of rewards or punishments. Its source comes from within each individual child, who can control his or her own actions and make positive choices regarding personal behavior. Self-discipline is directly related to development of the will.

### **False fatigue**

A phenomenon observed in Children's Houses around the world, often at approximately 10 a.m. The children seem to lose interest in work, behavior becomes disorderly, and the noise level rises. It may appear as if the children are tired. However, if the directress understands this is simply false fatigue, they will return to work on their own and their work will be at an even higher level than before.

### **Grace and courtesy**

An aspect of Practical Life. Little lessons which demonstrate positive social behavior help the young child adapt to life in a group and arm her with knowledge of socially acceptable behavior; practical information, useful both in and out of school.

### **Help from periphery**

The periphery is that part of the child that comes into contact with external reality. The child takes in impressions through the senses and through movement. Help from periphery means presenting objects and activities in such a way so as to evoke purposeful movement on the part of the child. "We never give to the eye



more than we give to the hand.” (Standing, 1957, p. 237).

### **Human tendencies**

A central tenet of Montessori philosophy is that human beings exhibit a predisposition to exploration, orientation, order, abstraction, work, self-perfection, communication and a spiritual life. The tendencies are universal, spanning age, culture and racial barriers; they have existed since the dawn of the species and are probably evolutionary in origin.

“Montessori stresses the need to serve those special traits that have proven to be tendencies of man throughout history.” (Mario Montessori, 1966, p. 21).

### **Independence**

Normal development milestones such as weaning, talking, etc., can be seen as a series of events which enable the child to achieve increased individuation, autonomy, and self-regulation. Throughout the four planes of development, the child and young adult continually seek to become more independent. It’s as if the child says, “Help me to help myself.”

### **Isolation of difficulty**

Before giving a presentation, the Montessori teacher analyzes the activity she wants to show the child. Procedures or movements that might prove troublesome are isolated and taught to the child separately. For example, the simple movement of holding and snipping with scissors is shown before cutting curved or zigzag lines; folding cloths is shown before table washing, an activity requiring folding. A task should neither be so hard that it is overwhelming, nor so easy that it is boring.

### **Indirect preparation**

The way nature has of preparing the

intelligence. In every action, there is a conscious interest. Through this interest, the mind is being prepared for something in the future. For example, a child will enjoy the putting together of various triangular shapes, totally unaware that because of this work his mind will later be more accepting of geometry. Also called “remote preparation,” the deeper educational purpose of many of the Montessori activities is remote in time.

### **Language appreciation**

From the very first days in the Montessori classroom, children are given the opportunity to listen to true stories about known subjects, told with great expression. Songs, poems and rhymes are a part of the daily life of the class. The teacher models the art of conversation and respectfully listens to her students. Looking at beautiful books with lovely, realistic pictures is also a part of language appreciation.

### **Learning explosions**

Human development is often not slow and steady; acquisitions seem to arrive suddenly, almost overnight, and with explosive impact. Such learning explosions are the sudden outward manifestation of a long process of internal growth. For example, the explosion of spoken language around two years of age is the result of many months of inner preparation and mental development.

### **Mathematical mind**

All babies are born with mathematical minds. That is, they have a propensity to learn things which enhance their ability to be exact and orderly, to observe, compare and classify. Humans naturally tend to calculate, imagine, abstract and create. But this vital part of intelligence must be given help and direction for it to develop and function. If mathematics is not part of the young child’s experience, his

subconscious mind will not be accepting of it at a later date.’

### **Maximum effort**

Children seem to enjoy difficult work, work which tests their abilities and provides a sense of their growing power. They exult in giving their maximum effort. A tiny child will struggle to carry a tray with juice glasses or push a heavy wheelbarrow whereas school age children, if allowed to make up their own problems will prefer to sink their teeth into a challenging equation  $(1+2+3+4\dots+10)$  rather than drill on  $3+5=_$  and  $6+2=_$ .

### **Memory games**

During the age period of 3-6, children build their memory; sensorial games provide children an opportunity to strengthen their mental muscles. A typical game goes like this: A child picks up a geometric shape from a drawer, lightly traces the shape with her fingers, and sets it on the table. She must then carry that shape in her mind as she walks across a room full of distractions and finds its match amongst a set of cards at the opposite end of the room. Games like this build visual memory, a key component of reading. Similar games are played using other sensory modes: auditory, tactile, etc.

### **Mixed ages**

One of the hallmarks of the Montessori method is that children of mixed ages work together in the same class. Age-groupings are based on developmental planes. Children from 3 to 6 years of age are together in the Children’s House. Six to 9-year-olds share the lower elementary, and the upper elementary is made up of 9 to 12-year-olds. Because the work is individual, children progress at their own pace; there is cooperation rather than competition between the ages.

### **Normalization**

If children are repeatedly able to experience periods of spontaneous concentration on a piece of work freely chosen, they will begin to display the characteristics of normal development; a love of work, attachment to reality, and a love of silence and working alone. Normalized children are happier children: enthusiastic, generous, and helpful to others. They make constructive work choices, and their work reflects their level of development.

### **Obedience**

An act of will that develops gradually, showing itself “unexpectedly at the end of a long process of maturation.” (Montessori, 1967, p. 257). While the inner development is going on, little children may obey occasionally, but be completely unable to obey consistently. As their will develops through exercise of free choice, children begin to have the self-discipline or self-control necessary for obedience

### **Points of interest**

Montessori realized that if children spend too much time on a complex task or fail to master necessary details, the exercise ceases to interest them. She suggested that points of interest be interspersed throughout each activity. These points guide the child toward the goal and stimulate repetition and interest by offering immediate feedback, or what Montessori called “control of error.” The child’s performance becomes refined through trial and error, the points of interest acting as signposts along the path to success.

### **Practical Life**

This is one of the four areas of the Montessori prepared environment. The exercises of practical life resemble the simple work of life

in the home: sweeping, dusting, washing dishes, etc. These purposeful activities help the child adapt to his new community, learn self-control, and begin to see himself as a contributing part of the social unit. His intellect grows as he works with his hands; his personality becomes integrated as body and mind function as a unit.

### **Prepared environment**

The Montessori classroom is an environment prepared by the adult for children. It contains all the essentials for optimal development but nothing superfluous. These include order and reality, beauty and simplicity. Everything is child-sized to enhance children's independent functioning. A trained adult and a large enough group of children of mixed ages make up a vital part of the prepared environment.

### **Presentation**

The teacher does not teach in the traditional sense, but rather shows the child how to use the various objects and then leaves him free to explore and experiment. This is called a presentation. To be effective, it must be done slowly and exactly, step by step, and with a minimum of words.

### **Psychic embryo**

The first three years of life is a period of mental concentration, just as the nine months in utero is a period of physical creation. The brain awaits experience in the environment to flesh out the genetic blueprint. So much mental development occurs after birth, Montessori called the infant a psychic embryo.

### **Repetition**

The young child's work is very different from the adult's. When an adult works, he sets out to accomplish some goal and stops working when the objective is achieved. A child,

however, does not work to accomplish an external goal, but rather an internal one. Consequently, they will repeat an activity until the inner goal is accomplished. The unconscious urge to repeat helps the child to coordinate a movement or acquire some ability.

### **Sensitive periods**

Young children experience transient periods of sensibility and are intrinsically motivated or urged to activity by specific sensitivities. A child in a sensitive period is believed to exhibit spontaneous concentration when engaged in an activity that matches a particular sensitivity. For example, children in a sensitive period for order will be drawn to activities that involve ordering. They will be observed choosing such activities, becoming deeply concentrated, sometimes repeating the activity over and over, without reward or encouragement. Young children are naturally drawn to aspects in the environment that meet their developmental needs

### **Sensorial materials**

The sensorial materials were created to help children in the process of creating and organizing their intelligence. Each scientifically designed material isolates a quality found in the world such as color, size, shape, etc., and this isolation focuses the attention on this one aspect. The child, through repeated manipulation of these objects, comes to form clear ideas or abstractions. What could not be explained by words, the child learns by experience working with the sensorial materials.

### **Simple to complex**

Moving from the simple to the complex is a principal used in the sequence of presentations in a Montessori classroom.

Children are first introduced to a concept or idea in its simplest form. As they progress and become capable of making more complex connections, they are eventually able to handle information that is less isolated.

### **Socialization**

“The process by which the individual acquires the knowledge and dispositions that enable him to participate as an effective member of a social group and a given social order.” (Osterkorn, 1980, p. 12) “Optimal social learning takes place when the children are at different ages.” (Hellbrugge, p. 14)

### **Sound games**

Many children know the alphabet but have not analyzed the sounds in words nor are they aware that words are made up of separate sounds (phonemic awareness). From the age of two (or as soon as the child is speaking fluently) sound games can make them aware of the sounds in words. In England, they use the nursery game, “I Spy.” The sound of the letter and not the letter name is pronounced.

### **Three-hour work cycle**

Through years of observation around the world, Montessori understood that children, when left in freedom, displayed a distinct work cycle that was so predictable, it could even be graphed. This cycle, with two peaks and one valley, lasted approximately three hours. In Montessori schools, children have three hours of open, uninterrupted time to choose independent work, become deeply engaged, and repeat to their own satisfaction.

### **Three period lesson**

“The famous three period lesson of Sequin” (Standing, 1957, p. 307) is actually quite simple. The first period is Naming: “This is thick. This is thin.” The second period is

Recognition: “Give me the thick. Give me the thin.” The third period consists of The Pronunciation of the Word: “What is this?” In three simple steps, the entire learning process is brought into play. The three period lesson is used for giving language.

### **Vocabulary enrichment**

The young child’s vocabulary increases exponentially in the years from 3-6. To feed this natural hunger for words, vocabulary is given: the names of biology, geometry, geography, and so forth, can be learned as well as the names of qualities found in the sensorial material. The child’s absorbent mind takes in all these new words “rapidly and brilliantly.” (Montessori, 1946, p. 10)

### **Work**

From an evolutionary perspective, the long period of childhood exists so children can learn and experiment in a relatively pressure-free environment. Most social scientists refer to this pressure-free experimentation as “play,” although Montessori prefers to call this activity the “work” of childhood. Children are serious when engaged in the kind of play that meets developmental needs. Given freedom and time, they choose purposeful activities over frivolous ones.

### **Writing to reading**

In a Montessori environment, children usually begin writing before they can read. They are keen to create words with a box of loose letters (the moveable alphabet) or write their words with chalk or pencil. About six months later, they begin to understand what reading means, and they do so only through associating it with writing. (Montessori, 1936/1983, p. 142)

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## PROFILE OF A 9<sup>TH</sup> GRADE AMI GRADUATE

Each 9<sup>th</sup> grade graduate of an AMI Montessori Program embodies qualities unique to their individual spirit while accomplishing a solid mastery of the Common Core state standards as well as the MMSD 9<sup>th</sup> grade course requirements. This allows for a graduate of the IMACS to be equipped and ready to smoothly transition to an MMSD 10<sup>th</sup> grade in any area High School.

The different structure and framework of the AMI Montessori scope and sequence allows for great self-knowledge and academic success providing skills necessary for meeting all requirements. Children set personal and academic goals at the beginning of each quarter and assess these goals during weekly conferences as well as during quarterly evaluations. This preparation and documentation also facilitates transition planning out of IMACS during other years as well. IMACS is able to provide the receiving school with a highly detailed report of a student's competencies and accomplishments.

### **The unique structure and framework**

The work and concepts are presented through and almost entirely integrated curriculum. Each area is presented through Seminar, writing prompts, student-driven projects, short and long-term guide-directed essays, research, and projects, through service work, and through the fundamental curriculum area of micro-economies. The 6<sup>th</sup> and 9<sup>th</sup> grade scope and sequence of lessons is provided to give you a brief survey of topics and concepts covered. Note that the differing sequence is provided thorough study and deep investigation for participants.

The multi-age classroom allows for children learn at their own pace and also to continue to succeed at their own pace, as well. Everything builds on what the individual child needs as well as what they are interested in. The integrated curriculum and focus on practical experience and hands-on learning allows for natural presentation through project-based experiential learning for all subject areas. The multi-age classroom allows for children to pick-up what they need when they need it with the guiding focus being mastery of curriculum areas by the time a child completes each three-year program level.

### **Secondary students access and engage with the curricular components equivalent to and in compliance with MMSD requirements**

All components of MMSD's **English I** and **English II** are covered within the Montessori areas of Language, Humanities and History while also integrated in all areas of the curriculum. Children delve deep into literature and essays prompting research and analysis of a variety of authors from different time periods as well as comparing the



perspectives, experiences, including sources from modern writers and current events. Required readings and themes for MMSD 9<sup>th</sup> graders will be incorporated into IMACS academic Career Planning. Concepts from English I and English II are also studied in Humanities Seminar and English within the AMI Montessori curriculum.

**Math** completed by the close of 9<sup>th</sup> grade not only covers common core standards of algebraic and geometric concepts, but also covers **Algebra I** and most of **Algebra II** including quadratic equations, trigonometry, linear equations, inequalities, graphs, matrices, polynomials and radical expression, and probability.

**Geometry** is deeply studied in the Montessori elementary classroom. This includes practice with congruency, similarity, equivalence, working with concrete materials to prove formulas for area and volume, a thorough study of polygons, circles, angles, lines, solids, volume, and geometric theorems. Montessori adolescents who completed the Elementary program would not typically revisit this material in the 9<sup>th</sup> grade year. However, the Geometry materials and lessons are always available for children without this previous exposure (such as children entering Montessori in 7<sup>th</sup>-9<sup>th</sup> grade) as well as for children that are interested in more advanced concepts.

**Science** in the AMI Montessori curriculum is the study of the physical Earth, its properties, and all forms of life within it. This is also the study of space and ecology. Within the Adolescent Program, **biology** is split into the five kingdoms of taxonomy and is most often integrated with history, ecology, and mathematics.

**Physical science** is investigated through **physics**, **chemistry**, further details about the composition of the Earth, **astronomy**, and **ecology** and is most often integrated with history, mathematics, art, music, health and mindfulness, and language.

**Social Studies** is explored through History and Humanities Seminars, which are the doorway to not only US history and Modern US history but to comparisons between **world history and US history**. This integrates subject matter from English, social studies, music, movement, and art to investigate the foundational area of social studies. An example from one year is the deep investigation of democracy as a concept and value, with that exploration encompassing analyses of contexts ranging from Ancient Greece to the US historical and contemporary civil rights movements.

**Physical Education** is based on the pillars of the book Move Your DNA by Katy Bowman. This guides the children through the process of natural and functional movement, the importance of a variety of movement and constant movement throughout the day without limiting it to a specific block of time. This is a biomechanical approach to physical education and to movement. It is viewed through a whole-body lens rather than isolating one idea such as cardio or resistance training. The objective is for children

to develop body awareness, know how to move well, and to have strong bodies. A part of this approach is mindfulness which includes yoga, self-reflection, journaling, breathing, and meditation. Team building and collaborative exercises incorporate the social aspects of movement while continuing to work on self-improvement. Understanding the game is math and physics (quadratic equations used to figure out the arc of a ball, and how force affects velocity and how this will affect the ball during bowling or baseball).

**Health** curriculum is accessed through the scientific study of nutrition and food science, which is integrated with physical education as well as with micro-economy projects. Additionally, Human Growth and Development is studied, including human anatomy and the interconnected body systems (skeletal, muscular, nervous, vascular, reproductive, etc). Health behaviors and decisions and the examination of health promotion and disease prevention heavily draw on the cultural framework of Montessori education that focuses on consent, decision-making, communication, respect, and responsibility to one's self, to others, and to the community.

