

APPENDIX II – 27



MARZANO Research

Montessori in the Public Sector

Examining the Montessori Approach at
Drachman K–8



The research department at Marzano Research supports partners in improving education systems, practices, and outcomes for all learners.

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Montessori in the Public Sector

Examining the Montessori Approach at Drachman K–8

Prepared for

Tucson Unified School District

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INTRODUCTION

The Tucson Unified School District (TUSD) contracted with Marzano Research to evaluate the implementation of Montessori practices at one of its magnet schools. The purpose of the evaluation was to assess the strengths of the school in its implementation of the Montessori approach and identify potential areas for improvement. The evaluation project started in March 2018 and was completed in May 2018.

The school, Drachman Montessori, is an established magnet public school that serves students in kindergarten through eighth grade. Marzano Research partnered with the National Center for Montessori in the Public Sector (NCMPS) to conduct the evaluation. NCMPS provided expertise in the implementation of Montessori practices in the classroom and at the administrative level.

OVERVIEW OF PROJECT

In response to the questions that TUSD posed, Marzano Research formatively evaluated the implementation of the Montessori approach at Drachman Montessori. Formative evaluation helps decision-makers understand the context of the implementation and aids school leadership in identifying opportunities for improvement.

Because Drachman Montessori identifies as a Montessori Public School, Marzano Research worked with NCMPS to ensure that the Montessori program, especially classrooms, were evaluated by the appropriate Montessori Public School standards.

Project activities included a multiday site visit by NCMPS and Marzano Research staff, interviews with the Drachman Montessori principal and lead teachers, a review of current teacher certification data, and an alignment of Montessori classroom standards to TUSD walkthrough rubrics.

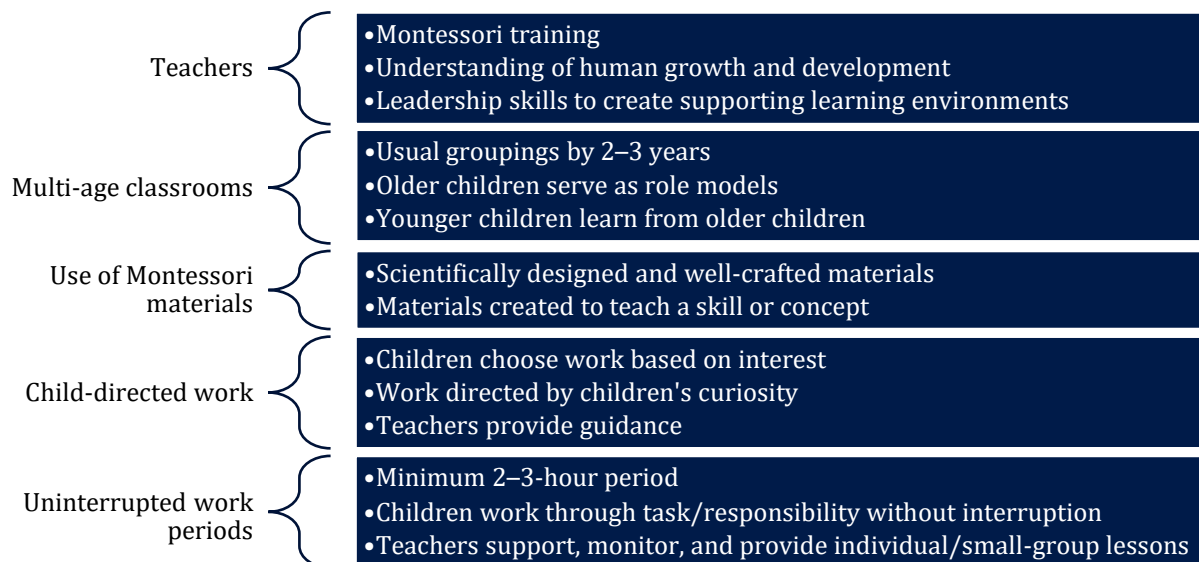
BACKGROUND

The Montessori method, developed by Maria Montessori (1870–1952), is a scientifically developed, child-centered, educational approach that identifies requisite elements for children to deeply learn.

MONTESSORI ESSENTIAL COMPONENTS

The Montessori method identifies five core components vital to quality implementation: properly trained Montessori teachers, multi-age classrooms, use of Montessori materials, child-directed work, and uninterrupted work periods (American Montessori Society, n.d.-b). Figure 1 provides a summary of each of these components.

Figure 1. Montessori Method Essential Components (American Montessori Society)



Applied at the early childhood level (ages 3–5), the Montessori method engages children through sensory-motor activities that develop cognitive ability through direct engagement with materials. At the elementary level (ages 6–9 and 9–12), teachers encourage students to organize their thinking around the specifically designed learning materials. The curriculum administered by Montessori teachers is interdisciplinary, and children have opportunities to apply knowledge to real-world experience. To prepare students for adolescence, learning at the elementary level is organized so that students will be able to understand more abstract concepts at the secondary level (American Montessori Society, n.d.-b).

Because of the objectives of the Montessori approach, classrooms in a Montessori school look different than those in traditional schools. In a Montessori school, students actively

work with age-appropriate materials for extended periods of time. Classrooms are comprised of students from multiple age groups. Teachers observe students as they work and identify appropriate next lessons for their development. All aspects of the education system are designed to meet the needs of the child (American Montessori Society, n.d.-b). Figure 2 outlines the primary differences between conventional and Montessori classrooms.

Figure 2. Conventional Classroom and Montessori Environment Comparison

CONVENTIONAL CLASSROOM		MONTESSORI ENVIRONMENT
Textbooks, Pencil and paper, Worksheets	→	Hands on materials, developed to enable discovery, self-correction, independence; Specially developed reference materials
Intellectual and social development disconnected	→	Working and learning matched to the social development of the child
Narrow, unit-driven curriculum	→	Unified, time-tested curriculum
Individual Subjects	→	Integrated subjects and learning based on developmental psychology
Block time, period lessons	→	Uninterrupted work periods
Single-graded classrooms	→	Mixed age classrooms
Students passive, quiet, at desks	→	Students active, talking with periods of spontaneous quiet, freedom to move
Students fit mold of school	→	School meets needs of students
Students leave for special help	→	Special help comes to students
Standardized, norm-referenced assessment	→	Process-focused assessment, skills checklist, mastery benchmarks

Note. Reprinted from National Center for Montessori in the Public Sector (n.d.-b).

PUBLIC SCHOOL CHALLENGES

The growth of Montessori schools in the public sector coincided with the growth of the charter school movement. NCMPS (2014) reported that over 300 new public Montessori programs have opened since 2000. Montessori public schools strive to implement the method with fidelity to the model. However, these schools face a number of challenges because of the need to meet district standards, administer district and state assessments, and follow district initiatives. As a result, Montessori public schools frequently have to make modifications to the model to meet these requirements (Benham, 2010).

In addition, Montessori public schools often experience enrollment challenges. For example, because the Montessori method involves a cumulative approach to cognitive development, students are encouraged to begin schooling at age 3 or 4. When students enroll at later ages, without similar opportunities for cognitive development or familiarity with the Montessori approach, both Montessori teachers and already enrolled students are challenged to accommodate them (American Montessori Society, n.d.-b). Another essential element of the Montessori method is mixed age groupings, which means that school administrators need to closely control and monitor enrollment into the school at each level (American Montessori Society, n.d.-b). Oftentimes, Montessori public schools are unable to control enrollment to such a degree and must make accommodations that are not part of the Montessori approach. For example, a Montessori school with an influx of students at a particular grade level may have to have a single-age-group classroom to provide students with exposure to the Montessori method prior to assimilation.

Path to School Accreditation

In the United States, the path to school accreditation has been supported by the American Montessori Society (AMS) and, previously, by the Montessori School Accreditation Commission (MSAC), which merged with AMS in 2006. School accreditation requires meeting nine distinct standards, including having a strong mission and consistent-with-Montessori-practices vision, strong governance and leadership, teaching and learning aligned with a Montessori curriculum and instructional methods, sound financial management, and engaged stakeholders (AMS, n.d.-a).

To maintain accreditation, schools must submit annual reports that document compliance with the nine standards. The need for accommodation to public school settings results in very few public schools receiving AMS accreditation. Of the 520 public Montessori schools in the United States, only 10 percent have currently received accreditation through AMS (AMS, n.d.-a).

Teacher Certification

Another unique aspect for Montessori schools in the public sector is teacher training and certification. To teach in the public school system, and to teach Montessori curricula,

educators are required to have state certifications and are encouraged to have additional Montessori training. In addition to AMS, the Association Montessori International (AMI) and the North American Montessori Center (NAMC) are national providers of Montessori training certifications. Minimum requirements for each training certificate differs by the multi-age grouping level.

DRACHMAN MONTESSORI K-8

As of 2016, Drachman Montessori served students from kindergarten through seventh grade. The school enrolled over 300 students, many of whom were eligible for free or reduced-price lunch. Students were predominantly Hispanic, although White, Black, and multiracial students were also enrolled. Approximately 48 percent of students were female (Arizona Department of Education, n.d.).

Because the school was—and still is—in the process of expanding to serve middle school students, 87 percent of students enrolled in 2016 were in kindergarten through fifth grade. The average number of students across grade levels was 47 students at the elementary level (K-5) and 21 students across grades at the middle school level (Arizona Department of Education, n.d.).

METHODS

Marzano Research and NCMPS partnered to evaluate the Montessori program at Drachman Montessori K-8. The evaluation consisted of four components: assessment of fidelity, which included classroom and school observations; school leader interviews; teacher certification review; and programmatic alignment of TUSD walkthrough rubrics with Montessori standards. Descriptions of each data collection method are outlined below.

ASSESSMENT OF FIDELITY

To assess fidelity, the evaluation team used rubrics developed by NCMPS. Evaluators used the Developmental Environmental Rating Scale (DERS) to assess fidelity of Montessori implementation in the classroom and the Essential Elements Rubric (EER) as a guiding document to understand and assess the implementation of Montessori methods at the school level.

These tools are publicly available on the NCMPS website and can be used to by external organizations to assess fidelity or to measure progress internally.

Classroom Observations

NCMPS conducted roaming observations in all Drachman Montessori classrooms over the course of two days, using the DERS to assess fidelity of Montessori implementation in the classrooms. The DERS is a tool used for classroom observation administered via an application on an Apple iPad. The DERS measures qualities in the classroom that support the development of executive function, literacy, and social-emotional learning. The areas measured by the tool focus on five outcomes of executive function and related developmental skills: (1) initiation and concentration; (2) inhibitory control; (3) working memory; (4) linguistic and cultural fluency; and (5) social fluency and emotional flexibility.

Trained observers administering the tool typically spend approximately one hour in a classroom. During the observation, the observer rates children, teachers, and the environment on 60 attributes. The platform allows an observer to rate, revise ratings, and add notes about observed attributes. Examples of the attributes rated for children include behaviors such as social graces, handling materials with care, and engaging with purpose.

Observed attributes align with one or more of the five outcomes. After the observation is complete, the application computes summary scores for each of the five outcomes of executive function and related developmental skills. It also provides counts of the total number of attributes observed and the total number of Montessori-aligned attributes observed in each of the five areas.

School Observations

Using the EER, NCMPS also reviewed the implementation fidelity of the Montessori approach at the school level. This rubric includes five domains for review: adults, Montessori learning environment, family engagement, leadership and organizational development, and assessment. Within each domain are specific standards that demonstrate fidelity of implementation for a school. For each standard, the school can be rated as *unsatisfactory*, *needs improvement*, *satisfactory*, and *exemplary*. The Essential Elements Rubric is provided in Appendix A.

SCHOOL LEADER INTERVIEWS

Another key aspect of evaluating Montessori environments is engaging with leadership. Montessori leadership are expected to articulate the logic and language of Montessori (NCMPS, n.d.-a). Marzano Research and NCMPS interviewed Jesus Celaya, the principal of Drachman Montessori, using both the NCMPS Principal Interview Rubric and an additional open-ended interview protocol developed by Marzano Research. The Principal Interview Rubric is provided in Appendix B and the interview protocol in Appendix C.

TEACHER CERTIFICATION REVIEW

Marzano Research requested a list of Montessori teacher certifications from Drachman leadership. For all teachers who had completed certification, school leaders provided information about the levels of certification and organizations providing the certification. In addition, they provided information about teachers who were planning to begin the certification process in the coming months.

PROGRAMMATIC ALIGNMENT

Marzano Research and NCMPS reviewed both the “Tucson Support & Innovation Team Classroom Walkthrough” and the DERS. We developed a crosswalk to summarize the alignment of the classroom environment and instruction standards.

EVALUATION FINDINGS

Through the data collection process, Marzano Research and NCMPS learned about the Montessori program at Drachman Montessori K-8. This section outlines findings from the assessment of fidelity, interviews, teacher certification review, and programmatic alignment.

ASSESSMENT OF FIDELITY

NCMPS evaluators used the DERS to assess the fidelity of implementation at the classroom level and the EER to assess fidelity at the school level in five domains (adults, Montessori learning environment, family engagement, leadership and organizational development, and assessment).