**Humanities** is often reviewed as the study of art, theater, music, and World Languages. Art and theater and music are stand-alone studies as well as integrated topics within all courses and curriculum areas covered in the AMI Montessori Method of education prior to the end of the 9<sup>th</sup> grade year

- Each child will be exposed to and study **World Language** including conversation, vocabulary enrichment, basics of grammar including verb conjugation, and cultural experiences and projects. World language is often integrated with Music, art, Humanities seminar, and English, of course.
- **Art** is investigated through history and theory of art, art techniques, art appreciation, use and practice with different media. Art is integrated with mathematics, geometry, history, music, and Language.
- **Music** is investigated through music appreciation integrated with all subject areas, theory and composition of music using multiple instruments
- **Theater** is investigated through stagecraft and stage directions, self-presentation, theater games, study of performances through performance attendance and performance presentation

**Financial Literacy** begins with the study of economic geography in the Elementary Program and continues through the Adolescent program. This study begins with products, resources, consumption, trade, currency, and taxes. This, of course, is integrated with the history of civilizations over time and the social constructs guiding different decisions, different successes and failures throughout time.

**Micro-economy** is an integrated curriculum area, allowing children to create their own business from the planning to the marketing to the accounting. Each child's business succeeds or fails in a safe environment in real time with real dollars. Their efforts are guided by integrated study in mathematics and finance (loans and interest rates and investments). This area of study also focuses on food science, agriculture and the societal impacts of food insecurities.

**Service work** begins in the Kindergarten year in an AMI Montessori program and continues throughout each level, growing in complexity and commitment. Each student designs and plans a service project for the school community and for the community at large. The child must document the service work and reflect on this work throughout their commitment. Their service work must show value to each community and it must show an innovative impact, what the child has learned and how they have grown as a person, and their future plans for service in the years ahead.

**In sum...**

An AMI Montessori 9<sup>th</sup> Grade Graduate is knowledgeable, kind, committed to learning and community growth, compassionately secure, healthy in body and mind, valuing the role of education for their own path to success as well as the overall progress of our society, and ready to observe, adapt, and make choices to change the world.

## ENROLLMENT BY TRANSFER FOR ELEMENTARY OR SECONDARY

Because IMA would be a young and growing school, because the culture and expectations in a Montessori school are those that require some degree of commitment, and because IMA is committed to serving the district as a resource to serve children most in need of what this method has to offer, IMA would seek in elementary and secondary transfers some indication that the student or family was willing to learn enough about the Montessori Method to determine whether it offered a good fit and whether the family could commit to remaining in the program as long as practical.

The following represent some circumstances that might make Montessori a beneficial placement, even among students with no experience in the method.

- Students who have high levels of mobility or who are homeless or unaccompanied will realize benefits from a stable school environment where most children continue throughout their education, they remain with the same instructor for a three-year cycle, and there are no daily worksheets or problem sets to be completed after the school day.
- Montessori is an exceptionally good placement option for students who experience stress as a result of individual attributes that they perceive as differing from normative ideals. LGBTQ and gender non-conforming youth, and children whose culture, ethnicity, or personality is underrepresented in their community will find in Montessori a welcoming community and a curriculum that takes an asset-based approach to individual differences.
- Montessori's freedom of choice may benefit children with typical or high aptitude that have nonetheless been identified or perceived as having behavioral or learning difficulties because they have physical needs to move their bodies or are bored with the subject matter and present these frustration in ways that disrupt a conventional classroom. Montessori classrooms encourage and require physical autonomy in the course of the work cycle.
- Because of Montessori's focus on developing independence, life skills, service, and responsibility, pregnant and parenting youth would stand to gain the critical skills necessary to thrive and to foster success in their children. These youth would also benefit from the option to bring their children with them to school, and have these infants benefit from the highest quality care in an environment that also supports breastfeeding and bonding and empowers the parents to model excellence and achievement.
- Students who may have remedial-level achievement in certain academic areas but are advanced learners in other subjects or skill-sets may find the special education options and advanced learning opportunities equally insufficient to meet their particular needs, but would naturally find a place within a peer group of Montessori students who all approach the curricula at their own pace.
- Families whose children are in every way typical but are interested in more information and skills to support their own development as well as that of their children may benefit from being a part of the Montessori community, observing classroom activities and attending the parent and community education seminars.

## FURTHER DETAIL ABOUT MONTESSORI CLASSROOMS

In the Primary (3K-5K) period of development, children absorb the culture of their group, their society, and develop intellectually, physically, socially, and emotionally. The environment is carefully organized to meet the individual needs of the child while building collaboration, concentration, coordination, independence, and improved executive function. Early learning materials are self-correcting, providing for independent exploration and learning. Later lessons are presented through instructor modeling rather than through verbal instruction, benefitting children with diverse language needs. Children further their exploration and deepen their understanding of self-care, refinement of the senses, vocabulary enrichment, encoding and decoding, letter formation, composition, geography, social studies, patterns, probability, geometry, measurement, all four operations, and more. Children choose their work and develop the abilities and habits of life-long learning and social conduct.<sup>27</sup> During a day's three-hour work period, a Primary student might begin sitting at a table tracing and writing numbers, then put on a smock and stand by the window to paint at an easel, then take a break to wash hands and help himself to a snack with a classmate, then get out a small rug and a globe and stretch out on the floor with another classmate to assemble a puzzle of North America. This freedom of movement meets the physical and developmental needs of each student.

Elementary (1<sup>st</sup>-6<sup>th</sup>) students continue an active exploration of the world and their place in it. They begin a study of the universe and life on earth through zoology, botany, biology, geology, astronomy, geography, history, and the interdependence of life. They refine their understanding through practical application, use of the scientific method, research-based inquiry of study, and continued focus on purposeful activities developing both inner faculties and a consciousness of others in the world. Children at this level maintain daily work journals, bi-weekly work conferences, portfolio development, and regular goal setting. Repetition and assessment is naturally built in to the use of the materials and small group lesson design. Children study literature, more in-depth composition, and further studies of mathematics through formula derivation using concrete materials, economic geography, science, physics, and chemistry. Another form of assessment in addition to standardized tests for elementary grades is the "Going Out." This is a milestone for each child's area of study, executing an independently planned outing to seek out experts in a particular field of study, culminating in a rubric-based, peer-reviewed presentation. At this stage of development, students develop their sense of reason and are most easily engaged by instruction that takes a narrative form. The AMI Montessori teacher may begin a Geometry lesson with a story of Euclid as a mathematician, then move onto an exploration of the iron insets, a material allowing children to independently test Euclid's theorem to prove or disprove it by manipulating shaped insets on a Pythagorean triangle. Each child pursues their independent research interest, while the guide assesses student understanding through observing and encouraging peer instruction and mentorship as they complete individual or small group work in each area of the classroom. Small group lessons are comprised of children of different ages and abilities so that all students have the opportunity to learn at their highest potential.

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27 Diamond, A., ["The Evidence Base for Improving School Outcomes by Addressing the Whole Child and by Addressing Skills and Attitudes, Not Just Content."](#) *Early Education and Development*, 2: 780-793 (2010)

Adolescent (7<sup>th</sup>-12<sup>th</sup>) focuses on preparation for participation in society through both theoretical knowledge and practical experience, and an understanding of personal and social responsibility.<sup>28</sup> At the Adolescent Level the AMI Montessori teacher continues to guide each child on their own path towards intrinsic motivation and self-discipline as they present multiple opportunities for learning and developing one's self-esteem and self-concept. Generalist teachers are assisted by specialist teachers in subject areas including English, Mathematics, Social Studies, Arts, Science, World Languages, and Physical Education. Students combine academic study with practical work that shows the children their concrete contributions to the local and global community and environment. They continue to work at their own pace and interests and collaborate with their teacher to devise an Academic Career Plan that includes both co-operative and self-directed work, including micro-entrepreneurship. Montessori guides introduce advanced academic lessons, which are also integrated into their arts and physical education. Students may write a historical play, and design and engineer the sets or research and execute improvements and maintenance of the school farm. All adolescent students design and run their own businesses and service endeavors.

Within the Adolescent program, IMA hopes to inspire as many students as possible to embark on the curriculum of the International Baccalaureate (IB), an internationally recognized program to prepare students in junior high and high for college and career. It is a comprehensive, demanding course of advanced study uniquely compatible with a Montessori education. IB coursework is a broad and balanced, global in outlook, emphasizing the same 'learning how to learn' approach as AMI Montessori, and focuses on the development of the whole person. The IB Diploma is accepted as an indicator of college-readiness by universities worldwide.

Additional web resources:

1. Montessori Method
  - a. <http://amiusa.org/>
  - b. <http://www.ami-global.org/research>
  - c. <http://www.public-montessori.org/>
  - d. <http://www.ami-eaa.org/>
  - e. <http://amiesf.org/esf/esf.htm>
  - f. <http://www.montessori-namta.org/>
  - g. <http://mariamontessori.com/mm/>
  - h. <http://www.public-montessori.org/resources/montessori-schools-help-children-exposed-trauma>
  - i. <http://www.public-montessori.org/resources/montessori-intervention-children-dyslexia>
2. Montessori in Secondary Schools
  - a. <http://www.montessori-namta.org/PDF/kahnresearch.pdf>
  - b. <http://www.montessori-namta.org/PDF/rathundeframework.pdf>
  - c. <http://www.montessori-namta.org/PDF/rathundecompar.pdf>
  - d. <http://www.montessori-namta.org/PDF/outcomes.pdf>
  - e. <http://www.montessori-namta.org/PDF/gebhardtseeleexpcards.pdf>

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28 Rathunde, Kevin. "A Comparison of Montessori and Traditional Middle Schools: Motivation, Quality of Experience, and Social Context." *The NAMTA Journal*. Vol. 28, No. 3. Summer 2003.



## MONTESSORI MATERIALS – FUNCTION AND EXAMPLES

### Quality design

Throughout a Montessori classroom, are materials that facilitate experiential learning. They are scientifically designed to allow children to work independently with very little introduction or help. The students are empowered to come into class, choose their own work, use it appropriately, and put it away without help.



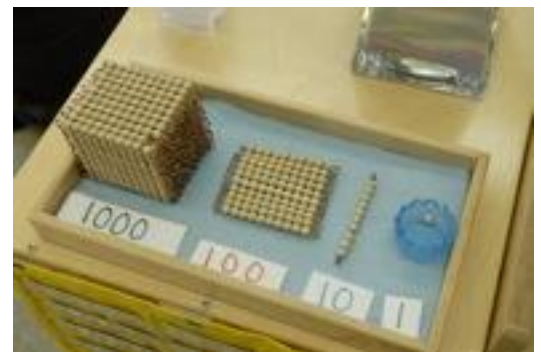
In the primary room, where nearly all learning is hands-on, children sort, stack, and manipulate objects in a range of colors, materials, and textures. Many of these objects will be made of smooth polished wood. Others are made of enameled metal, wicker, and fabric. Also available to explore are items from nature, such as seashells and birds' nests.

Montessori teachers make a point to handle Montessori materials slowly, respectfully, and carefully, as if they were made of gold. The children naturally sense these objects are important, and they learn to handle them accordingly, carrying their learning materials carefully with 2 hands from their place on the shelf to the child's chosen "work" area. While they may look like toys, these materials take students one step at a time, according to a predetermined sequence, through concepts of increasing complexity.

### Specific

Each learning material teaches a single skill or concept at a time. For example, young children need to learn how to button buttons and tie bows, and the Montessori materials for teaching this are the "dressing frames" which remove all distractions and simplifies the child's task. The child sees a simple wooden frame with 2 flaps of fabric—1 with 5 buttonholes and 1 with 5 large buttons. His task is obvious. If he makes an error, his error is obvious. This built-in "control of error" in many of the Montessori materials allows the child to determine if he has done the exercise correctly. A teacher never has to correct his work. He can try again, ask another child for help, or go to a teacher for suggestions if the work doesn't look quite right.

Montessori materials use real objects and actions to translate abstract ideas into concrete form. For example, the decimal system is basic to understanding math. Montessori materials represent the decimal system through enticing, pearl-sized golden beads. Loose golden beads represent ones. Little wire rods hold sets of 10 golden beads—the 10-bar. Sets of 10 rods are wired together to make flat shapes of 100 golden beads—the hundred square. Sets of 10 flats are wired together to make cubes of 1,000 golden beads—the thousand cube. Children have many activities exploring the workings of these quantities. They build a solid, inner, physical



understanding of the decimal system that will stay with them throughout school and life. Later, because materials contain multiple levels of challenge, the beads can be used to introduce geometry. The unit is a point; the 10-bar is a line; the hundred square a surface; the thousand cube, a solid.

### **Hands-on**

AMI Montessori holds that moving and learning are inseparable. The child must involve her entire body and use all her senses in the process of learning. She needs opportunities built into the learning process for looking, listening, smelling, touching, tasting, and moving her body.

Students are drawn to explore Montessori materials with the senses. For example, one would want to pick up the sound cylinders and shake them. These consist of 2 matched sets of wooden cylinders containing varying substances that create different sounds when shaken. The child sorts the sound cylinders using only his listening skill. Two cylinders have the barely audible sound of sand. Two have the slightly louder sound of rice inside them. Others contain beans or items that sound louder still. After matching the cylinders, the child can grade the cylinders—that is, put the cylinders in order of softest to loudest, or loudest to softest.

### **Multiple levels of challenge**

Materials can be used repeatedly at different developmental levels. A special set of 10 blocks of graduated sizes called “the pink tower” may be used just for stacking; combined with “the brown stair” for comparison; or used with construction paper to trace, cut, and make a paper design. The pink tower, and many other Montessori materials, can also be used by older children to study perspective and measurement.

In exploring the “binomial cube”—made up of 8 red, black, and blue cubes and prisms—the early childhood student develops visual discrimination of color and form. The elementary child labels the parts to explore, concretely, the algebraic formula  $(a+b)^3$ . The upper elementary child uses the binomial cube as the foundation for work with more advanced materials to solve algebraic equations.



For students of every age, the Montessori materials represent tools to discover the answers to students’ own questions. Elementary and high school materials build on the earlier Montessori materials foundation. Because older students have built a solid foundation from their concrete learning, they move gracefully into abstract thinking, which transforms their learning. Now they learn how to carry out research. At these upper levels, students broaden their focus to include the community and beyond. They learn through service and firsthand experience. The Montessori materials support responsible interactive learning and discovery.

## SPECIAL EDUCATION AND ENGLISH LANGUAGE LEARNING IN MONTESSORI

Dr. Maria Montessori developed her educational methods through her work with students with exceptionalities. Thus, the Montessori methods, curriculum, environment, and materials are, by design, readily able to meet the individual needs of students with disabilities, various levels of English language skills, and even advanced learners. Each student is provided work that is easily adaptable and individualized to meet his or her needs. While the terminology may be different, various components of the AMI approach overlap with much of what is considered “best practice” for students with disabilities and English Language Learners.

Montessori Term or Concept	Special Ed. Term or Concept	ELL Term or Concept
<u>Control of Error</u> : materials are designed to provide instant feedback to students, allowing students to independently recognize and correct errors.	<u>Curriculum Modifications</u> : IEP supports that adapt tasks to individual students	Providing <u>Non-Linguistic Cues</u> ” to assist students understand a given task
<u>Didactic Materials</u> : specially designed materials intended to teach.	<u>Assistive Technology</u> : items or equipment designed to increase, maintain, or improve functional skills of students with disabilities.	Supplementing verbal instruction with <u>Non-verbal instruction</u> such as samples, hands on activities, and modeling.
<u>Observation</u> : formal, intentional practice for understanding and responding to developmental needs.	<u>Assessment and Progress Monitoring</u> : collecting data related to individual student needs and/or IEP goals	Frequent <u>Checks for Understanding</u> to ensure language barriers are not interfering with a student’s learning of skills or concepts.
<u>Prepared Environment</u> : materials arranged and presented sequentially to meet the developmental needs of the individuals in the classroom	<u>Inclusion</u> : participation of students with disabilities in the general education setting alongside non-disabled peers. <u>Accommodations</u> : environmental adaptations that allow individuals with disabilities to access and participate fully in learning activities.	<u>Sheltered English Instruction</u> : An approach used to make academic instruction in English understandable to ELL students through the use of physical activities, visual aids, and the environment to teach vocabulary and concept development.

Because every student in an AMI classroom has an individualized learning plan, interventions delivered to children with special education or ELL needs may not appear obvious to observers. This is because these students are integrated fully as part of the Montessori classroom community. Through this fully inclusive framework, IMACS will comply with all federal, state, and local requirements as they relate to students with disabilities and students who are English Language Learners. This includes, but is not limited to, engaging in appropriate “child find” activities, conducting special education evaluations, meeting individual needs for students with Individual Education Plans, supporting ELL students to accelerate their English Language Acquisition and achieving English Language Proficiency, and supporting ELL students in meeting academic growth and achievement goals.

IMA recognizes that students with disabilities may present with needs that require specialized instruction and services. Students who require specialized instruction will receive that instruction from a teacher certified to provide special education services. A Special Education Teacher (or Speech-Language Pathologist, Occupational Therapist, or Physical Therapist) may work individually or with small groups of students with disabilities in the general education setting or may provide “pull out” instruction for these students. Special education staff members will participate in professional development activities in Montessori methods and consult with lead teachers to ensure special education practices at IMA meet IDEA legal requirements while remaining consistent with AMI standards.

IMACS will conduct IEP meetings for students who transfer in with existing Individual Education Plans. The purpose of these meetings will be to gather input from the families to determine how the IEP supports and services will be provided in the AMI setting. The Montessori environment is naturally more adaptable than a conventional school or classroom structure, so in many cases IEPs will not need to be adjusted for new students with disabilities who enroll at IMACS. However, there are some areas in which IMA anticipates changes to IEPs may be fairly common. For example, general education setting will be used more frequently as the “educational setting” for IEP services than in most schools.

Additionally, accommodations and modifications contemplated by an IEP may already exist within the accommodations and modifications the Montessori classroom implements for all students. IMA does not anticipate any scenario in which it would not be able to provide a student with a reasonably written IEP the individualized services he or she needs.

The AMI classroom is also readily adaptable to meet the individual needs of English Language Learners. Because world languages are integrated throughout the curriculum, English learners are frequently able to learn in their primary language. For example, in practicing identifying parts of a sentence, a student is able to complete this work in one or both languages. Furthermore, because AMI is an international organization, materials in multiple languages are readily available. Students identified as English Language Learners will receive the support of the BRT and BRS inside or out of the classroom. Similar to the special education staff members at IMACS, Bilingual Resource professionals will receive training in AMI approaches and will work closely with Lead Teachers to implement best practices in ELL instruction that is consistent with AMI philosophy.

The AMI approach honors and respects individual differences and diversity, so that each child is a valued member of the community. Students with disabilities and English Language Learners who attend IMACS will receive the services and supports that meet federal, state, and local requirements. But they will also receive so much more. The AMI environment supports students in developing self-confidence, self-discipline, a joy for learning, and internal motivation. These and other skills obtained through AMI instruction are consistent with the MMSD graduate vision. Having a disability or identification as an English Language Learner will not keep IMACS students from the path toward being successful in High School and later being College, Career, and Community ready.

## AMI MONTESSORI EXAMPLES OF BEHAVIORAL LEARNING OPPORTUNITIES

Example #1: A seven year old takes another child's personal belongings, interrupting the other child's work. This situation may escalate before the children are able to reach understanding and resolution.

1. The AMI Montessori guide uses positive discipline, conflict resolution, and through intense observation and knowing the children involved; redirects the child who chose to disrupt another child by guiding them to arrange the disrupted belongings back as they were to achieve a sense of responsibility while guiding the child on a path to productive work following the child's interest.
2. This redirected child may then be included in mentoring a younger child within the mixed-age classroom that makes similar choices.
3. In weekly conferences, the AMI Montessori guide will help the child develop self-reflection skills through thoughtful and consistent, guiding questions about the child's choices.
4. The adult will assist the child in goal-setting activities, developing ways, with the child and family, to measure patterns of behavior, communicating regularly with the family about progress and areas for improvement.
5. The AMI Montessori guide works with the child and family to develop a plan for steady, positive messaging including work and communication goals for the child

Example #2: A thirteen-year-old disrupts a class meeting, after becoming angry, by throwing a table across the room.

2. The guide uses positive language to direct the student to safe choices and listens to the child's feelings.
3. The guide sits with the student outside of the continuing meeting to observe rather than collaborate.
4. The guide and the student discuss how fortunate all students are to have freedoms and responsibilities and the chance to solve problems, make plans, and set guidelines.
5. Student can ask questions and observe other classmates while feeling safe with the adult.
6. Student is directed to replace the table in its proper position, asking another child to help.
7. Student and the guide work together to develop self-reflection through goal setting, journaling, and productive choices.
8. Student and guide work with the student's family to become aware of the situation, use positive and productive language at school and home, and measure the behavioral progress through daily check-ins. These regular meetings can also involve other adults or older students who the child admires.
9. Once the student has shared a reflection or drafted and edited a reflection to the classroom community, the student is encouraged to choose to participate in the next class meeting, as each child's involvement is valuable.

10. The classroom culture of empathy and forgiveness is established in collaboration with the guide and the students through simulations, role-playing, and team building activities.

Example #3: A sixteen-year-old student brings an illegal substance to school.

2. After removing the substance from the child's possession; the guide communicates directly with the family, the administrative team, the family, and when appropriate, the child's support network at school.
3. The guide works with the child to understand the situation and the true intention of the child. This work first begins with trust developed through an AMI Montessori environment founded on mutual respect.
4. The guide or administrator reviews the guidelines regarding school safety with the child, and the child is presented with options regarding community service within the school and neighborhood focusing on health and brain development.
5. The child is invited to be an apprentice and then a part of a leadership team, working with children of the school and surrounding areas to assist in the growth of self-esteem.
6. The child is then asked to create a presentation as a part of their coursework and credit requirements to the whole classroom community. *This event becomes a part of the child's story of success and overcoming obstacles.*



## STATEMENT ON THREE-YEAR OLD KINDERGARTEN:

### *The Wis Stat 120.12 (25) opportunity*

Wisconsin has a long history and a constitutional commitment to early childhood education. WI-DPI reports that the very first Kindergarten in the United States was a one-room school in Watertown, Wisconsin, which opened in 1856, serving children ages two to five.

The AMI Montessori primary classroom is a multi-year, multi-age class grouping of students in 3K-5K. By entering the class at age three, the model introduces children to concepts and opportunities at precisely the time that they are most developmentally suited to begin this learning, and affords them the maximum time needed to master the three-years' worth of material. The presence of these younger students also provides opportunities for the 4K and 5K students to learn and practice the important skills of modeling, and empathy.

Wisconsin has adopted a universal 4K model, representing a strong commitment to providing quality education in the earliest years. While this has led to improved outcomes, it perhaps does not go far enough toward serving the best interests of the youngest learners in Wisconsin. An increasing body of research shows that quality education is critical to the success for all children of working parents. Now is the time to build upon the gains realized by universal 4K by exploring quality 3K education for Wisconsin children. In May of 2016, WPR reported that “just 1% of Wisconsin’s 3-year-olds attended a state-funded preschool program in 2015, putting the state in the middle of the pack nationally for access. An additional 10 percent of 3-year-olds were enrolled in Head Start.”<sup>29</sup>

IMA would like to support MMSD in moving toward providing 3K in this community, and is in a uniquely well-suited position to pilot this innovation for the school district. However, if MMSD is not prepared to partner with IMA in this pilot at the time of the beginning of the charter period, then IMA will continue to offer 3K through the current daycare model, with funding to come from Wisconsin Shares (for eligible families), scholarships such as the city of Madison and UW assistance grants, through tuition waivers, or through payment of tuition by families with means.

Even under the current daycare model, IMA is confident in its record and ability to continue to recruit 3K participants from families with diverse needs. IMA’s 5-star rating from Youngstar allows families to use a public childcare subsidy at IMA, increasing access beyond families with means to pay. In fact, 40% of current IMA families receive some type of financial assistance. IMA will continue to offer 3K enrollment preference to families of school-age children that may have or expect infants and toddlers, and will leverage existing relationships and recruitment channels. IMA is excited and honored to have recently permitted the use of our facility for regular meetings of a local wellness and support group of

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<sup>29</sup> <http://www.wpr.org/report-wisconsin-stands-out-preschool-access>

Madison mothers of color, and expects that relationship will also provide opportunities to increase knowledge of our facility and programming among that community.

As 3K is not currently funded under the standard enrollment-based allotment, the budget included in this proposal is shown as a separate line item, using the general aid amount as a conservative estimate (private-pay families actually pay up to \$9900 per year for full-time 3K), and to demonstrate that the model would continue to work even were MMSD to pursue what IMA believes may be available state funding for these 3K students

### **Legal and budgetary basis for MMSD to pursue funding for 3K**

The state legislature created the flexibility not only for school districts to provide 3K education, but also to receive the formula funding for these students. General education aid is as follows:

#### **121.05 Budget and membership report.**

(1) The school district clerk shall include, as part of the annual school district report under s. 120.18, all of the following:

(a) The average of the number of *pupils enrolled* on the 3<sup>rd</sup> Friday of September and the 2<sup>nd</sup> Friday of January of the previous school year, including all of the following: (emphasis added)

Funding is accordingly based on “pupils enrolled” as defined earlier in statute as follows:

#### **121.004 (7) Pupils enrolled.**

(c)1. A pupil enrolled in kindergarten may be counted only if the pupil attains the age permitted under s. 120.12 (25) or required under s. 118.14 for kindergarten admission...”

And the first of these two references is the one in which the school board is granted flexibility:

#### **120.12 School board duties. The school board of a common or union high school district shall:**

(25) Prescribe procedures, conditions and standards for early admission to *kindergarten* and first grade. (emphasis added)

Under Wisconsin Statute, the term “kindergarten” applies both to 4K and 5K:

**115.01(2) Grades.** The educational work of the public schools is divided into 12 grades, besides kindergarten, which are numbered from one to 12 beginning with the lowest. The first 8 grades are the elementary grades. Where reference is made to "elementary grades", the reference includes kindergarten, where applicable. **Where reference is made to "kindergarten", the reference includes both 4-year-old and**

**5-year-old kindergarten, except as otherwise specifically provided.** The last 4 grades are the high school grades. A middle school is a school in which grades 5 to 8 are taught. A junior high school is a school in which grades 7 to 9 are taught. A senior high school is a school in which grades 10 to 12 are taught. This classification is not a limitation of the character of work or the studies that may be carried on in either the elementary or the high schools. (emphasis added)

Since 120.12 does not limit the board to determine criteria for early enrollment only to 5K, MMSD BOE may also elect to establish criteria for early admission to 4K, and might do so to permit three-year-olds enrolling in multi-year classrooms to be included.

Milwaukee's school board has done this by creating a number of 3K sites through its Administrative Policy 8.08, which may serve as a model for amending MMSD BOE 4011:

“THREE-AND FOUR-YEAR-OLD KINDERGARTEN

In addition to the regular kindergarten program, the Board may establish three-and four-year-old kindergarten programs at selected locations. The establishment of any such program shall be in keeping with budgetary limitations and the needs of the community.

- (1) A child entering the three-year-old kindergarten program must be three years of age on or before September 1...

# TRANSPARENT CLASSROOM: SAMPLE QUARTERLY PROGRESS REPORTS

## Primary Student Sample and Elementary Student Sample

### Primary Progress Communication

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Name: [REDACTED]

School Year: 2016-17

Age at Start of Year: 4yr 11mo

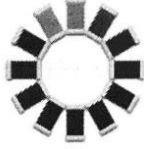
Start Date: 9/1/2015

Teacher: Melissa Droessler

Head of School: Ms. Droessler, Ms. Marlette

Placement Next Year:

	1	2	3	4
Report Period	X			
Days Absent	0			
Tardy	0			



Lilamys Montessori Academy

### Parent Involvement

Event	Attended
Fall Parent Conference	X
Spring Parent Conference	
Parent Information Sessions	1/2
Classroom Observations	0
Social Events	3/4

X Consistently / Making Progress - Inconsistent Not Presented

### SOCIAL/EMOTIONAL

#### Self-Esteem

	1	2	3	4	
x					Displays a happy, positive attitude
x					Is secure and self-confident
/					Accepts responsibilities for self

#### Self Control

	1	2	3	4	
x					Maintains appropriate behavior without external control
x					Accepts adult direction
x					Able to give attention in a groups setting

## Social Skills

1	2	3	4	
x				Works and plays cooperatively with peers
x				Respects needs of others
x				Reacts to social conflicts in a constructive manner
x				Likes to join others at work
x				Respects the work of others
x				Is courteous in speech and action

## PRACTICAL LIFE

### Coordination of Movement

1	2	3	4	
x				Large motor control
x				Fine motor control

### Independence

1	2	3	4	
x				Attempts challenging work independently

## WORK HABITS

### Self-Motivation

1	2	3	4	
x				Shows active interest in classroom activities
x				Chooses challenging activities, unassisted
x				Cares for materials and environment
x				Sets realistic goals
x				Accomplishes realistic goals

### Concentration

1	2	3	4	
x				Shows age appropriate attention span
x				Able to follow simple directions
x				Able to follow complex directions

### Organizational Skills

1	2	3	4	
x				Able to organize tasks independently
x				Able to ask for help when needed
x				Follows a logical sequence in a task
x				Is attentive to detail
x				Completes one task before starting another
x				Uses time constructively
x				Works well alone
x				Works well in group activities

### SENSORIAL

1	2	3	4	
x				Differentiation
/				Gradation
x				Left to right orientation
/				Sensorial vocabulary



## MATHEMATICS

1	2	3	4	
x				Counts to 10
x				Makes quantities for 1-10
x				Recognizes symbols for 1-10
x				Complex numbers 1-99
x				Complex numbers greater than 99
x				Introduction to the Decimal System

## Process/Concept

1	2	3	4	
x				Addition
/				Subtraction
/				Multiplication
-				Division
/				Memorization of Facts
/				Clock
-				Money
/				Linear Counting to 1000

## GEOGRAPHY

1	2	3	4	
-				Land and Water Forms
/				Globes
/				Continents
/				Puzzle Maps

## MUSIC

1	2	3	4	
x				Rhythm instruments
x				Bells: scale and matching
x				Singing

## ART

1	2	3	4	
x				Holds scissors correctly
x				Recognizes colors
x				Skill in using materials

LANGUAGE

1	2	3	4
x			Speech development
/			Communicates well
x			Initial sound concept
x			Recognizes letters
x			Word construction
x			Reads simple phonetic words
/			Sequencing
/			Blends/Phonograms
/			Puzzle Words
/			Sentence Structure
/			Capitalization
			Creative Writing
/			Grammar
x			Identifies eight basic colors
/			Participates in classroom discussions
x			Follows oral directions
x			Uses sentences to express ideas
/			Tells/writes stories to accompany an experience or a picture
x			Identifies sounds as introduced
x			Builds phonetic words independently
/			Reads phonetic words independently
-			Reads sight words as introduced

WRITING

1	2	3	4
R			Dominant hand (left or right)
x			Holds pencil correctly
x			Traces shapes
/			Numerals
x			Letters (in cursive)
x			Writes first names

SCIENCE

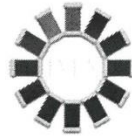
1	2	3	4
x			Botany/Care of Plants
/			Zoology/Care of Animals
x			Earth Science

Comments

It has been a heartwarming experience to observe [redacted] develop his leadership skills and express a stronger sense of self through his work. Through his work with the moveable alphabet, the stamp game and the 1000 chair [redacted] has helped others to understand the work and furthered his own conceptualization and confidence [redacted] has listened intently to our Grace and Courtesy lessons on telling our stories, depending on others, and being a good friend to others by listening to the stories they share. I have overheard others confiding in [redacted] and [redacted] actively listening. I will continue to encourage [redacted] to increase his communication support within the classroom community by also taking a step towards sharing with others. Becoming vulnerable is also taking responsibility for our emotions and honoring them. I am confident that [redacted] can begin this process in his own way in the coming months. This will be an exciting year for [redacted] as a leader in our classroom community!