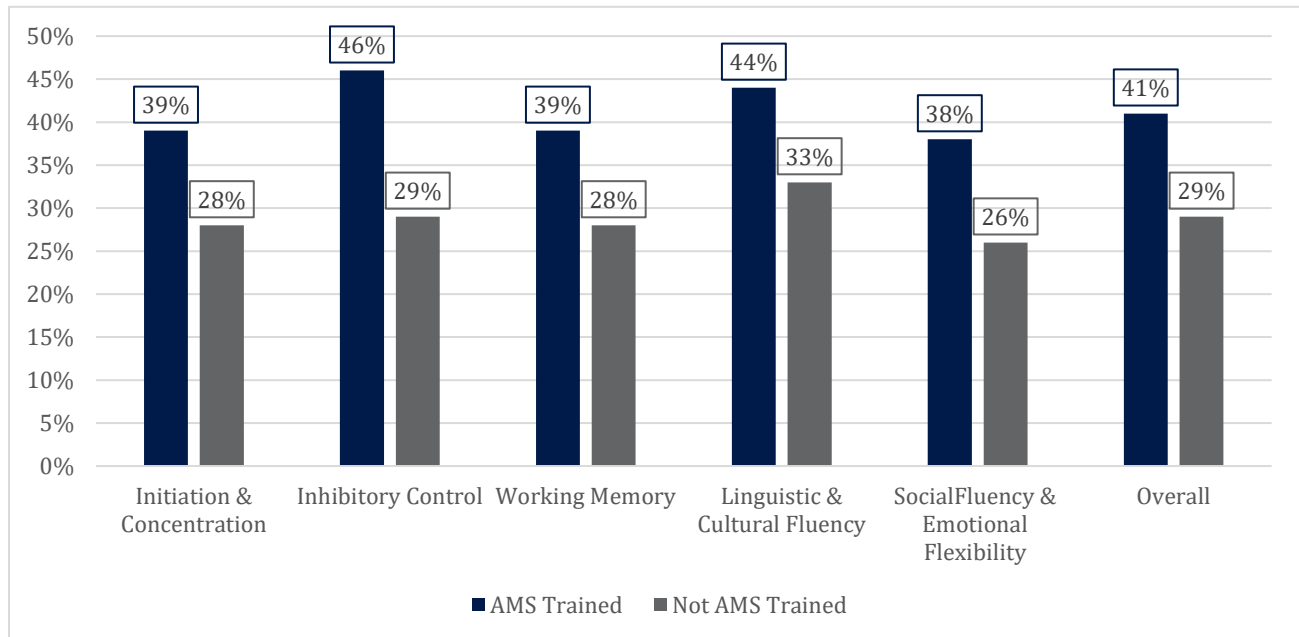
Classroom Fidelity

NCMPS visited classrooms at Drachman Montessori for two days. The team focused primarily on elementary school classrooms but had an opportunity to visit middle school classrooms as well. Using the DERS, NCMPS evaluators rated classrooms on child and adult behaviors and environmental attributes.

NCMPS evaluators visited seven Drachman Montessori classrooms over the course of two days. The duration of each visit lasted from 4 to 28 minutes, with an average duration of 17 minutes. The evaluators visited kindergarten through fourth grade classrooms that included teachers with AMS training (3), NAMC training (2), and no formal Montessori training (2). Four of the seven classrooms included multi-age groupings. The number of years of experience for observed teachers ranged between 1 to 36 years. Marzano Research calculated an overall percentage score from the DERS.

Overall, NCMPS evaluators observed a greater proportion of Montessori-aligned behaviors in classrooms taught by AMS-trained teachers (Figure 3). Observed strength areas for AMS-trained teachers included both “Inhibitory Control” and “Linguistic and Cultural Fluency.” For non-AMS-trained teachers, an observed strength area was “Linguistic and Cultural Fluency.”

Figure 3. Average DERS Observation Scores by Type of Teacher Training



Adult Behaviors. NCMPS evaluators observed a range of Montessori-aligned adult behaviors in the classroom. Across all classrooms observed, teachers demonstrated social graces and warmth and connection with students as they moved or bent to speak to children. Generally, teachers spoke calmly, softly, and with clarity when interacting with students. Teachers showed “friendliness with error,” which means that they encouraged students to continue problem solving even when the children did something incorrectly. Adults shared enthusiasm for student accomplishments but did not unnecessarily praise student work.

The evaluators also noted some behaviors teachers could modify to better align with the Montessori approach. For example, in some classrooms, teachers interrupted students who were concentrating; warned students about things that were incorrect in their work; spoke in loud, didactic voices; or called across the room.

Child Behaviors. NCMPS evaluators characterized observed classrooms as having the low hum that is indicative of children working collaboratively and independently. Children interacted with one another and teachers with joy, and they navigated their environment with intention. Children waited patiently for their turns and demonstrated comfort in working with adults. The evaluators noted that many children were initiating work, resolving needs with words, and handling materials with care.

The evaluators noticed some behaviors that could be modified to better align with the Montessori approach, including decreasing the frequency of students interrupting and

disrupting peer work. Although students navigated their environment with intention, they did not demonstrate caring for the classroom. Additionally, students did not have the opportunity to complete a work cycle (a 2–3-hour interrupted work period).

Environmental Attributes. NCMPS evaluators further noted several classroom environment attributes that align well with the Montessori approach. One commonality across all classrooms included child-sized furniture and the presence of digital technology. Overall, teachers maintained clean classrooms and ensured that learning materials were ready for use. Half of the observed classes included mixed-age groupings.

Students did not have access to real tools and real work (i.e., gardening). Although the courtyard is a major feature of the school, the evaluators observed that students did not interact with nature during the work period.

School Fidelity

Drachman Montessori received ratings on the EER that varied substantially across the five domains. The following subsections summarize the findings of the school alignment to the Montessori approach for each domain. A copy of the full report by NCMPS can be found in Appendix D.

Adults. This domain assesses Montessori teacher training, Montessori teacher support by an assistant, and overall implementation of core Montessori principles by adults. Drachman Montessori performed unevenly in this domain. Exemplary performance was evident in the positive school culture promoted by adults and in teacher–student interactions that support age-appropriate development. NCMPS noted that adults engaged with students respectfully, speaking clearly and softly and inviting children to engage in meaningful work. However, Montessori teacher certification and teacher assistant training were two areas that received *unsatisfactory* ratings. Implementing the Montessori model with high fidelity would require that 90 percent of teachers would be fully trained with the appropriate certification and each classroom would be staffed with an assistant trained Montessori assistant.

Montessori Learning Environment. This domain assesses the classroom as well as the school. Standards include multi-age groupings for children, uninterrupted work periods, and access to a prepared outdoor environment. Drachman Montessori was rated *satisfactory* in only one standard of this domain: *The learning environment offers appropriate access to a prepared outdoor environment*. The Drachman campus includes a courtyard area with decorative plants, a garden, and a chicken coop for children to tend. This courtyard area is an excellent space for children to work and aligns well with an essential element of a Montessori school.

In the remaining domains, however, Drachman Montessori scored *unsatisfactory* or *needs improvement*. Some of these standards include having multi-age classrooms, 2.5-hour

morning work periods, specialty programs integrated into work periods, and a work environment that offers access to real-world materials and activities.

Family engagement. This domain assesses the relationship between the home and school as well as opportunities for family education. With limited time for observation, NCMPS did not evaluate all standards for family engagement. However, evaluators rated Drachman Montessori as *satisfactory* on building a strong partnership between home and school in formal and informal communications. The school maintains an active website, and classrooms distribute newsletters and other communications that are translated into the languages of the school population. In addition, to facilitate family engagement, Drachman Montessori makes an effort to hire faculty and staff that reflect the community it serves.

Leadership and organizational development. This domain assesses the certification of school leadership and the engagement of adults in Montessori practices and professional development. Drachman Montessori was rated *exemplary* in adult interactions demonstrating respect, grace, and courtesy. The school was rated *satisfactory* on three standards: engagement of all adults in Montessori professional development; membership in a Montessori professional organization; and funding for Montessori training in the school budget.

However, Drachman Montessori was rated as *needs improvement* in its evaluation of teachers. Teachers are currently evaluated under the Danielson Framework for Teaching, which does not reflect Montessori practices, and are required to follow a scope and sequence that conflicts with Montessori pedagogy.

Assessment. The standards in this domain require assessments to be delivered in the least obtrusive manner possible and students, as they mature, to be involved in monitoring their own progress. NCMPS evaluators rated Drachman Montessori as *unsatisfactory* and *needs improvement* on these standards. The evaluators noted that preparing for tests appears to be a driver of the school's program and that testing windows seem to take over an entire school day. Instead of having students develop work plans and manage their own time and productivity, Drachman Montessori teachers were observed assigning work to students.

SCHOOL LEADER INTERVIEWS

Marzano Research posed questions regarding the history of Drachman Montessori under Celaya's tenure, specific challenges experienced, key supports provided by the district, and school growth over time. Themes that emerged from the interview are discussed in detail below.

Establishing Montessori Culture

Over the past 12 years, Celaya has made concerted efforts to move Drachman Montessori toward a high-fidelity implementation of the Montessori approach, embracing its vision

statement: “Drachman Montessori’s community nurtures the whole child.” After observing the school for several years during his initial tenure, Celaya learned about the community, the staff supporting the education of the students, and the students themselves. In 2010, Celaya began his Montessori administrator certification process and started consultations with Montessori experts who provided guidance on managing the challenges of implementing the Montessori approach in the public sector.

Since 2010, Celaya has envisioned Drachman Montessori as a school with the potential to be Montessori accredited, which is particularly challenging for a public school. Celaya communicated this vision to staff and, with strong support from TUSD, has allocated resources to Montessori certification and professional development for teachers and has ensured that a growing number of Montessori materials are accessible for students. The school has an increasing number of classrooms with multi-age groupings and has teaching assistants supporting some of these classroom, as resources allow. All of these efforts are consistent with EER indicators for successful Montessori implementation (NCMPS, n.d.-a).

Navigating Requirements of the Public Sector

Celaya has made a number of adjustments to the Montessori approach to accommodate public school requirements. Drachman Montessori has adopted the Danielson Framework for Teaching for educator evaluations. Although there is some overlap between the Danielson framework and the DERS, using a framework not designed for the Montessori approach can lead to misinterpretation of Montessori methods. For example, Domain 1 in the Danielson framework recommends setting instructional outcomes, which may lead a teacher to have a classroom objective (Danielson Group, 2013). However, in the Montessori method, objectives are student-directed through teacher support, so a teacher implementing the Montessori method with fidelity might be rated low on this domain under the Danielson framework.

Drachman Montessori is also a Positive Behavioral Interventions and Supports (PBIS) school. PBIS encourages a multi-tiered approach to social and emotional behavior support by providing incentives for appropriate student behaviors. This approach is not aligned with the Montessori method. Instead of providing external rewards, which are viewed as temporary, Montessori educators should nurture a student’s intrinsic motivation through the Montessori lessons and materials (AMS, n.d.-b).

To accommodate the demands of high-stakes standardized testing, Drachman Montessori has made a number of changes to both the education structure and organization of the class schedule. For example, the school has allocated specific time blocks to English language arts (ELA) and mathematics literacy, including quarterly benchmark testing. In the Montessori approach, students are provided with 2–3-hour blocks to perform uninterrupted work of their choosing. During this period of time, teachers provide small-group lessons to children, based on their educational needs. In traditional education models, classrooms have whole-group instruction with, for example, blocks of time

allocated to ELA and math literacy. However, this practice inhibits the implementation of the 2–3-hour work period.

Drachman Montessori also has a gifted and talented track and a special education track for students. These two tracks were established to meet parent and district expectations. However, in the Montessori method, there are no gifted and talented or special education tracks. Instead, students are integrated into the multi-age classroom, and teachers with their assistants meet each student’s individual learning needs (Tittle, 1984).

Engaging Families

Educators at Drachman Montessori have implemented a variety of strategies to engage families. During the 2010-11 school year, Celaya promoted an initiative for teachers to visit the homes of children currently attending the school. This initiative has been a priority and has adapted to the community’s needs over time. During the 2017-18 school year, educators aimed to meet with every family by the end of September. Usually, this interaction occurs at parent–teacher events; however, if parents are unable to attend these events, teachers connect with them when it is most convenient.

Drachman Montessori also hosts regular events throughout the school year for families and the neighboring community to attend. These events are designed to educate families on Drachman Montessori and encourage engagement between the school and community.

Celaya, with support from the district, the magnet programs department, and parents, has maintained an active media presence. Celaya regularly updates the Drachman Montessori Facebook page with information about events and activities at the school. Families of students and members of the neighboring community follow and actively engage with the Facebook posts. Celaya also uses the district-provided “parent link” to regularly update parents and families on school happenings.

TEACHER CERTIFICATION REVIEW

Drachman Montessori teachers have certifications from both NAMC and AMS. AMS training is provided by schools implementing the Montessori approach, and certificate completion can vary slightly by school. NAMC certification is a distance-learning program, and certification completion requires a minimum of seven months (depending on the certificate level) with approximately seven hours of work each week. Because learning is online, the practicum, student teaching, and additional hours may not be part of the program.

In contrast, the AMS certification requires in-person training. Most certifications require student teaching (120 hours or more). Minimum academic hours include lectures, group process and discussion, and supervised practice with materials. Additional hours can consist of independent research, material making, album preparation, additional student

teaching, or additional academic contact hours. (Montessori Accreditation Council for Teacher Education, 2016).

Table 1 displays a comparison of the requirements for certification under these two programs.

Table 1. Comparison of AMS and NAMC Requirements

Training Certificate Level	AMS (in-person training)	NAMC (distance learning)
Infant Toddler (0-3)	200 academic hours 400 practicum hours	7 months (minimum 120 academic hours)
Early Childhood (2.5-6)	200 academic hours 400 practicum hours 120 student teaching hours	7 months (minimum 210 academic hours)
Elementary I (6-9)	200 academic hours 400 practicum hours 120 student teaching hours 200 additional hours	9 months (minimum 180 academic hours)
Elementary I-II (6-12)	375 academic hours 400 practicum hours 125 student teaching hours 425 additional hours	9 months (minimum 180 academic hours)

Note. Currently, the school accreditation process requires teachers to have certifications from AMS, AMI, or NAMC.

Because Drachman Montessori is implementing the Montessori method from kindergarten through fifth grade, Marzano Research reviewed the Early Childhood and Elementary I certifications, which include children from age 2.5 through age 9.