# Elementary Progress Communication

Name: [REDACTED]  
 School Year: 2016-17  
 Age at Start of Year: 8yr 10mo  
 Start Date: 9/1/2015  
 Teacher: Carrie Marlette  
 Head of School: Ms. Droessler, Ms. Marlette  
 Placement Next Year:



Islamus Montessori Academy

	1	2	3	4
Report Period				
Days Absent	0			
Tardy				

## Parent Involvement

Event	Attended
Fall Parent Conference	X
Spring Parent Conference	
Parent Information Sessions	X
Classroom Observations	
Social Events	X

1	2	3	4
Advanced			Reading Proficiency Level

X Consistently / Making Progress - Inconsistent Not Presented

## READING/LANGUAGE

1	2	3	4
X			Works out new words independently
X			Developing a reading vocabulary
X			Comprehension
X			Reads independently
X			Expresses self clearly when speaking
X			Participates in group discussions
X			Grammar
X			Word Study i.e., compound words,
X			Synonyms, prefixes, etc.
/			Sentence Analysis
X			Research Skills
X			Composition and Style
X			Literature
X			Acquiring skill in cursive handwriting
X			Acquiring skill in spelling
X			Express ideas in writing
X			Acquiring research skills
X			Applies language skills in writing
X			Applies editing skills in punctuation/ capitalization, constructs paragraphs

MATHEMATICS

1	2	3	4	
X				Understands the decimal system
X				Place Value/Number Families
X				Story Problems/Reasoning
/				Measurement/Money/Time
X				Fractions - Common
/				Fraction - Decimal
				Squaring and Cubing
				Powers
				Roots
/				Signed Integers
				Ratio and Proportion
				Non-decimal number bases
X				Geometry
X				Knows facts of addition
X				Knows facts of subtraction
/				Knows facts of multiplication
/				Knows facts of division
X				Operation of addition
X				Operation of subtraction
/				Operation of multiplication
/				Operation of division

CULTURAL STUDIES

1	2	3	4	
X				Geography
X				History
X				Zoology
X				Botany
/				Taxonomy

PHYSICAL DEVELOPMENT

1	2	3	4	
X				Large Muscle Development
X				Coordinated Movements
X				Sportsmanship

CREATIVE EXPRESSION (Art/Music)

1	2	3	4	
X				Participates in art activities
X				Participates in music activities
X				Chooses art/music to express lesson topics

Academic Foundations

SOCIAL/EMOTIONAL

1	2	3	4	
X				Follows school and classroom rules
X				Shows respect for classroom environment
X				Communicates respectfully
X				Exercises physical control
X				Follows adult direction
X				Is learning to make good choices
X				Demonstrates kindness
X				Accepts responsibility for own choices/actions
X				Is able to resolve problems with peers
X				Uses appropriate "going out" behaviors

WORK HABITS

1	2	3	4	
X				Chooses challenging work
X				Concentrates on task at hand
X				Uses materials properly
X				Completes work
X				Keeps work organized
X				Works without disturbing others
X				Works with minimal adult help
X				Uses time constructively
X				Works well alone
X				Works well in group activities

Comments

██████ is a motivated and curious learner. This year, I observe her working with a wider variety of classmates. She still loves to write and her unique style shines through her words. ██████ very conscientious and caring for all the new animals in the environment. As we discussed during ██████ conference, she is very ready and capable to be a leader in the class.

## **CURRENT IMA BOARD**

The following Persons serve on the Board of Directors of IMA, Inc., the 501(c)(3) nonprofit that currently operates IMA in all functions, and which will, if IMA receives an instrumentality charter, continue to govern the daycare and the community outreach functions of IMA, Inc., while the operations of the Charter School would shift to the responsibility of the school Governance Council.

**Melissa M. Droessler** *M.Ed., AMI Montessori Primary Directress, AMI Montessori Elementary Teacher*

Melissa is from Minneapolis, Minnesota, where she attended Golden Valley Montessori School. After working as an assistant in Carrie Marlette's Montessori classroom, Melissa decided to take the Montessori training and become an AMI Montessori elementary teacher with a Masters in Education in 2005. After teaching in Madison for many years, Melissa received her state teaching license and taught in Milwaukee at Craig Montessori School. Melissa completed her AMI Montessori Primary training in 2009, and opened IMA with Carrie Marlette in 2012. Melissa thoroughly enjoys speaking Spanish with her students, as well as playing the flute and piano in her classrooms. Above all else, Melissa adores working and learning with families and children of all ages. Melissa has been in Montessori primary and elementary classrooms for ten years, she serves on the board of the Montessori Institute of Milwaukee and as Vice President of the Wisconsin Montessori Association, and she is excited to be a part expanding access to AMI Montessori for communities in Madison.

**Carrie Marlette** *M.Ed., AMI Montessori Elementary Teacher*

Carrie earned a Journalism Bachelor of Arts degree from the University of Wisconsin-Madison in 1978. She then completed the Association Montessori Internationale training at the elementary level (for students ages six through 12) in 1995 and received her M.A. in Education at Loyola College in Baltimore, MD that same year. Carrie also attended Edgewood College in Madison to study the Orton-Gillingham program to help students with reading, spelling, and writing. Carrie taught at Madison Central Montessori School for 15 years. During that time, she served on the curriculum committee and the Retention Task Force. Both of Carrie's children attended Montessori at the primary level and her son continued in the elementary class through the fifth year. Implementing true Montessori methods with a thriving "Going Out" program is Carrie's goal for IMA.

**Ingrid Andersson**

Ingrid has been a midwife in Madison for 12 years. She attended the Frontier School of Midwifery and Family Nursing, the oldest school of nurse-midwifery in America, and received a Masters of Science in Nursing Education from UW-Madison. Prior to becoming a midwife, Ingrid worked as an RN in high-risk pregnancy, postpartum and newborn care at St. Mary's Hospital in Madison. As a nurse, she traveled to Kenya to learn from traditional and British-model midwives. Previously, she worked as a doula, journal editor, farm-hand,

orchard-picker, nanny, baker and waitress while completing degrees in European Studies and Cultural Anthropology. Besides practicing full-time as a home birth nurse-midwife (CNM), Ingrid serves on the Dane County Fetal and Infant Mortality Review panel and the steering committee for the Wisconsin Environmental Health Network. Ingrid founded Mothers Milk Alliance in Madison to connect donors of safe human milk with infants in need. She is a member of American College of Nurse-Midwives, American Midwifery Educators, Breastfeeding Coalition of Dane County, and Wisconsin Guild of Midwives. And from 2005-2007, Ingrid worked with hundreds of midwives and families around WI to help achieve state licensure for Certified Professional Midwives.

**Troy Vosseller, MBA, JD**

Troy is a 2006 graduate of UW-Madison. While an undergrad, Troy started the Sconnie Nation t-shirt company ([www.sconnie.com](http://www.sconnie.com)), which he continues to own and operate. Troy went on to earn his MBA in Entrepreneurial Management and Law Degree, both from University of Wisconsin - Madison. In addition to running Sconnie Nation, Troy currently works as a Supervising Attorney with the UW Law School's Law & Entrepreneurship Clinic — a program providing free legal services to startup businesses and entrepreneurs.

**Jessi Wortman, MS, OTR/L**

Jessi obtained her Master of Science in Occupational Therapy from the University of Wisconsin Milwaukee in 2000. She has experience in a variety of pediatric settings over the last 12 years, including early intervention, private practice, schools and home-based practices. She has worked with a wide variety of diagnoses including orthopedic issues, neurological, cognitive and/or behavioral disorders. Continuing education experiences Jessi holds include Crisis Intervention Training, Handwriting Without Tears training, The Wilbarger Deep Pressure Touch Protocol (DPPT), Therapeutic Listening, Astronaut Training (a Sound-Activated Vestibular-Visual Protocol) and Food Chaining (a feeding approach for difficult eaters). Her additional training includes Pediatric Vision Therapy, Pre-reading and Writing exercises, Oral/Motor and Feeding difficulties, and treatment strategies for children with Developmental Delays. Jessi is certified by the National Board of Occupational Therapy (NBCOT). She holds a current Wisconsin and Illinois Occupational Therapy License as well as a Department of Public Instruction license.



## LETTER OF SUPPORT



**Cresa Madison**  
613 Williamson Street, Suite 210  
Madison, WI 53703  
608.467.1513 tel  
608.259.9114 fax

**The Tenant's Advantage**  
cresa.com

October 20, 2016

*Via Electronic Mail*

Madison Metropolitan School District  
Board of Education  
545 West Dayton Street, Room 110  
Madison, WI 53703

**RE: Isthmus Montessori Academy**

Dear Members of the Board:

I am writing to express Cresa Madison's support of the Isthmus Montessori Charter proposal and school. The proposal offers an alternative education model not currently offered within the district but which has been proven to be successful with all children.

As a member of the Madison community, Cresa is committed to the next generation of leaders and thinkers and believes that an innovative approach to education is one way in which to ensure the progress and success of our community. The vision and mission of Isthmus Montessori Academy serves families who have often been priced out of a high quality AMI Montessori education - including families of children with different needs; children living in poverty; children who are English Language Learners; children who are oppressed; children who have experienced trauma; and children living in highly mobile families.

This is a proposal in which we are pleased to invest and we are committed to supporting Isthmus Montessori Academy through a total financial contribution of \$100,000.

Cresa is pleased to make such a contribution in honor of the children and families of Madison.

Sincerely,

A handwritten signature in black ink, appearing to read "Tim Ridders".

Tim Ridders  
Managing Member



# Enclosure: Curriculum Maps

Enclosed herein is an **AMI Montessori Curriculum Map**, extracted from the Transparent Classroom Data Tracking Section. It provides thorough detail about the specific curricular components of an AMI Montessori Student's education from 1<sup>st</sup>-9<sup>th</sup> grade.

Because of the importance of 9<sup>th</sup> grade achievement in successful high school completion, graduation, and college, career and community readiness, this extract first displays the curricular framework a child leaving the 7<sup>th</sup>-9<sup>th</sup> grade class is expected to master.

This is followed by an identical display of the 1<sup>st</sup>-6<sup>th</sup> grade curriculum, which serves as a foundation for the Adolescent lessons and materials. Readers may also note that and AMI Montessori school presents certain information during the elementary years that readers might expect to see only in later years.

# Adolescent Curriculum 7th-9th Grade - Sample Student Progress Data

Mastered 
  Practiced 
  Introduced 
  Needs More 
  Planned 
  Planned (by someone else)

## Math

### Math seminar

- Concrete to abstract
- Mathematical imagination & science
- Amazing math tricks
- Visual representation of data
- Fractals
- Thinking about infinity
- Extensions of Montessori Materials
- Problems math can solve
- Statistics around us
- The Golden Ratio and Nature

### Reviewing Concepts

- I addition drills
- I subtraction drills
- I multiplication drills
- I division drills
- I word problems
- M Multiplication tables through 12
- M Median
- M Average
- M Mean

### Fractions

- M Rounding Mixed Numbers
- Ratios of Fractions
- Ratios of Fractions, Word Problems
- Ratios of Fractions, Represented Graphically
- Proportional relationships as equations
- Adding fractions with like denominators
- Subtracting fraction
- Multiplying fractions

### Probability

- N Probability experiments
- N Classical probability
- N Probability rules
- I Empirical probability
- I Law of large numbers
- I Subjective probability
- I Sample spaces
- I Tree diagrams
- I Tables

### Geometry

- M How Geometry Got Its Name
- M Pythagoras
- M Euclid
- I The Golden Ratio
- M Lines, Rays, Line segments
- I Coordinates
- M Angles and Polygons
- M Circle nomenclature, constructions, relationships and area
- M Plane figure construction, classification and derivation of area formulas
- M Equivalence of solids
- M Geometric Constructions
- M Equivalence Game with Materials
- M Lateral and total surface area
- Calculating the surface area of a Lego construction in units
- I Deriving volume formulas
- Calculating volume of a Lego construction in units
- Geometry in art: symmetry
- Geometry in art: circles
- Geometry in art: tessellations

### Math in Everyday Life

- Writing a check
- Documenting charges and deposits in a checkbook
- Balancing your checkbook
- Reading a paystub
- Creating a monthly personal budget
- Tipping and percentages
- Figuring tax on purchases
- Interest in a savings account
- Grocery shopping price comparisons

### Algebra

- M The Cartesian Coordinate System
- M Linear Equations and Solutions
- M Graphing an equation
- M Graphing Using Zeroes (Intercepts)
- M Graphing Horizontal and Vertical Lines
- M Slope
- M Graphing Using Slope and Y-intercept
- M Writing Equations
- M Systems and solutions
- M Solving systems by graphing
- M Solving systems by substitution
- M Solving using addition
- M Rational expressions
- M Terms and factors
- M Multiplying and dividing rational expressions
- M Least common multiple
- M Adding and subtracting rational expressions
- M Fractions inside fractions
- M Fractional equations

- (M)** Review of graphing linear equations, systems of equations and rational expressions
- (I)** Radical Expressions
- (M)** Perfect Square Numbers and Radicals
- (I)** Simplifying Radical Expressions
- (I)** Variable radicands
- (I)** Multiplying Radicals together
- (I)** Collecting Like Terms

- (I)** Simplifying radicals containing fractions
- (I)** Quotient rule
- (I)** To rationalize the denominator
- (I)** Radical equations
- (I)** Quadratic Equations
- (I)** The Square Root method
- (I)** The Zero Product Method

- (I)** The Quadratic Formula method
- (I)** Summary of solving quadratic equations
- (I)** Graphing Quadratics (parabolas)
- (I)** To find the x-intercepts without graphing
- (I)** Review of quadratic equations
- (I)** Algebra Cumulative Review

## Enclosure P2

## Scientific Discoveries

- History of Science
- Designing Scientific Experiments
- Mind-mapping Scientific Experiments
- Persuasive essay: Should scientists share their discoveries with the public?
- Guest speaker: How scientists communicate to the public
- IMA Science Fair: Developing a Hypothesis
- IMA Science Fair: Conducting Experiments
- IMA Science Fair: Presenting your Data

## Relationships of Humans to the Environment

- Biomes study
- Ecology
- Environmental Impact study of our school
- Energy use
- Pollution
- Climate change