Currently, 55 percent of elementary teaching staff at Drachman Montessori are reported to have certifications—22 percent certified by NAMC and 33 percent by AMS. Additional teachers at Drachman Montessori plan to begin the certification process over the summer months. With this additional training, 83 percent of teachers will have some formal training by the beginning of the 2018/19 school year. Descriptions of the percentages of teachers with Montessori certifications are provided in Table 2.

Table 2. Current and Future Drachman Montessori Teachers with Formal Montessori Training

Montessori Certification	2017/18	2018/19
AMS Training	33%	61%
NAMC Training	22%	22%
Total	55%	83%

Note. These calculations include only K-5 and lead teachers.

PROGRAMMATIC ALIGNMENT

Marzano Research conducted an alignment between Domains 2 and 3 of the “Tucson Support & Innovation Team Classroom Walkthrough” and the DERS classroom observation tool, which measures fidelity to the Montessori model. Many of the elements in the Tucson classroom walkthrough align to the DERS. In this section, we provide some highlights of the alignment. Complete information about the alignment is presented in Appendix E.

In Domain 2 (the Classroom Environment), 90 percent of the elements in the Tucson classroom walkthrough aligned with elements in the DERS. The unique features of a Montessori classroom should be considered when observing two of the Tucson classroom walkthrough elements:

1. “When asked by an observer, students can state what they are learning.”
2. “Little or no loss of instructional time.” (TUSD, 2017)

In contrast to element 1, children should not be interrupted while working in the Montessori approach. While one would expect children to be able to state what they are learning because their work is self-directed, the model stipulates not to interrupt.

Instructional time also looks different in the Montessori model. Element 2 refers to a teacher using instructional time appropriately. In a traditional classroom, a teacher might provide whole-group instruction. However, in the Montessori model, students choose their work, and teachers, during the work period, provide instruction to small groups or observe students without interrupting them.

In Domain 3 (Instruction) of the Tucson classroom walkthrough, 80 percent of the elements align with the DERS. Five of the 31 elements do not have counterparts in the DERS. Table 3 outlines the elements from Domain 3 that are not applicable to the Montessori method.

Table 3. Tucson Classroom Walkthrough Domain 3 Elements and the DERS

Tucson Domain Elements	Montessori Method Explanation
The teacher states clearly, at some point during the lesson, what the students are learning. Evidence of objective posted/articulated/aligned to lesson.	Students are engaged in self-directed work, and, as a result, may not be concurrently engaged in the same content; therefore, a teacher-stated objective does not apply. However, if observers were present during small-group lessons, Montessori teachers would articulate the objective.
Questions are related to the lesson objectives.	Because students' work is self-directed, each student may have different lesson objectives. This domain may appear differently in a Montessori classroom.
The teacher makes effective use of wait time.	Because there is little whole-group instruction, observers would generally not see strategies such as wait time demonstrated. Students are engaged in self-directed work with little teacher interaction during the work period. However, if observers were present during small-group lessons, wait time could be observed.
The teacher calls on most students, even those who don't initially volunteer.	Because there is little whole-group instruction in a Montessori classroom, teachers rarely call on students.
The teacher elicits evidence of individual student understanding during the lesson.	Students are not expected to develop understanding during teacher-directed lessons in a Montessori classroom. Instead, students develop understanding after the initial presentation, during periods of experimentation and practice. During these work periods, teachers observe student work and intervene, when necessary, to support student learning.

The alignment indicated that district observers should be able to see a majority of district requirements when they conduct walkthrough observations of Drachman Montessori classrooms.

CONCLUSIONS

STRENGTH AREAS

Drachman Montessori has been actively engaged in improving its Montessori program by creating a peaceful school culture, having stable leadership and consistent vision, and strategically building both teacher and school capacity for the implementation of the Montessori method.

Demonstrating Peaceful School Culture and Climate

During the site visit to Drachman Montessori, both the Marzano Research and NCMPS noted the peaceful culture at the school. When we observed teacher–student engagement, both teachers and students interacted calmly and respectfully. Relationships among staff and faculty appeared positive and supportive, with conversations naturally occurring in shared spaces. During the teacher meeting at the conclusion of classroom observations, teachers actively participated in the discussion with NCMPS, clarified recommendations among themselves, and generally appeared to be comfortable with collaboration.

In the Montessori method, peaceful school culture is directly tied to the learning environment. In addition to respectful, positive, and supportive relationships, Drachman Montessori offers access to a prepared outdoor environment in the school’s courtyard.

Providing Stable Leadership with Vision

Drachman Montessori has been under the consistent leadership of Celaya since fall 2006. Celaya was eager to work at the school, as he was familiar with the Montessori approach of multi-age groupings and choice from his previous teaching experience.

Celaya first expressed his vision for Drachman Montessori to all staff, faculty, parents and administrators in 2008. This vision continued to develop as Celaya received Montessori administrator training from summer 2009 through summer 2011. In fall 2010, Celaya presented “Drachman Foundations for Montessori Standards & Accreditation,” in which he outlined essential components for the program at Drachman Montessori and the expectations of teachers, faculty, students and families that ranged from Montessori professional development to connecting with the community.

Every year, Celaya presents “Drachman Foundations for Montessori Standards & Accreditation” with reflections on progress from the previous year, expectations and opportunities to grow in the coming year, and an expression of his continued commitment to the staff, faculty, and students. Through these efforts, Celaya promotes a consistent vision of the future to school administrators, faculty, and support staff.

Increasing Montessori-Trained Teachers

Drachman Montessori, like many schools in Arizona, has struggled with retaining teachers, especially those with additional Montessori certification. Celaya reported that Montessori-trained teachers had previously left Drachman to teach at private Montessori schools because of financial incentives. However, Celaya, with TUSD support, has provided resources to support teacher certification in the Montessori approach. By providing this funding for teaching training, Drachman Montessori is addressing one of the essential elements of a successful Montessori school in the public sector. More than 80 percent of teachers will begin the fall 2018 school year with some level of formal Montessori training.

Strategically Building Teacher and School Capacity

Systematic efforts have been made to build the school capacity of Drachman Montessori. For many years, Drachman Montessori offered K-6 education. However, over the past several years, the school has had district support to grow into a middle school program, offering sixth, seventh, and eighth grade for Drachman students.

Although there is no formal Montessori middle school model to emulate, the NCMPS team noted that the Drachman middle school structure appears to be Montessori inspired and that the peaceful school culture and climate extends to the middle school program.

Celaya has carefully administered the process to grow into a middle school and increase the number of mixed-age groupings. Recruiting, retaining, and consulting with teachers on their experiences, comfort levels, and opportunities to slowly build classroom management capacity have allowed Drachman Montessori to move closer to implementing the Montessori approach with fidelity. Strategies that Celaya has encouraged include allowing teachers to determine whether they prefer single-age or multi-age classrooms and whether they would be willing to loop with students.

Additionally, Celaya has implemented a lead teacher structure in Drachman Montessori. The lead teacher is responsible for providing direct supports to teachers as they implement the Montessori model. With hundreds of pieces of curriculum to implement and a range of student needs to meet, lead teachers are able to support, guide, and be models for teachers as they work to align their practice with the Montessori method.

IMPROVEMENT AREAS

The following section outlines the challenges described by school leadership and observed by Marzano Research and NCMPS. All of the areas to be addressed are related to the overall challenge of developing a Montessori culture in a public school. Opportunities for improvement include the Montessori approach in instruction, professional development and coaching, the prepared environment, and use of staff. These areas are described in further detail below.

Instruction

NCMPS noted a number of areas that could be improved using the EER. During classroom observations, NCMPS observed that work periods were divided into small portions. During these work periods, teachers provided whole-group instruction, and there were extended blocks of time for literacy and math. The Montessori approach promotes 2–3-hour uninterrupted work periods, specifically in the morning, during which students choose their own work to concentrate on.

NCMPS also observed that the classroom schedule differed from the Montessori model in other ways. For example, teachers began each morning with a meeting during which they reviewed attendance and took lunch orders. The Montessori method recommends starting each day with student-chosen work to capitalize on students' desire to learn. Given the limited instruction time available in general, the time spent on morning meetings is not considered an efficient use of time in the Montessori philosophy.

During the instruction period, NCMPS also noted that the students used worksheets and computers to complete the majority of work. The frequency of this practice was greater than that recommended in the Montessori approach. Although technological engagement is encouraged in the model, it should be integrated to inform students' self-chosen work.

NCMPS also suggested that slight improvements to the learning environment would better embody the Montessori approach. For example, in the Montessori approach, children have opportunities to take care of the classroom, prepare food, and clean up after meals. At Drachman Montessori, adults handled these real-world tasks, and students did not engage in them. Furthermore, Montessori children use silverware, glassware, and dishes. At Drachman Montessori, students used plasticware and paperware.

Professional Development and Coaching

Drachman Montessori incorporates professional development for all of its teachers, generally through professional learning communities. In these communities, teachers have the opportunity to learn more about the Montessori approach. However, the school currently offers additional professional development that is not aligned with the Montessori approach. For example, teachers have participated in professional development on implementing PBIS. However, PBIS is contrary to the Montessori belief that children are internally, not externally, motivated. The professional development could be improved by having it be more consistent with the Montessori philosophy.

The other opportunity for improvement relates to providing a designated space for focused classroom observation. Although a required location is not stipulated in the Montessori approach, it is recommended that a chair be located in a space that allows full view of the classroom. This chair is often placed in an area of the room that allows for parents, students, and particularly teachers to sit and observe how students are learning and to

identify appropriate future lessons for each student. Lead teachers can also use the chair to support teachers in accurately identifying education plans for students. However, Drachman Montessori classrooms do not have such spaces designated for focused observation.

Prepared Environment

One feature previously mentioned as an asset of Drachman Montessori is the outdoor space. Evaluators recognized this space as an opportunity to adopt the whole school as a prepared environment, encouraging more use of the outdoors. Potential improvements include having each classroom maintain a specific area of the outdoor space, using the outdoor environment to encourage more real work for students, and giving students the opportunity to beautify this space.

Use of Staff

The site visit team identified two opportunities for improvement in regard to lead teachers and assistants.

First, to better serve classroom teachers, Drachman Montessori could provide lead teachers with training as coaches. At the school, lead teachers are charged with coaching other teachers to better implement the Montessori model. These lead teachers are actively working with PLCs and one-on-one with teachers to provide support and resources as needed. Training for lead teachers could help them become more effective in teacher engagement and coaching.

Second, to better align with the Montessori approach, Drachman Montessori could utilize classroom assistants differently. In an ideal Montessori classroom with multi-age groupings, a teacher and an assistant organize the day's work. Leaders at Drachman Montessori are still in the process of building teacher capacity to lead multi-age classrooms. As a result, some classrooms still have single-age groupings with no classroom assistants. This issue could be addressed through modifications in scheduling both the classroom and the assistants assigned to classrooms. For example, an assistant could be assigned to two classrooms throughout the day, spending time in each classroom during the scheduled work period to support the teacher.

LIMITATIONS OF THE EVALUATION

Originally, Marzano Research and NCMPS planned to visit Drachman Montessori for one full week to conduct observations. Since Montessori instructional practice tends to be relatively stable across time, this amount of observation was deemed sufficient for developing an understanding of instructional practice at the school. Due to unexpected school closures, however, the team was able to observe classrooms for only two days. This shortened site visit may have affected the results of the evaluation.

RECOMMENDED NEXT STEPS

Similar to other Montessori public schools, Drachman Montessori is experiencing the challenges of managing district demands while maintaining Montessori methods at the lower and upper elementary levels. Although concerted efforts have been made to meet these seemingly competing objectives, Drachman Montessori is still actively learning how to address these challenges.

Marzano Research recommend that Drachman Montessori, in addition to its current focus on accreditation, take the following action steps to continue progress toward a fully implemented Montessori approach.

ALLOCATE RESOURCES FOR PROFESSIONAL DEVELOPMENT AND COACHING

Ongoing professional support for teachers is essential to developing a Montessori program. Professional development can assist teachers in better transitioning into the Montessori method. This support can be provided by experienced Montessori educators in the school or external Montessori consultants. For example, lead teachers at Drachman Montessori are already in place to support the development of classroom teachers. However, lead teachers need requisite skills to be effective coaches. With additional training in coaching, lead teachers can model Montessori lessons, observe classrooms, help teachers develop appropriate education plans for each child, and offer direction as teachers transition to the Montessori approach.

In addition, Drachman Montessori should provide continued professional development on appropriate and relevant Montessori topics. This support does not need to be external. Resources for professional development of Montessori teachers in the public sector are publicly available on the NCMPS website. Teachers can use available resources such as these to support the professional development needs at Drachman Montessori.

IMPROVE PREPARED ENVIRONMENT

There are two ways in which we recommend Drachman Montessori improve its prepared environment: develop the outside and simplify the inside. Drachman Montessori has a beautiful outdoor community space; however, this space could be improved through additional development, overall clean-up, and garden boxes. Students could take an active role in this process by cleaning, planting, and maintaining the additional gardens.

At the classroom level, teachers can begin aligning rooms with the Montessori approach by removing conventional decorations. The Montessori method emphasizes relevant and meaningful decorations, such as artwork or exemplary student work, that stimulate thinking as opposed to nonrelevant materials that can be distracting for students. For example, printed alphabet letters posted on the wall are considered nonrelevant materials

in the Montessori method because they do not align with the Montessori approach to learning the alphabet. Furthermore, the bright-colored letters can be distracting for students when they are working.

MAXIMIZE INSTRUCTIONAL TIME

We further recommend that students have 2–3-hour uninterrupted work periods at the beginning of the school day to better align learning with the Montessori approach. In this model, students arrive in class and begin working. At Drachman Montessori, however, the time for student work decreases due to morning meetings for attendance tracking, lunch ordering, and announcements. The school might also consider providing more flexibility to teachers related to the required literacy and math block instruction in order to create room in the daily schedule for extended work periods.