## Physics

- Forces
- Energy
- Motion
- Dynamics
- Turning forces
- Periodic motion
- Gravitation
- Machines
- Density
- Temperature
- Transfer of heat

- Effects of heat transfer
- Expansion upon heating
- Behavior of gases
- Waves
- Reflection, refraction and diffraction
- Wave interference
- Sound waves
- Perception of sound
- Electromagnetic waves
- Light
- Reflection and refraction of light
- Optical instruments

## Chemistry

- What is chemistry? Introduction assignment
- Atoms and molecules
- Molecular properties
- Periodic Table of Elements
- Periodic Table Battleship
- Beginning molecule construction

## The Study of Living Things

- The Five Kingdoms
- Kingdom Monera
- Kingdom Fungi
- Bacteria
- Kingdom Plantae
- Kingdom Animalia
- Periods on the timeline of life
- Evolution

## Biology

- Cellular biology
- Viruses and bacteria
- Animal structure and function
- Plant biology
- Plant chemistry
- Ecosystems
- Land lab work
- Native plants and invasive species

## Nature Journaling

- Observing nature
- Writing observational notes about nature
- Noting seasonal changes on a phenology wheel
- Nature drawing
- Citizen naturalism: technology for gathering data
- Plant identification
- Animal tracking and identification

## Astronomy

- History of Astronomy
- Tools Astronomers Use
- Gravity
- Celestial bodies
- Tracking the moon phases
- Constellations
- How to read a star chart
- NASA and Space Exploration
- Researching black holes
- Planetarium lesson
- Observatory trip at night

# Music

## Music Appreciation

- The Infinite Variety of Music
- Vocabulary for Listening and Understanding
- Traditional Folk and Religious Music
- Jazz in America
- The Roots of Popular Music
- World Music: The Western Hemisphere
- World Music: Beyond the Americas
- Classical Music to 1600
- Music of the Baroque Period (1600-1750)
- Music of the Classical Period
- Musical of the Romantic Period (Nineteenth Century)
- Music of the Twentieth Century
- Music in Today's Society
- The Instruments of the Orchestra
- History of the symphony
- Film Music

## Theory, Composition, and Musicianship

- The Grand Staff
- Note Names
- Notation of Music
- Composition on paper
- Writing down a melody
- Composing a bassline for a melody
- Composing a triadic harmony for a melody
- Composing musical theater songs
- Reading music
- Sightreading
- Rhythms and rhythmic notation
- Sight singing
- Conducting basics
- Instrument basics
- Music analysis and interpretation
- Tempo

- Dynamics and Accents
- Notation and Terms
- Intro to guitar
- Intro to ukulele

## Singing

- Learning a Song
- Teaching a Song
- Composing a Song
- Singing in harmony
- Choral singing
- Singing with accompaniment
- Vocal anatomy and health

## Keyboard

- Practicing keyboard pieces
- Learning new keyboard piece
- Keyboard techniques
- keyboard warmups and exercises
- Piano practice techniques

## Scales Intervals Keys Triads Rhythm and Meter Textbook

- The Semitone
- Diatonic and Chromatic Semitones
- The Whole Tone
- The Major Scale
- Basic Note and Rest values
- Dots and Triplets
- Accent, Simple Meters, Anacrusis
- Compound Meters, Beams, Ties
- Generic Names (Intervals)
- Major 2nds, 3rds, 6ths, and 7ths
- Minor, Augmented, and Diminished 2nds, 3rds, 6ths, and 7ths
- Constructing 2nds, 3rds, 6ths, and 7ths
- Perfect, Augmented, and Diminished Primes, 4ths, 5ths, and Octaves
- Doubly Augmented and Diminished Intervals

- Compound Intervals, Consonance and Dissonance, Enharmonic Equivalents, Inversion
- The series of 5ths
- Key Signatures in Major
- Notating Key Signatures
- Minor Scales
- Key Signatures in Minor
- Relative Keys, Accidentals
- Major and Minor Triads
- Diminished and Augmented Triads
- Diatonic Triads in Major
- Diatonic Triads in Minor
- Analyzing Triads in Root Position
- Triad Inversions and Figured Bass
- Triad Inversions and Structural Types
- Analyzing Triads in Inversion
- Major-Minor Seventh Chords
- Other Types of Seventh Chords
- Doubling and Spacing
- Voice Leading and Chord Connection
- Connecting Tonic and Dominant Chords
- Harmonizing a Melody using Tonic and Dominant Chords
- Resolving the Dominant Seventh Chord to Tonic
- Harmonizing a Melody Using Tonic, Dominant, and Dominant Seventh Chords
- Associating Keys and Key Signatures
- Analysis of Bach Chorale
- Analysis of Beethoven Minuet
- Analysis Schumann, Kleine Romanze
- Analysis Lang, Mag da Draussen Schnee sich thürmen
- Analysis Brahms, Lullaby
- Analysis Tchaikovsky, in Church
- Analysis Sousa, The Thunderer
- Analysis Gershwin
- Analysis Bartók
- Analysis Capers, "Billie's Song"

# History

## Historical Thinking

- Chronological Thinking
- Using Timelines
- Historical Analysis and Interpretation
- Historical Contexts
- Historical points of view
- Historical Evidence: Documents and Sources
- Going out to archives to do research
- Geological Time
- Historical fiction: critical review

## The Study of Human Progress & Civilizations

- Timelines
- History Story lessons

## Exploration

- History of Technology
- History of Civilizations and Explorations

## U. S. History

- The First Peoples of the United States
- Founding of the United States
- The Revolutionary Period
- Growth and Expansion
- Civil War Era
- Industrial Revolution
- The 20th century
- Our contemporary United States
- The Immigrant Experience
- Literature of American History

## The Documents of American History

## World History

- World History projects per student interest
- The Origins of Historical Thinking
- Earliest recorded histories
- Archaeology
- Ancient Civilizations
- Trade Between Civilizations
- The European Renaissance
- Expanding Empires and Colonialism
- History of Asian Cultures
- History of African Cultures
- History of Latin American Cultures



Art History and Theory

- Art history story lesson
- Elements of Art
- Principles of Design
- Art Appreciation lesson
- Ancient Greek Art (part of Humanities Seminar)
- Describing art
- Color theory
- Creativity exercises

Media and Techniques

- Graphite pencils
- Colored pencils
- Charcoal
- Chalk and pastels
- Conte crayons
- Pens
- Painting
- Collage
- paper sculpture
- Working with modeling clay

- 2-dimensional media
- 3-dimensional media
- Printing
- Surface design and pattern

Art projects

- Building a multi-media totem pole sculpture from recycled materials
- Brush pen calligraphy
- Hand lettering styles
- Layout for handlettering
- Calligraphy posters for school and classrooms
- Glue & watercolor resist "batik" fabric hanging
- Tie-dye
- Making a pamphlet book
- Accordion books
- Origami
- Paste papers for book making
- Book structures
- Drawing Comics
- Keeping a sketchbook
- Mixed Media Project

- Making mobiles
- Carving stamps and linoleum blocks
- Mandalas and symmetry
- Woven wall hangings
- Ecological installations

Art appreciation

- Periods of Art History
- Tour of Chazen Museum of Art
- Tour of MMOCA
- Trip to Art Institute of Chicago
- Tour of printmaking, paper making, and book binding studios
- Study of a 21st-century artist
- Study of a 20th-century artist
- Study of a 19th-century artist
- Study an 18th-century artist
- Study of a 17th-century artist
- Photography
- Graphic Design
- Architecture History

# Social Studies and Geography

## Five Themes of Geography

- Location
- Place
- Human-Environment Interaction
- Movement of people and goods
- Regions: what qualities unify a "region"?

## Representing our world

- History of maps and globes
- Longitude and latitude
- Time zones
- Types of maps

## Physical Geography

- Layers of the Earth
- Plate tectonics
- Isostatic pressure and balance
- Bodies of water

## The Place We're In: Personal Geography

- Mapping our School
- Mapping our Neighborhood
- Resource map for our school community
- Ecology of our area
- Mapping our city
- Mapping our county
- Mapping our state

## U. S. Civics

- Democracy
- Current US Presidential Candidates
- The Federal Government
- How the Electoral College works
- Presidential Election
- Holding a mock election
- Three branches of federal government
- Wisconsin State Government
- Civil rights (with History and Humanities Seminar)
- Laws and legislation

- Local government
- Civic rights and responsibilities
- Case study: Children's impact on environmental policy

## The First Peoples of Wisconsin

- History of the first peoples
- Culture and traditions of the first peoples
- Contemporary American Indian culture
- Wisconsin place names and the first peoples
- Arts of Wisconsin Indians

## World Cultures

- Continents
- World Religions and Philosophies
- Political systems around the world
- The United Nations
- Peace Studies
- What makes a culture?
- Folk traditions around the world
- Globalism

## Service work

### Service Work Basics

- Benefits of volunteering
- Service Work Goal setting
- Service Work mission statement
- Finding service work
- Evaluating service work

### Within the school

- Managing and mentoring the Pen Pal Project
- Helping in the Toddler classroom
- School Newsletter
- Preparing food for the community
- Building compost bins
- Providing childcare activities at school meetings

- Organizing and cataloging school library

### In the Community

- Scotch Hill Farm service
- Troy Community Gardens service learning
- Planning Food drive for community organizations
- Volunteering to cook meals

# History and Humanities Seminar

## History and Humanities Seminar: Ancient Greece

- (M) Intro to Socratic Seminar
- Ancient Greece Timeline
- Maps of Ancient and Modern Greece
- Myths and beginning history
- Close reading of Historical texts
- Types of Socratic questions
- Chapter 1: Bertrand Russell, The History of Western Philosophy
- Ancient Greece book report: rough draft
- Ancient Greece book report: second draft
- Ancient Greece book report: final draft
- Ancient Greece learn and teach assignment
- What Ancient Greek poetry sounded like
- Ancient Greek temples and architecture
- Ancient Greek drama (tragedies and comedies) and literature
- Athens vs. Sparta
- The beginnings of Democracy
- The spread of Hellenistic Society under Alexander the Great
- Ancient Greek clothing
- Ancient Greek food
- Planning Ancient Greece fair
- Cooking for ancient Greece fair
- Poster presentations: Ancient Greece Fair
- The Iliad and the Odyssey
- The Death of Socrates

## History and Humanities Seminar: Civil Rights: Now and in the Past

- Defining Civil Rights
- Avenues for protecting civil rights
- The historical Civil Rights Movement
- Roots in the Labor Movement
- Brown vs. Board of Education
- The Montgomery Bus Boycott

## History and Humanities Seminar: History of the Book

- What is a Book?
- Earliest books: clay tablets, papyrus scrolls, silk fragments
- Writing technologies
- Medieval manuscripts
- The invention of printing
- Books and the spread of ideas
- Modern books
- comic books and magazines
- History of Paper making
- History of Book binding
- Rare book restoration
- Visit: Rare Books Collection at UW Madison Memorial Library
- Visit: Silver Buckle Press to learn about letterpress printing
- Typography and illustrations
- Libraries and bookstores
- Publishing a book and the book industry
- The future of the book
- Study an aspect of the book arts, and make a sample
- Study a historically important book

## History and Humanities Seminar: Revolutionary Ideas in American History

- Big Ideas in the American Experience
- Revolutionary War Era: Revolutionary Documents
- Important Speeches in American History
- American scientists and their inventions
- American media around the world
- American social and political movements
- The U.S. as a global power
- An American story: Interviewing an elder family member about their experiences
- American cities: New York and Los Angeles
- Project: Persuasive Essay on The Most Revolutionary American Idea

## History and Humanities Seminar: Folklore Around the World

- Freedom Summer
- Dr. Martin Luther King, Jr.
- Voting rights movement
- Jim Crow Laws
- Music of the Civil Rights Movement
- Guest speaker: Civil rights in today's society
- Current civil rights issues

- What is folklore?
- Who are "the folk?"
- Oral culture vs. written culture
- Storytelling
- Folk stories around the world
- Types of stories
- Study a folklore story type
- Study a particular culture's folktales
- Folklore in material culture
- Folk music
- Folk culture in the digital age?

## History and Humanities Seminar: American Life Through the Arts

- Arts in the American experience
- American ideas and contributions in the history of the arts
- "Fine" art and "popular" art - a particularly American question
- Survey of American visual arts
- Survey of American art music, folk music, and popular music
- Survey of American dance, theater, and performing arts
- Survey of American literature
- Study a theme in American art across artforms
- Create an American arts timeline
- Study a contemporary American artist
- Study a historical American artist

## Research Skills

- Gathering information
- Note taking
- Going Out: Research with an Expert
- Evaluating Sources
- Primary Sources vs. Secondary Sources
- Libraries as Resources
- Facts and Opinions
- Bibliography
- Plagiarism and summarizing
- Online research (with Technologies / Digital Citizenship)

## Drama

- Shakespeare study & Visit to American Players Theater
- Researching potential dramatic productions
- Writing script adaptation from book
- Producing a play
- Rehearsing a play
- Memorizing a dramatic monologue
- Creating Costumes and Sets for a Play

## Composition Skills

- Syntax
- Capitalization and punctuation
- Paragraphs
- Grammar

- Topic sentences and signposting
- Expository writing
- Descriptive writing
- Narrative writing
- Persuasive writing
- Vocabulary
- Composing a review: draft
- Composing a review: final draft
- Rewriting
- Spelling
- Organization and outlines
- Editing skills
- Final draft
- Proofreading

## Literature

- Read aloud and discussion
- Fiction: novels
- Lives and times of authors
- Book club: discussion
- Book club: summaries
- Fiction: short stories
- Poetry
- Biography and Autobiography
- Drama

- Essays
- Creative Nonfiction
- Experimental writing and graphic novels

## Creative Writing

- Writing a poem
- Reading a poem
- Analyzing a poem
- Poetic meter
- Writing fiction
- Plotting a story
- Journal Freewriting
- Fiction rough draft
- Fiction editing and publishing
- Author visits
- Writing creative nonfiction
- Song lyrics

## Reading Skills

- The parts of a book
- Close reading
- Reading for pleasure
- Reading for information
- Summarizing main ideas
- Thinking like an author

# French

## Beginning phonics

- Learning the sounds of French
- French alphabet pronunciation
- Counting in French
- Listening to native speakers
- Conversation in French

## The French-speaking World

- French history
- France today
- Francophone culture study

- Francophone culture fair
- French literature and poetry
- Francophone literature

## French Syntax and Vocabulary

- French grammar
- French nouns
- French verbs
- French adjectives
- Writing sentences in French
- Reading sentences in French
- Listening to stories in French

- French verb tenses
- French pronouns
- French agreements and gender
- French conversation and travel basics

## French projects

- Creating a French noun poster
- French labels for classroom items
- French conversation cards
- Creating a French noun scavenger hunt for elementary
- French speaking penpal (with Service work)

# Spanish

## Spanish

- Understands and responds to greetings in Spanish
- Identifies and pronounces vocabulary of the classroom
- Identifies and names colors
- Geographically locating all the Spanish-speaking countries of the world

## Spanish

- Understands vocabulary about emotions and feelings
- Studies and spells diverse vocabulary in Spanish
- Recognizes concepts and vocabulary about celebrations in Spanish-speaking countries
- Apply vocabulary and pronunciation about food during practices
- Apply searching skills in investigations topics about cultures and food
- Write sentences with complete meaning in Spanish

## Spanish

- Demonstrate grace and courtesy in each lesson
- Practice "sustantivos, articulos and verbos" in short phrases
- It communicates in short phrases with clear pronunciation
- Practice mini-conversations about food every day
- Identifies "sustantivos, articulos and verbos" in short phrases
- Participate in games about "sustantivos, articulos and verbos".