CONTROL ENROLLMENT

One of the challenges of a Montessori school in the public sector is being able to limit and control enrollment. Because the sequence of curriculum is consecutive, students that enroll in a Montessori school at higher grades may struggle with the culture, community, and independence provided. In addition, they may not have developed the requisite higher-level executive functions that are encouraged in the Montessori approach.

EXPAND PREKINDERGARTEN PROGRAM

A long-term recommendation for Drachman Montessori is to consider expanding the school to include 3- and 4-year-old children. Although we recognize the many challenges of implementing a program for children of this age, this expansion would better support the school's effort to fully implement the Montessori approach. The Montessori approach focuses on the cognitive development of children and identifies each level of understanding as a prerequisite to their later success.

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APPENDIX A. ESSENTIAL ELEMENTS RUBRIC

Domain 1—Adults				
STANDARD	EXEMPLARY	SATISFACTORY	NEEDS IMPROVEMENT	UNSATISFACTORY
Teachers have Montessori credentials, from a MACTE or AMI accredited training program, for the age group they teach, in addition to any required licenses or credentials.	<ul style="list-style-type: none"> <input type="checkbox"/> All teachers are fully trained at the appropriate level and hold required licenses or credentials. <input type="checkbox"/> All auxiliary staff (special education, PE) are Montessori trained or oriented. <input type="checkbox"/> Montessori principles are evident in the actions of all adults. Key actions include: speaking softly, clearly, and respectfully to children and adults, refraining from offering unnecessary help, inviting as opposed to commanding, and student engagement in meaningful work. 	<ul style="list-style-type: none"> <input type="checkbox"/> 90% of teachers are fully trained at the appropriate level, with the remainder in the process of earning an appropriate Montessori credential. <input type="checkbox"/> Auxiliary staff have been oriented in Montessori theory and practice. <input type="checkbox"/> Montessori principles are evident in many, but not all adults' actions. 	<ul style="list-style-type: none"> <input type="checkbox"/> 85% of all teachers are fully trained at the appropriate level, with the remainder in the process of earning an appropriate Montessori credential. <input type="checkbox"/> Montessori principles are evident in some adults' actions. 	<ul style="list-style-type: none"> <input type="checkbox"/> Less than 85% of all teachers are fully trained at the appropriate level. <input type="checkbox"/> Absence of robust knowledge of Montessori theory and practice is evident in the actions of adults; key actions include: interrupting students who are concentrating, using a loud, intrusive voice, attempting to control rather than model respectful behavior.
Each teacher is supported by a paraprofessional/assistant given Montessori-specific orientation for that role.	<ul style="list-style-type: none"> <input type="checkbox"/> All classrooms are staffed with an assistant who has completed a Montessori Assistant's course. <input type="checkbox"/> The school provides an orientation workshop for all assistants. <input type="checkbox"/> All assistants play an integral role in the culture of the classroom, providing support in the care of the environment, modeling positive behavior, assisting the teacher when students need redirection, and other duties as assigned by the teacher. 	<ul style="list-style-type: none"> <input type="checkbox"/> 90% of all classrooms are staffed with an assistant who has completed a Montessori Assistant's course. <input type="checkbox"/> The school provides an orientation workshop for all assistants. <input type="checkbox"/> Many assistants play an integral role in the culture of the classroom. 	<ul style="list-style-type: none"> <input type="checkbox"/> 75% of all classrooms are staffed with an assistant who has completed a Montessori Assistant's course. <input type="checkbox"/> Some assistants play an integral role in the culture of the classroom. 	<ul style="list-style-type: none"> <input type="checkbox"/> Fewer than 75% of all classrooms are staffed with an assistant who has completed a Montessori Assistant's course <input type="checkbox"/> Assistants, when they are present, are disengaged from the work of the room or function solely as disciplinarians.

All adults, Montessori trained or not, embrace core Montessori principles, respecting the process of human development and supporting children's independence, freedom, responsibility, and growth.	<input type="checkbox"/> All adults interact with children in ways that are deeply respectful and support their development as appropriate to the children's age and level of independence.	<input type="checkbox"/> Adults sometimes set developmentally inappropriate expectations for children, expecting too little or too much independence and responsibility. <input type="checkbox"/> Adults sometimes interact disrespectfully with children (e.g., interrupting, ordering, teasing, contradicting, controlling...)	<input type="checkbox"/> Adults often set developmentally inappropriate expectations for children, expecting too little or too much independence and responsibility. <input type="checkbox"/> Adults often interact disrespectfully with children (e.g., interrupting, ordering, teasing, contradicting...). <input type="checkbox"/> Untrained staff show no awareness of appropriate interactions.	<input type="checkbox"/> Adult interactions with children are not guided by Montessori principles, and are developmentally inappropriate and disrespectful (controlling, interrupting, shouting, shaming, blaming, etc.).
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Domain 2—Montessori Learning Environment

STANDARD	EXEMPLARY	SATISFACTORY	NEEDS IMPROVEMENT	UNSATISFACTORY
Children are grouped according to Montessori age groupings: <ul style="list-style-type: none"> • 2.5-6 • 6-9 • 9-12 • 12-15 • 15-18 	<input type="checkbox"/> All learning environments reflect Montessori age groupings. <input type="checkbox"/> Classroom communities serve at least 24 students supervised by no more than two adults. <input type="checkbox"/> The primary point of entry to the program is age 3. <input type="checkbox"/> For students who enter after age 4, the school has a well-elaborated orientation and induction program.	<input type="checkbox"/> All learning environments reflect Montessori age groupings. <input type="checkbox"/> Classroom communities feature at least 24 students supervised by no more than two adults. <input type="checkbox"/> Significant numbers of 5-year-olds may enter without prior Montessori experience, but these new students are carefully oriented.	<input type="checkbox"/> Mixed-age environments exist, but children are segregated by age, gender or ability. <input type="checkbox"/> There is a stand-alone "kindergarten" program for 5 year-olds, but is working toward a full 3-6 program, and has a reliable method for orienting these children. <input type="checkbox"/> Students age out of the school before the end of a 3-year cycle (e.g., after 1 st , 2 nd , 4 th , or 5 th grades, etc.).	<input type="checkbox"/> Children are grouped in single-grade or two-year classrooms. <input type="checkbox"/> There is a stand-alone "kindergarten" program for 5 year-olds with no reliable method for orienting these children. <input type="checkbox"/> Children are segregated by age, gender or ability.