# Occupations

## Occupations Basics

- Writing a business plan
- Writing a loan proposal
- Creating a budget
- Business economics
- Entrepreneurship

## School Newspaper

- Creating School Newspaper Editorial Calendar
- Creating Marketing plan for School Newspaper
- Soliciting contributions for School Newspaper
- Typing up articles for School Newspaper
- Designing School Newspaper
- Writing articles for School Newspaper
- Budgeting & Accounting for School Newspaper
- Creating art for school newspaper

## Chickens

- Planning chicken occupation
- Planning going out to Farm & Fleet to research chicken supplies
- Fixing Chicken Coop
- Shopping for and planning to buy adult chickens
- Building chicken run
- Calculating food and other costs for chickens
- Finding chicken food sponsorship
- Daily chicken care: feeding, watering, cleaning
- Study of chicken life cycle
- Study of chicken health issues

## Bakery

- Planning bakery and bake sale
- Testing recipes
- Researching bread recipes
- Shopping for bread supplies

- Yeast experiment

- Bi-weekly bake sales
- Bakery financial management
- Going out to shadow a professional baker
- Creating a shopping list and budget
- Researching price points for baked goods
- Planning bakery and bake sales
- Budgeting for bakery
- Grocery planning and shopping for bakery
- Testing recipes for bakery (with food science)

## School Dance

- Marketing for School Dance
- Planning for School Dance
- Budgeting for School Dance
- Accounting for School Dance

# Food science

## Growing Food

- Planning a garden
- Economics of gardening
- Organic vs. conventionally grown
- Shadowing a farmer
- Raising chickens for eggs (with Occupations)
- Maintaining a garden
- Soil study
- Harvesting fruit and vegetables
- Garden journaling and tracking
- Planning meals based on fresh produce

## Cooking and baking

- Food safety & cleaning
- How Yeast Works
- Non-yeast leaveners
- Following a recipe
- Adapting a recipe

- Creating a recipe

- Recipe testing
- Doubling and increasing recipes
- Cooking techniques: baking
- Cooking techniques: roasting
- Cooking techniques: sautéing
- Cooking techniques: knife skills
- Food chemistry

- Making a salad with fresh produce
- Making a sourdough starter
- Cooking techniques: eggs every way
- Cooking techniques: simple sauces

## Food economics

- Coupon activity
- Food budgets activity: Food stamps budget, average budget, luxurious budget
- Shopping for school projects (price comparisons, budgeting)
- Food insecurity and ways to address it

- Food supply chain

- Food regulations
- Nutrition
- Menu planning
- Local and seasonal foods
- Reading labels and nutritional information
- Restaurant / grocery store meal comparisons

## Composting

- Introduction to compost at Troy Gardens
- Lesson on compost & decomposition
- Designing compost system
- Building compost system
- Giving lesson on compost to younger classes
- Creating compost posters
- Lesson on carbon and nitrogen in the soil
- Lesson on microbes and worms in the soil

# Going Out & Trips

## Camping Trip

- M Brainstorm camping trip packing list & activities
- N Post-camping narrative essay draft
- Cooking dinner over a campfire
- P Cooking breakfast
- M water safety lessons
- Setting up a tent

Harvesting vegetables

Budgeting for camping trip groceries

Grocery shopping for camping trip

Tie-dye while on camping trip

Post-camping narrative essay final version

## Class Trip Research and Planning

Class decision-making about when and where to travel

Researching plans, travel options, and prices

Budgeting for a Class Trip

Class trip proposal: budget and educational goals

Fundraising or otherwise financing class trip

Class trip guidelines created

Documenting the class trip

Follow-up assignments for class trip



## Caring for the Environment

- Small repairs
- Interior painting
- Vacuuming and sweeping
- Dusting
- Washing Dishes
- Washing tables
- Flower Arranging
- Doing laundry
- Taking out trash and compost

## Study Skills

- Note taking techniques
- Organizing your ideas
- Test preparation skills
- Academic vocabulary
- Demonstrating and communicating knowledge
- Reading for content
- Hand-mind connection
- Organizing your space
- Using drawing and graphics for study
- Documenting your interests
- Organizing information
- Using a library
- Tutoring other students
- Studying in groups
- Self-evaluation
- Avoiding procrastination
- Tools for tracking progress

## Time Management

- Planning our weekly schedule
- Writing the week's tasks (from Weekly Review Sheet) on our weekly schedule
- Time management circles visualization tool
- Daily work lists: deciding on tasks and prioritizing
- Goal setting

- Connecting values to how we spend our time
- The value of work

## Personal Finance (with Math)

- Credit and debt
- Investing
- Banking
- Taxes
- Employment
- Insurance
- Housing and home ownership
- How much does your ideal life cost? activity

## Public Speaking

- Information presentations of ideas
- Learn-and-teach assignments
- Reading aloud
- Powerpoint presentations
- Poster presentations

## Career Exploration

- Skills and interests inventory
- Employment skills
- Resumes and references
- Interviewing skills
- Career Shadowing
- Personal vision statements

## Community living

- Weekly community meeting
- Weekly community planning session
- Conflict resolution skills
- Communication skills
- Grace and courtesy: including others
- Grace and courtesy: finding common ground
- Grace and courtesy: Meeting new people
- Body language
- Addressing community needs and issues

- Creating a chore chart
- Group projects
- Peer evaluation
- Caring for the environment
- Weekly advisory meeting with guide
- Peer evaluation and critique
- Creating Community Guidelines

## Families and Children

- Relationships with our families
- Families around the world
- Considerations in parenting
- Study of infant needs (observe in infant community)
- Health and Safety of children
- Children's rights
- Babysitting and CPR course
- Child development (with Health)

## Handwork and Fiber Arts

### Sewing

- Introduction to hand sewing
- Introduction to sewing machine
- Introduction to using an iron for sewing projects
- Sewing a seam
- Sewing a placemat using sewing machine and hand embroidery
- Sewing a pillow
- Fabrics and laundry
- Sewing with a pattern

### Knitting

- Casting on
- Introduction to knit stitch
- Making a scarf

### Embroidery

- Introduction to embroidery
- Introduction to counted cross-stitch

### Crochet

- Learning crochet foundation chain
- Learning single crochet stitch
- Crochet squares

### Woodwork & Construction

- Planning raised garden bed construction
- Constructing raised garden bed

- Calculating amount of soil needed to fill garden bed
- Constructing compost bin
- Stripping table using eco-safe soy solvent
- Making eco-safe beeswax & mineral oil "stain"
- Staining table with beeswax & mineral oil
- Building a bat house

- Building a little free library
- Tools and safety
- Measurement and construction techniques
- Constructing chicken enclosures
- Mending chicken coop

Enclosure P14

## Physical Education and Health

### Human development

- Dr. Montessori's Four Planes of Development
- The growing brain of the adolescent
- Development of the infant
- Gender and sex characteristics
- Puberty
- Menstrual cycle
- Sexuality
- Reproduction

- Tracking your sitting habits
- Posture & core strength
- Incorporating movement into your life
- Range of motion exercises

### Health

- Nutrition (tied into Food Science)
- Mental Health and the Adolescent Brain
- Addiction and the Adolescent Brain
- Sexually transmitted diseases
- Health and Disease
- Healthcare today

### Aerial Arts at Goodman Community Center

- Trapeze swinging and sweeps
- Trapeze climbing and hanging
- Aerial silks introduction
- aerial silks hangs and swinging

### Sports for life

- Ice skating
- Bowling
- Swimming
- Archery
- Team Sports
- Tennis
- Walking and hiking
- Team sports and games - student-led exploration

### Anatomy and Functional movement

- Interrelated body systems
- Anatomy: skeletal system
- Anatomy: circulatory system
- Anatomy: respiratory system
- Anatomy: integumentary system
- Anatomy: lymphatic system
- Anatomy: muscular system & fascia
- Anatomy: endocrine system
- Anatomy: reproductive system
- Anatomy: urinary system
- Anatomy: human cells, tissues, and organs
- Anatomy: digestive system
- Introduction to biomechanics: why we need to move

### Yoga & Pilates

- Yoga session with mindful walk and meditation
- Breathing techniques for relaxation
- Standing poses for balance
- Core strengthening poses
- Restful Yoga
- Introduction to pilates

### Running

- Running 1/2 mile
- Running 1 mile
- Thursday morning running club

### Strength Training (Bodyweight exercises) and Cardio

- Squats and lunges
- Indoor cardio: jumping jacks, high knees, side shuffle
- Whole body exercises: burpees, mountain climbers
- Core exercises: crunches
- Planks and variations
- Aleatoric (chance) workout using cards and dice
- Arm & Leg strength exercises

# Technologies

## Computers and Creativity

- Digital Graphic Design
- Writing using digital tools
- Web design
- Typography
- Blogging with Wordpress
- Digital video editing
- Digital music notation
- Digital music creation

## Digital Citizenship

- History of the internet
- Screens, alerts, texts, and your brain
- News and information sources
- Critical Thinking about Media and Advertising
- Responsible use of social media
- Digital identity
- Copyright and Intellectual Property
- Equitable access to the internet
- Evaluating Online Sources
- Safety and privacy online

## Thinking like a Programmer

- Introduction to programming
- Introduction to html
- Html coding
- CSS

## Computers as Tools

- Keyboarding
- Word Processing
- Spreadsheets
- Databases
- Presentations

# Upper Elementary Curriculum 4th-6th Grade - Sample Student Progress Data

- Mastered  
  Practiced  
  Introduced  
  Needs More  
  Planned  
  Planned (by someone else)

## Mathematics

### Great story

- The story of mathematics

### The decimal system, categories and numeration

- Large bead frame: Addition and subtraction

### Wooden hierarchical material

- Wooden hierarchical material: quantity and language
- Wooden hierarchical material: symbol
- Wooden hierarchical material: quantity and symbol

### Numeration with the large bead frame

- Large bead frame: Reading numbers
- Large bead frame: Presentation of symbol
- Large bead frame: Writing numbers

### Multiplication

- Geometric form of multiplication

- Multiplication algorithm

### Laws of multiplication

- Commutative law
- Distributive law
- Distributive law: Multiplication of a sum by a sum
- Distributive law: Passages to more symbolic representations
- Distributive law: Operation signs and products expressed in cards
- Distributive law: Bead bars for partial products only
- Distributive law: Application to decimal system
- Distributive law: Paper only

### Chequer board

- Chequer board: Reading numbers - single to multi-digit
- Chequer board: Multiplication by a multi-digit multiplier - no use of facts, no writing
- Chequer board: Multiplication by a multi-digit multiplier - use all facts, recording problem and final product
- Chequer board: Multiplication by a multi-digit multiplier - use all facts, recording problem, partial products, and final product

- Chequer board: Writing products directly

### Large bead frame

- Large bead frame: Short multiplication
- Large bead frame: Long multiplication - writing final product only
- Large bead frame: Long multiplication - writing partial products
- Large bead frame: Long multiplication - introduction to algorithm using LBF

### Flat bead frame

- Flat bead frame: Multiplication by a 2 to 4-digit multiplier - writing final product only
- Flat bead frame: Multiplication by a 2 to 4-digit multiplier - writing partial products

### Bank game

- Bank game: Multiplication by 1-digit multiplier
- Bank game: Multiplication by 2-digit multiplier
- Bank game: Multiplication by 3-digit number

### Multiples and factors

#### Multiples

- Concept and language of multiple/common multiple with short chains
- Further investigation of multiples using the bead bars
- Further investigation with multiples-of-numbers paper
- Further investigation of multiples using tables A & B
- Concept, language and investigation of common multiple
- Investigation of common multiple using multiples-of-numbers paper
- Investigation of numbers using table C, leading to concept and language of prime number
- Concept, language, notation for least common multiple (LCM)

#### Factors

- Concept/language of factor with pegboard
- Concept/language of common factor
- Concept/language of prime factor
- Investigation of prime factor using pegboard

- Using prime factors to find the least common multiple (LCM) of numbers
- Concept, language, notation for greatest common factor (GCF)

### Division

- Division algorithm

### Distributive division with racks and tubes

- Racks and tubes: Single digit divisor
- Racks and tubes: Multi-digit divisor (up to 4 digits)
- Racks and tubes: Record problem, quotient, remainder
- Racks and tubes: Record intermediate remainders, quotient, final remainder
- Racks and tubes: Record what has been used, intermediate remainders, quotient, final remainder
- Racks and tubes: Special cases
- Racks and tubes: Zero in the middle of divisor
- Racks and tubes: Zero as last digit(s) of divisor

### Group division with stamp game

- Stamp game: One digit divisor
- Stamp game: Multi-digit divisor
- Stamp game: Special case (zero in the quotient)

### Divisibility

- Divisibility by 2, 5, 25
- Divisibility by 4, 8
- Chart for divisibility
- Divisibility by prime factors divisibility by 3, 6 & 9
- Divisibility by 11
- Divisibility by 7

### Common fractions

#### Introduction

- Introduction to fractions - quantity, language
- Common fractions: Symbol, notation, further language (numerator, denominator)
- Common fractions: Other representations for fractions

- Common fractions: Divided squares and insets
- Common fractions: Constructive triangles
- Common fractions: Equivalence—sensorial
- Common fractions: Nomenclature for equivalence (raising/reducing)

### Operations, simple cases (sensorial reduction)

- Addition (same denominators)
- Subtraction (same denominators)
- Multiplication by a single digit, whole number
- Division by a single digit, whole number

### Operations, beyond simple cases

- Addition or subtraction; different denominators
- Multiplication by fraction
- Division by fraction less than one (measurement/group)
- Division by fraction less than one (partitive/sharing)

### Operations with fractions

- Applications: exploring word problems having fractions
- Addition/subtraction
- Find a common denominator (CD) using transparencies
- Finding a common denominator using graph paper
- Raising/reducing a fraction arithmetically
- Finding numerators by raising or reducing a fraction
- Other methods for finding a common denominator
- Multiplication using graph paper
- Fractions as part of a set

### Abstraction of rules for operations with fractions

- Addition/subtraction – finding least common denominator
- Sensorial exploration of rule for multiplication of a fraction by a fraction
- Multiplication of mixed numbers
- Statement of rule
- Sensorial exploration of rule for division of a fraction by a fraction
- Statement of the rule

### Decimal fractions

- Centesimal frame

### Introduction

- Decimal board

- Introduction to quantity and language
- Introduction to symbolic notation for decimals
- Formation in cards and reading of multi-digit decimals
- Who has?
- Who has more?

### Operations, simple cases

- Addition and subtraction using decimal board
- Addition and subtraction of decimal fractions using paper only
- Multiplication by unit multiplier using decimal board
- Division by unit divisor

### Multiplication with decimals, beyond simple cases

- Introduction to decimal chequer board
- Multiplication on the decimal chequer board
- Whole number x whole number
- Mixed number x whole number
- Mixed number x mixed number
- Large mixed number x mixed number
- Large whole number x whole number
- Mixed number x decimal fraction
- Decimal fraction x decimal fraction
- Decimal felt squares
- By a fraction using decimal board
- Multiplication and division by powers of 10
- Multiplication with paper only

### Division with decimals, beyond simple cases

- By a mixed number or by a decimal using skittles
  - Algorithm for division of decimals
- ### Decimal fractions – Further studies
- Relative size of terms when multiplying, dividing in decimals
  - Rounding with decimal numbers
  - Conversion of common to decimal fractions and vice versa

### Squares and cubes of numbers

- Concept and notation of square of a number
- Concept and notation of cube of a number
- Finding squares in multiplication bead bar layout
- Building the decanomial using the distributive law—The tower of jewels

- Building the numerical decanomial using **Faploxyte, P13** and rectangles
- Operations with numbers written as squares and cubes
- Finding patterns in successive differences of squares of numbers

### Powers of numbers

- Factors of the same number (base) form the powers of that number
- Power of number unit can be any size
- Any number has powers

### Powers of numbers: Exponential notation

- Exponential notation: Operations (+, -, x, ÷) with numbers written in exponential notation
- Exponential notation: Special case: Multiplication of powers of numbers having the same base
- Exponential notation: Special case: Division of powers of numbers having the same base
- Exponential notation: Operations with multi-digit numbers written in expanded notation
- Exponential notation: Negative exponents
- Exponential notation: Fractional power notation

### Squaring

- Transformation of squares building a larger square from a smaller square
- Passing from one square to a successive square
- Passing from one square to a non-successive square
- Squaring a sum (one-digit terms) Application to decimal numbers (2 digits, products to 999)
- Application to decimal numbers (1–4 digits)
- From the real square to the symbolic square (preliminary)
- Squaring a binomial using the pegboard
- Squaring a trinomial using the pegboard
- The guide squares

### Algebraic passages

- Binomial formula
- Trinomial formula
- Derivation of formulas applicable to the decimal system

### Square root

- Concept, language, notation for square root (bead squares)
- Extracting a square root for numbers  $\leq 225$  (square root board and loose units)
- Extracting a square root for numbers  $\leq 999$  (golden bead material)
- Extracting a square root for numbers  $\leq 99,999,999$  (pegboard, hierarchical pegs/cups)

- Passages to abstraction
- Building the square by category
- Special cases
- Building the square by periods
- Calculating the next root digit
- Calculating the square root on paper
- Rule for extraction of square root

### Cubing

#### Arithmetic passages

- From a given cube to a successive cube
- From a given cube to a non-successive cube
- Cubing a binomial, numeric, starting from the square
- Cubing a binomial, numeric, starting from the cube of the first term

#### Algebraic passages

- Cubing: Derivation of formulas and subsequent application of formula
- Cubing a binomial, algebraic
- Cubing a trinomial, algebraic

#### Application to the decimal system

- The story of the three rulers and introducing the hierarchical trinomial
- Cubing a decimal number using the hierarchical cube

### Cube root

- Concept, language, notation for cube root
- Wooden cubing material: Finding cube root
- Wooden cubing material: Special case: Zero at the end of the root
- Wooden cubing material: Special case: Backtracking
- Wooden cubing material: Finding cube root of 4-6 digit #'s using wooden cubing material (Build by categories)
- Hierarchical trinomial cube: Finding cube root
- Hierarchical trinomial cube: Special case: Backtracking
- Hierarchical trinomial cube: Special case: Zero in the middle of root
- Hierarchical trinomial cube: Special case: Zero at end of root
- Hierarchical trinomial cube: Rule for extraction of a cube root

### Non-Decimal bases

- Counting in a non-decimal base
- Operations in different bases

- Conversion of notation from one base to another using bead material
- Conversion of notation from any base to base 10 using power notation
- Algorithm for conversion of notation from one base to another base

### Signed numbers

- Signed numbers: Addition
- Signed numbers: Subtraction
- Signed numbers: Multiplication
- Signed numbers: Division
- Signed numbers: Rules for operations

### Introduction to algebra

- Concept of equation and balancing an equation using laws of equivalence
- Solving for one unknown using the laws of inverse operations
- Translating verbal problems into equations
- Solving for one unknown using more than one operation
- Solving equations having fractional coefficients
- Solving for two unknowns when there is a pair of equations
- Manipulation of algebraic expressions
- Graphs of algebraic expressions
- Algebraic word problems

### Ratio and proportion

#### Ratio

- Ratio: Concept, language, notation
- Ratio can be expressed as a fraction
- Ratio expresses a division
- Ratios are equal if they are equivalent fractions
- Problem solving using ratios

#### Proportion

- Proportion: Concept, language, notation
- Problem solving using ratio and proportion
- Cross multiplication
- Ratio and proportion word problems
- Other activities using ratio and proportion
- Sample problem for ratio and proportion

### Graphing

- Interpreting graphs

- Constructing graphs
- Types of graphs (pictograph, bar, line, circle) and their uses

### Word problems

#### Distance, rate, time problems

- Word problems: Solving for distance (sensorial, arithmetic, algebraic)
- Word problems: Solving for time (sensorial, arithmetic, algebraic)
- Word problems: Solving for rate (sensorial, arithmetic, algebraic)

#### Principal, interest, rate, time problems

- Word problems: Solving for interest (sensorial, arithmetic, algebraic)
- Word problems: Solving for rate, Principal and time (algebraic)

### Measurement

#### Area

- Conversion between metric system units and English system units

#### Length

- History of the measurement of length
- The concept of measurement
- Small non-standard unit of measurement for length
- Larger non-standard unit of measurement for length
- Standard unit of measurement for length
- Introduction to the metric system
- Introduction to the customary/English system

#### Ratio

- Length extension 1: The decimal fraction board
- Length extension 2: How many smaller units are there in a larger unit?
- Length extension 3: How many larger units are there in a smaller unit?
- Length extension 4: Customary units

#### Volume

- Volume extension 1: The decimal fraction board
- Volume extension 2: How many smaller units are there in a larger unit?
- Volume extension 3: How many larger units are there in a smaller unit?
- Volume: Customary units

#### Angles

- The story of angles

#### Weight

- Weight extension 1: The decimal fraction board

- Weight extension 2: How many smaller units are there in a larger unit?
- Weight extension 3: How many larger units are there in a smaller unit?
- Weight: Customary units

Temperature

- The story of Gabriel Fahrenheit

Time

- The story of the measurement of time

Numeracy

- Counting and numbers to 10
- The decimal system
- Memorization of number facts

Operations with decimal whole numbers

- Decimal whole numbers: Addition
- Decimal whole numbers: Addition algorithm
- Decimal whole numbers: Subtraction
- Decimal whole numbers: Subtraction algorithm
- Decimal whole numbers: Multiplication
- Decimal whole numbers: Division



# Music

## Great story

- The story of the grand staff

## Singing

- Selecting songs
- Teaching a song
- Related activities

## Rhythm

- Clapping rhythm patterns (sensorial)
- Clapping rhythm patterns (introduction to note patterns)
- Clapping names (sensorial)
- Clapping names (notation)
- Clapping items in the room
- Moving to rhythmic notation
- Reading note patterns
- Making note patterns with loose cards

## Dictation

- Finding rhythmic patterns in music
- Making chants to fit a rhythmic pattern
- Dictation using words

## Playing instruments

- Body percussion
- Percussion band instruments
- Playing techniques
- Band - conducting and notation
- Playing other instruments
- Instruments of the orchestra
- Making instruments

## Listening

- Listening games
- Listening to music
- the infinite variety of music
- vocabulary for listening and understanding
- Traditional Folk and Religious Music
- Jazz in America
- The Roots of Popular Music
- World Music: The Western Hemisphere
- World Music: Beyond the Americas
- Listening the Classical Music: Music to 1600
- Music of the Baroque Period (1600-1750)
- Music of the Classic Period (1750-1820)
- Music of the Romantic Period (1820-1899)
- Music of the Twentieth Century
- Music in Today's Society

## The tone bars

- The major scale pattern strip
- Composing music by ear
- Whole steps/half steps – tetrachord
- The scale of C major
- Introduction to the musical staff
- Note names on the staff - unmarked green staff
- Sharps and flats
- Naming scales
- Composing music using movable alphabet of music
- The white boards for tone bars and singing
- Simple songs
- Pitch dictation
- Bass clef and its notation

- Names of the degrees of the scale
- Intervals
- Notation of the major scales
- Sequence of the major scales – Sharps
- Sequence of the major scales - Flats
- The chain
- The star
- Key signatures
- Transposition of simple songs
- Introduction to minor scales

## Movement

- Exercises for body control and body awareness
- Exercises for equilibrium
- Walking on the line
- Silence
- Movement for expression
- Games on the line
- Accents
- Dynamics
- Tempo
- Free movement
- Productions
- Performance

## Music history

- Partial list of composers
- Eras in music history
- Sample story of a composer (Camille Saint-Saens)

## Scientific investigation of sound

- Music experiment cards

# Biology

## Great story

- The story of the coming of life

## The timeline of life

- The timeline of life
- The blank timeline of life
- The timeline of life – Further details
- Following up the timeline of life

## BOTANY

### Plants and it's vegetative parts

- The Story of plants
- Nature Walk
- Parts of a plant
- Needs of plants
- Needs of plants 2
- Needs of plants - chart A

### The leaf

- The leaf as a food factory
- Plants grow toward light
- Leaves of a plant arrange themselves to get the light
- Leaves of plants sometimes need help to reach the light
- Plants release oxygen (photosynthesis)

### The root

- Roots take up water for the plant
- Roots march toward water
- Roots secure plants to the ground
- Roots keep soil in place
- Leaves and plants shape help the roots
- Leaves get rid of extra water

### The stem

- Stems hold the leaves up to the light
- Stems carry water from the roots and food from the leaves
- Stems extend into the leaves as veins
- Geotropism/heliotropism/hydrotratism

### The plant and its reproductive parts

- The Story of the flowers
- Function of the flower (Story)
- Parts of the flower
- How plants ensure pollination
- Position of the Ovary
- The fruit
- Function of the fruit
- Parts of the fruit

### The seed

- Function of the seed
- Parts of the seed (testa, cotyledon, embryo, radicle, plumule)
- Seed dispersal

### Simple classification of plants

- The leaf
- external parts of the leaf
- Functions of Stipule, Petiole, Blade
- Variety leading to Classification
- Arrangement of leaves on the Stem
- Arrangement of leaf to stem
- Leaf margin
- Leaf shape
- Leaf size
- Leaf specializations
- Insectivorous leaves

### The root

- Parts of root tip
- Types of root systems
- Forms of root systems
- Other functions of root
- Other interesting modifications

### The stem

- Parts and structure of the root
- Buds on the stem
- Attachment of buds on a stem
- Types of stems

- Types of aerial stems
- Specialization (Modifications) of stems
- Internal structure of stems

### The flower

- Flower specimen list
- Variety in particular parts of flower
- Position of the ovary

### The fruit

- The fruit: Based on the ovary
- The fruit: Based on the pericarp
- Types of fleshy fruits
- The fruit: Types of dry fruit

### The seed

- The seed: Monocotyledon
- The seed: Dicotyledon

### Plant classification

- Introduction to the plant classification system
- Text and picture cards
- Classification of plants using folders

## ZOOLOGY

- Question and answer game
- Chart of interdependencies (Supranature)

### Animal Stories

- Introduction to the animals of the child's environment
- What do animals eat?
- Question and Answer Game

### Body functions of vertebrates

- Vertebrates: Introduction to the five classes
- Vertebrates: Learning the characteristics of each class
- Vertebrates: Missing text
- Vertebrates: Comparing classes
- Vertebrates: Naming vertebrates

### The human body

- Physical education

- (M) Warming up
  - (M) Cooling down and stretching
  - (M) Running a distance
  - (N) Physical exercises
  - (N) Cycle of exercises/ repetitions
  - (N) Dance movement and muscular awareness
  - (N) Scottish highland dance
  - (N) Square dancing
- (N) Yoga
  - (M) Pilates
  - (M) Track and Field
- The human body
- (I) The great river
  - (I) Human being is a mammal
  - (M) Human body systems - cells
  - (M) Human body systems - The sensory systems
- (I) Human body systems
- Enclosure P22
- Animal classification
- (I) Introduction to the animal classification scheme
  - (I) Introduction to text and picture cards
  - (I) Classification of animals using folders and circles
- Ecology
- (M) The ocean ecosystem

## Matter & Laws

- I** The First great Story: God Who Has No Hands

## Composition of Earth

- P** Layers of Earth
- P** Functions of Earth's layers
- P** Relative size of Earth's layers
- P** Further study of Earth's layers

## Movements of the crust

- P** Continental drift
- P** Isostatic balance

## Plate tectonics

- M** Mountain formation
- P** Hot spots
- N** Earthquakes
- P** Tsumami
- P** Geysers

## Rock formations

- P** Igneous, sedimentary, metamorphic

## Different ways of combining

- P** Combining: Mixture
- P** Combining: Suspension
- P** Combining: Solution
- P** Chemical change: Color change
- N** Chemical change: Gas evolves
- N** Chemical change: Precipitation occurs
- N** Chemical change: Temperature change
- P** Chemical change: Light emitted
- P** Separating: Mixture
- P** Separating: Suspension
- P** Separating: Solution
- P** Separating: Compound
- N** Saturated solution
- N** Supersaturated solution
- N** Crystallization

## States of matter

- M** Temperature affects the state of matter

## Solids: Model

- P** Solids: Properties
- P** Solids: Solids will not let you pass

## Liquids: Model

- P** Liquids: Properties
- P** Liquids: Liquids take the shape of their container

## Gases: Model

- P** Gases: Properties
- P** Gases: Gases move in all directions to take up the available space
- P** Solids push down
- P** Liquids push sideways and down
- P** Gases can push upwards

## Further states of matter

- P** Temperature affects the state of matter (extended)
- P** Liquids: fluid, viscous
- P** Liquids: temperature affects viscosity
- P** Solids: rigid elastic plastic

## Attraction and gravity

- I** Idea of gravity
- P** Liquids settle according to their weight
- P** With movement, different materials arrange themselves according to their weight

## Sun & Earth

- P** Tilt of the axis of the earth
- I** Temperature zones
- N** Work charts: Temperature zones
- N** Work charts: Temperature variation in zones
- N** Work charts: Seasons

## Introduction

- P** Relative proportion of the earth to the sun
- P** The planets of the solar system
- P** The earth in relation to the sun

## Earth's rotation

- P** Parts of the day

- P** Hottest and coldest parts of the day

- I** Work chart for timezones - clock times in different zones
- P** Work chart for timezones - global sunrise and sunset

- I** Lines of latitude and longitude

- P** The international date line (story of Ferdinand Magellan)

## Earth is a sphere

- M** Hottest and coldest parts of the earth
- P** Sun's rays strike at different angles
- P** Perpendicular rays are more concentrated than non-perpendicular rays
- P** Perpendicular rays lose less energy to the atmosphere

## Earth's revolution

- P** Unequal day and night
- P** There is a 24 hour day/night at the poles
- N** Effect of unequal day and night
- N** Solstices and equinoxes
- P** Dates of the solstices and equinoxes and the length of the seasons

## Work of air

- I** Wind erosion

## Prelude

- I** Air occupies space
- I** Warmer Air Moves Upward
- I** Heated air rises
- I** Air Insulates
- I** Wind is Moving Air Which Circulates in a Pattern

## Winds

- I** Global Winds
- I** Deflections and Names of some Planetary Winds
- I** Interactions of heated Land/Water and Wind (Sea/Land breeze)

## Interaction of heated land/water and wind

- I** Changing Seasons and Winds
- I** Work Chart of the Winds

## Rain

- I** What is Rain? What is Seasonal Rain?
- I** Water vapors

- I Water condenses
- I Seasonal rain
- I Local Conditions for rain
- I Tropical Rain
- I Orographic Rain

### Ocean currents

- I Air can make water surface move
- I Land causes the currents to turn
- I Water rises as it is heated
- I Ocean Currents

### Work of water

- P The water cycle

River model

- I Sedimentation
- P Parts of a river
- P River flows from highlands to lowlands
- P Rivers of the child's own continent and main rivers of the earth

### Erosion

- I Erosion: By water
- P Erosion: By rain
- P Erosion: By waves
- P Erosion: By ice

### Life on earth

- P People in different zones
- P Vegetation in different zones
- Location of cities in North America

Interdependencies of human beings in society

## History

- Hand time line

### Prehistory

- P Black strip
- P Clock of eras

### History

- I The story of the coming of human beings

### The timeline of Human Beings

- N First time line of human beings (first presentation)
- N First time line of human beings (second presentation)

- P Hand Timeline

### Three Phases of History

### After - Three Phases own group Civilizations

- N Civilizations
- N River Civilization
- P American Civilization
- I Classical Civilizations
- I The End of Isolated Civilizations

### BC/AD time line

- P Where do we get our food from?
- P What does the farmer produce?
- I Who depends on the farmer?
- P Who does the farmer need?

The flow of goods

The collection bowl

### Economic geography

- P What is produced and where?
- P How much is produced? (wheat)
- P How much do we consume? (milk)
- Comparison of consumption and production
- World trade
- Trade balance and the flow of money

### The exercises for time

- I The year

### The calendar

- M Days of the week
- I Origin of the names of the days of the week
- M Months of the year
- I Origin of the names of the months of the year
- N Clock time
- M My day
- M Telling time-other expressions
- I My family time line

### 1. Keys for Exploration

- N Fundamental Needs of Humans
- I Fundamental Needs of Humans Chart 2
- I Fundamental Needs of Human Beings - Research
- I The History Question Charts
- N Making a timeline

### 5. Civilizations

# Geometry

Geometry nomenclature and activity cards

## Great story

- The story of how geometry got its name
- Other geometry stories
- Congruent/Similar/Equivalent

## Congruency, Similarity, Equivalence

### Congruent/Similar/Equivalence

- Introduction to congruent similar equivalence
- Congruent
- Similar
- Equivalent
- Introduction to sign
- Congruence - Further Exploration
- Similarity - Further Exploration
- Equivalence - Further Exploration
- Equivalence - Further Exploration Using Two Figures
- Equivalence - Further Exploration Combining Boxes
- Equivalence - Equivalent Pictures
- Further exploration of equivalence - Equivalence utilizing addition
- Further exploration of equivalence - Equivalence of two key triangles

## Equivalent figures with metal inset plates

- Equivalent figures: Triangle and rectangle
- Equivalent figures: Rhombus and rectangle-minor diagonal
- Equivalent figures: Rhombus and rectangle-major diagonal
- Equivalent figures: Triangles
- Equivalent figures: Trapezoid and rectangle
- Equivalent figures: Decagon and rectangle - broad rectangle
- Equivalent figures: Decagon and rectangle-narrow rectangle
- Equivalent figures: Pentagon and rectangle

## Lines

- Concept of line (line has no end) Straight/curved line
- Position of a straight line (horizontal, vertical, oblique)
- Parts of a straight line (ray, line segment)
- Positions of two lines (parallel, convergent, divergent)

Intersection of two straight lines

## Angles

- Measurement of an angle
  - Adding, subtracting angles using the Montessori protractor
- ### Introduction
- Concept of an angle
  - Parts of an angle
- ### Variety of angles
- Right, acute, straight, obtuse
  - Complementary, supplementary, vertical angles, linear pair
  - Angles made by a transversal
  - Relationship between two parallel lines cut by a transversal

## Polygons

### Introduction

- Types of plane geometric figures
- Types of regular polygons according to the number of sides
- Types of planar simple closed curves

### Types of triangles

- Parts of a triangle
- Types of triangles: According to sides
- Types of triangles: According to angles
- The Story of Pythagoras
- Types of triangles according to sides and angles

### Types of quadrilaterals

- Parts of a quadrilateral
- The family tree of quadrilaterals
- Types of quadrilaterals

### Types of polygons

- Types of polygons
- Diagonals of polygons
- Sum of angles in a polygon
- Naming polygons

## The circle

- Circle: Parts

- Circle: Relative positions between a straight line and a circumference
- Circle: Relative positions between two circumferences
- Circle: Circumference

## Theorems

- All triangles having the same base and height are equivalent
- Euclid's theorem

## Pythagoras

- Pythagoras: Sensorial introduction, Plate I (isosceles triangle)
- Pythagoras: Numerical study, Plate II (scalene triangle)
- Pythagoras: Sensorial proof, Plate III (plate of Euclid's Theorem)
- Pythagoras: Pythagorean Theorem applied to other regular figures with constructive triangles

## Area of plane figures

- Concept of area (utilizing the yellow rectangles)
- Area of rectangle: arithmetic
- Area of parallelogram: arithmetic
- Area of triangle: arithmetic
- Area of rectangle
- Area of parallelogram
- Area of triangle
- Area of trapezoid
- Area of rhombus
- Area of decagon
- Area of pentagon
- Area of plane figures-story problem examples
- Area of circle

## Solids

- Solids: Nomenclature
- Solids: Making figures
- Solids: Basic concepts
- Regular prisms; transformation into rectangular prisms
- Polyhedrons
- Surface area: Rectangular prism
- Surface area: Triangular prism
- Surface area: Cylinder

- Surface area: Pyramid
- Surface area: Cone

### Volume

- Concept of volume
- Volume of right rectangular prism
- Volume of non-rectangular right prisms
- Volume of pyramid
- Volume of cylinder

- Volume of cone
- Volume of sphere
- Story of archimedes

### Geometric design and construction

- Design with metal insets
  - Construction with compass and ruler
- Basic skills
- How to zero a ruler

- How to use compass
- How to use a protractor
- How to use a square

### Design with compass and ruler

- Making curves with straight lines
- Op-Art
- Mandalas



# Language

## Great story

- The story of our alphabet

## Language history

- Language history: Pre-alphabetic systems
- Language history: Ideographs
- Language history: Other methods for communicating in signs
- Language history: Mesopotamia - Cuneiform
- Language history: Ancient Egypt - Hieroglyphics
- Language history: The Phoenicians - The first alphabet
- Language history: The Greeks
- Language history: The Romans
- Language history: After the Romans
- Language history: Printing

## History of spoken language

- The story of our language
- The story of English

## Word study

- Suffixes
- Suffixes and introduction to the "root" of a word
- Prefixes
- Compound words
- Word families
- Classified suffixes

## Parts of speech - grammar boxes

- Composed grammar symbols

## The noun

- The noun: Oral introduction - everything has a name
- The noun: Name and symbol
- The noun: Names are very old
- The noun: Lists of nouns
- The noun: The story of the multitude
- The noun: Number - singular/plural
- The noun: Gender - masculine/feminine/common/neuter
- The noun: Classification

## The article

- The article: Oral introduction
- The article
- The article: Definite/indefinite

## The adjective

- The adjective: Oral introduction
- The adjective: Grammar box
- The adjective: Transposition
- The adjective: Command cards
- The adjective: Impressionistic chart of noun phrase
- The adjective: Comparative degree
- The adjective: Superlative degree
- The adjective: Positive, comparative, superlative
- The adjective: Spelling changes
- The adjective: Classification

## The verb

- The verb: Oral introduction - Two significant parts of speech
- The verb: Grammar box

- The verb: Impressionistic chart of noun family and verb
- The verb: Transposition
- The verb: Command cards
- The verb: Tenses (present, past, future, perfect tenses)
- The verb: Transitive/intransitive verbs
- The verb: Reflexive pronoun/verb
- The verb: Active/passive voice
- The verb: Mood

- The verb: Other forms of the verb (progressive, negative, intensives, interrogative)
- The verb: Conjugation

## The preposition

- The preposition: Oral introduction
- The preposition: Grammar box
- The preposition: Transposition
- The preposition: Command cards

## The adverb

- The adverb: Oral introduction

- The adverb: Grammar box
- The adverb: Transposition
- The adverb: Command cards

## The pronoun

- The pronoun: Oral introduction
- The pronoun: Grammar box
- The pronoun: Command cards
- The pronoun: Declension of pronouns - Subjective/objective cases

## The conjunction

- The conjunction: Grammar box
- The conjunction: Transposition
- The conjunction: Command cards
- The conjunction: Parallelism
- The conjunction: Classification

## The interjection

- The interjection: Grammar box

## Simple sentence analysis

- Sentence analysis: Writing analysis on paper
- Sentence analysis: Sentences with modals
- Sentence analysis: Sentences with verbals
- Sentence analysis: Participles
- Sentence analysis: Infinitives

## Action verb (arrows/circles with questions/names)

- Sentence analysis: Subject and predicate
- Sentence analysis: Direct object
- Sentence analysis: Compound predicate
- Sentence analysis: Compound subject
- Sentence analysis: Compound direct object
- Sentence analysis: Special cases - Multiple compounds
- Sentence analysis: Subject, Simple predicate, Direct object, indirect object
- Sentence analysis: Attributives
- Sentence analysis: Appositive
- Sentence analysis: Adverbial modifiers
- Sentence analysis: Elliptical construction

- Sentence analysis: Direct object (same name?)
- Sentence analysis: Inverted order (question, emphasis, poetic construction)
- Sentence analysis: Personal pronouns
- Sentence analysis: Long simple sentence
- Sentence analysis: Analysis of simple sentences with action verb using chart A
- Sentence analysis: Identifying noun of direct address using chart A
- Sentence analysis: Linking verbs

### Clause analysis

- Clause analysis: Compound sentences
- Clause analysis: Using "names only" arrow material
- Clause analysis: Writing the analysis on paper
- Clause analysis: Analysis of compound/complex sentence

### Analysis of complex sentences

- Clause analysis: Adjectival clause
- Clause analysis: Adverbial clause
- Clause analysis: Direct object clause
- Clause analysis: Indirect object clause
- Clause analysis: Subject clause
- Clause analysis: Using chart B (illustration)
- Clause analysis: Incidental clause

### Dependencies of clauses in complex sentences

- Clause analysis: Using dependency circles (I, II, III, IV, V)
- Clause analysis: Using chart C

### Style

- Enrichment of vocabulary
- Grammar symbols

### Literacy

- Interpretive reading cards

### Reading

- Assessing the reading ability of a child
- Limiting the task
- Alphabet – sounds (flashcards)
- Puzzle words (flashcards)
- Blending to form phonetic words
- Reading phonetic words

- Alphabet – names
- Phonograms
- The silent 'e'
- Language experience books
- Labeling the environment
- Alternative sounds for phonograms
- Reading phrases and sentences
- Function of words commands
- Nomenclature – words and definitions
- Reading schemes and books
- Listening to a child read
- Reading miscue analysis
- Reading tests – reading inventories

### Spelling

- Spelling strategies
- Spelling phonograms and puzzle words
- Spelling lists
- Spelling contractions
- Spelling homophones
- Spelling dictation
- Spelling analysis

### Handwriting

- Activities related to handwriting
- Pencil grip and posture
- Letter formation - initial stroke method - letter families

### Joining letters

- Writing capital letters
- Calligraphy and lettering

- Handwriting analysis (size, slope, formation, joins, spacing, attractiveness, fluency)

### Written expression

### Skills

- Sentence building: Parts of speech
- Sentence building: Phrases
- Sentence building: Clauses
- Sentence construction
- Punctuation: The capital letter

- Punctuation: The period
- Writing paragraphs
- Writing a essay
- Editing
- Research and papers
- Writing reports
- Parts of a book
- Taking notes
- The report

### Techniques

- Figures of speech
- Other literary forms
- Sentence structure for effect
- Show, don't tell
- Plot
- Characterization
- Consider what to include/omit in a description
- Include a hook in the beginning

### Genres

- Initial written expression activities
- Prose
- Poetry
- What to write when you're not writing a story
- What to do when you're not writing a book report
- Breaking through writer's block

### Literature

- Making timelines
- Key lessons
- Literature: Interpretation of cover and illustrations
- Literature: Vocabulary
- Literature: Spelling
- Literature: Punctuation conventions
- Literature: Literary devices
- Literature: Comprehension
- Literature: Setting
- Literature: Characterization

- M Literature: Plot
- M Literature: Theme
- M Literature: Point of view
- M Literature: Style & voice
- M Literature: Afterward
- Genres
  - M Expository or explanatory writing
  - M Creative writing
  - N Journals and diaries
  - N Letters
  - I Dialogue
  - N Descriptive writing
  - M Poems
  - I Essays
  - I Biography and autobiography

- M Speeches
- Elocution
- M Presenting poetry
- I Debates
- M Drama
- N Summary

### Spanish

- M Understands and responds to greetings in Spanish
- M Identifies and pronounces vocabulary of the classroom
- M Identifies and names colors
- N Geographically locating all the Spanish-speaking countries of the world
- M Understands vocabulary about emotions and feelings
- M Studies and spells diverse vocabulary in Spanish
- N Recognizes concepts and vocabulary about celebrations in Spanish-speaking countries
- M Recognizes families of letter (m and p) and their pronunciation
- M Use correct pronunciation for greetings and others words in simple dialogues

### Spoken language

- M Oral reports

- N Apply correct pronunciation and knowledge of **Figures** about Thanksgiving
- N Practice simple commands and phrases during the day in Spanish
- M Understand and recognizes vocabulary about food and the process involves to prepare dishes
- M Demonstrate grace, courtesy and positive disposition in each lesson
- M Understand and recognizes "Articulos"(articles) and "Sustantivos"(noun)
- M Practice mini conversations every day
- N Understand and recognizes "Verbos" (verbs) on the speech
- N Recognizes and respond to questions like: "Que paso?, Como estas?, Donde esta? and Que es eso?"
- M Understand and practice some vocabulary about food
- M Understand and practice mini-conversations about food every day
- N Identifies "sustantivos, articulos and verbos" in short phrases
- N Participate in games about "sustantivos, articulos and verbos".
- N Practice vocabulary about actions (verbos)
- N Shows self-control and respect to classmates and teachers during the develop of the lessons
- Apply grace and courtesy

Art

- Modified countour drawing (your own hand)
  - Draw something by drawing nothing (chair)
  - Ten steps of gradation from black to white
  - Draw a sphere
  - Crosshatching
  - Stippling
  - Size and position on the paper relates to distance of object from artist
  - Relationships/perspective - sighting (pencil and group portrait)
  - Vanishing point
  - Overlap indicates what is in front and what is behind
  - Art history - Seurat and Pointillism (colored pencil)
  - Weaving (Valentine's day woven heart)
  - Craft - God's eye (threads and textiles)
  - Drawing faces
  - Story of the created image
- Sewing
- Threading a needle
  - Sewing a seam
  - Sewing clothing/ costume

Weaving on a loom

- Weaving on a cardboard loom
- Weaving on a table loom

Embroidery

- Following a pattern
- Creating an embroidery piece

Knitting

- Using knitting needles
- Knitting a piece

Crochet

- Using a crochet needle
- Making a crocheted piece

Painting

- Watercolor
- Acrylic Paint
- Oil Paint
- Crayon Resist

Collage

- Introduction to collage

- Making a collage project

Making stationery for the school

- Decorating a note card
- Decorating and/ or making an envelope

The Lives of Artists

- Cave painters
- Leonardo da Vinci
- Michaelangelo
- Georgia O'Keefe
- Leo Nello Rotelli

Art appreciation

- Looking at art
- Forms of Art
- Comparing two or more pieces of art

The Elements of Art

Three-dimensional art

- Making a sculpture
- Making a mobile
- Making a diorama