Learning environments provide uninterrupted 3-hour work periods.	<input type="checkbox"/> All classrooms provide 3-hour morning work periods. <input type="checkbox"/> Classrooms for older children provide 2-hour work periods, with limited interruption for specials and other programmed activity.	<input type="checkbox"/> All classrooms provide 2.5-hour morning work periods. <input type="checkbox"/> Classrooms for older children provide 2-hour work periods, with limited interruption for specials and other programmed activity.	<input type="checkbox"/> All classrooms provide 2.5-hour morning work periods. <input type="checkbox"/> Classrooms for older children provide 2-hour work periods, but 2-3 times a week, those periods are taken up with specials and other programmed activity.	<input type="checkbox"/> Work periods are divided into small portions (e.g.: Readers or Writers Workshop, Literacy Block) with limited opportunity for children to concentrate on self-chosen work.
Specialty programs such as music, art, and second languages are integrated into the three-hour work cycle.	<input type="checkbox"/> The Montessori teachers confidently deliver Montessori music, using bells, tone bars and other materials integral to this part of the program. <input type="checkbox"/> Materials for making and viewing art are visible on shelves, and students have access to them at all times. <input type="checkbox"/> Bilingual staff support an immersion approach to second-language instruction.	<input type="checkbox"/> Specialty programs (music, art, second language) are offered as separate classes, but do not interrupt extended work periods. <input type="checkbox"/> Students have free access to Montessori music materials—bells, tone bars, etc.	<input type="checkbox"/> Specialty programs (music, art, second language) are offered as separate classes, usually during afternoon work periods. <input type="checkbox"/> Students have limited access to Montessori music materials.	<input type="checkbox"/> Specialty programs such as music, art, and second languages are delivered by non-Montessori specialists during work periods. <input type="checkbox"/> There are separate morning and afternoon classes. <input type="checkbox"/> Students have no access to Montessori music materials.

Domain 2—Montessori Learning Environment

STANDARD	EXEMPLARY	SATISFACTORY	NEEDS IMPROVEMENT	UNSATISFACTORY
The environment supports a high degree of student choice in what to work on, where to work, and how long to work.	<input type="checkbox"/> Students can choose to work at tables, on rugs on the floor, or outside. <input type="checkbox"/> Students have ongoing access to all materials, and are allowed to choose their work freely during extended work periods. <input type="checkbox"/> Almost all instruction takes place in small groups (Elementary & Secondary) or one-on-one (Early Childhood).	<input type="checkbox"/> Students can choose to work at tables, on rugs on the floor, or outside. <input type="checkbox"/> Students have ongoing access to all materials, and are allowed to choose their work for the majority of work periods. <input type="checkbox"/> 80% of instruction takes place in small groups (Elementary & Secondary) or one-on-one (Early Childhood).	<input type="checkbox"/> Students have choice regarding where and what to work on for part of the day. <input type="checkbox"/> Students may be assigned work but may choose where and in what order they will do their work. <input type="checkbox"/> Whole or large-group instruction is used almost as much as individual and small group instruction.	<input type="checkbox"/> Student movement is restricted. <input type="checkbox"/> Most students work at tables. <input type="checkbox"/> Most learning is directed by adults. <input type="checkbox"/> Most instruction takes place in whole-group formats. <input type="checkbox"/> Teaching and learning are expected to follow a pacing set by the teacher.

<p>The full complement of Montessori materials is available in every area, representing the majority of materials on all shelves. Additional materials conform to Montessori standards of order, beauty, and simplicity.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> The full complement of Montessori materials is available in every area. <input type="checkbox"/> Montessori materials are meticulously cared for and displayed in an orderly and inviting manner, representing the majority of work available to students. <input type="checkbox"/> Materials are in constant use. 	<ul style="list-style-type: none"> <input type="checkbox"/> The full complement of Montessori materials is available in every area. <input type="checkbox"/> Montessori materials are displayed in an orderly and inviting manner, representing the majority of work available to students. <input type="checkbox"/> Materials are in good repair and ready for use. <input type="checkbox"/> Materials are in regular use. 	<ul style="list-style-type: none"> <input type="checkbox"/> There is less than a full complement of Montessori materials. <input type="checkbox"/> Montessori materials are visible, but not organized in a way that invites robust engagement and concentration. <input type="checkbox"/> Montessori materials are liberally supplemented with other curricular approaches. 	<ul style="list-style-type: none"> <input type="checkbox"/> Montessori materials may be visible, but the majority of work involves other materials and resources, such as worksheets, text books, or computers. <input type="checkbox"/> The environment is cluttered, with little attention to order, beauty and simplicity.
<p>The learning environment offers ongoing access to real-world materials and activities.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Children have ample opportunities to engage in care of the classroom, food preparation, dining and meal cleanup, and plant and animal care, and these activities are a regular part of children's activity. <input type="checkbox"/> Tools and materials for practical activities are functional and child- sized. <input type="checkbox"/> Appropriate cutlery, glassware and dishes are used daily. 	<ul style="list-style-type: none"> <input type="checkbox"/> Children have some opportunities to engage in care of the classroom, food preparation, dining and meal cleanup, and plant and animal care, and are at times engaged with them. <input type="checkbox"/> Functional child-sized tools and materials are available, but the supply is limited or some are not appropriate for children's use. <input type="checkbox"/> Appropriate cutlery, glassware and dishes are used daily. 	<ul style="list-style-type: none"> <input type="checkbox"/> Some real world activities are available, but children do not spontaneously engage in them. <input type="checkbox"/> Tools and materials are very limited, or mostly inappropriate for children's use. <input type="checkbox"/> Care of the classroom, food preparation, dining and cleanup, and plant and animal care are handled mostly by adults. <input type="checkbox"/> Children eat with disposable cutlery, plates, and cups. 	<ul style="list-style-type: none"> <input type="checkbox"/> No real world activities are available. <input type="checkbox"/> Care of the classroom, food preparation, dining and cleanup, and plant and animal care are handled by adults. <input type="checkbox"/> Children eat with disposable cutlery, plates, and cups.

Domain 2—Montessori Learning Environment				
STANDARD	EXEMPLARY	SATISFACTORY	NEEDS IMPROVEMENT	UNSATISFACTORY
The learning environment offers appropriate access to a prepared outdoor environment.	<input type="checkbox"/> Children have free access, within appropriate limits, to a well-prepared outdoor learning environment. <input type="checkbox"/> The outdoor environment is in regular use.	<input type="checkbox"/> Children have some access to a well-prepared outdoor learning environment. <input type="checkbox"/> The outdoor environment is in occasional use.	<input type="checkbox"/> Access to the outdoor environment is tightly restricted by adults. <input type="checkbox"/> The outdoor environment is not well prepared or appropriate for children's use. <input type="checkbox"/> The outdoor environment is infrequently in use.	<input type="checkbox"/> Access to the outdoors is only available during "recess", as a free play activity. <input type="checkbox"/> The outdoor environment is not well prepared or appropriate for children's use.
SPED students are fully included and supported within the classroom.	<input type="checkbox"/> Montessori teachers are dual certified as SPED teachers and able address all but most significant learning issues through the Montessori program. <input type="checkbox"/> SPED and Resource Teachers are Montessori trained or oriented and work in collaboration with Montessori teachers to provide special services within the prepared environment.	<input type="checkbox"/> SPED students are pulled out for small portions of the day, or specialists come in the classroom but work with the SPED students apart from the rest of the group and primarily through non-Montessori materials.	<input type="checkbox"/> SPED students are pulled out of the Montessori classroom for large portions of the day.	<input type="checkbox"/> SPED students have a separate program for most or all of the day.
ELL students are fully included and supported within the classroom	<input type="checkbox"/> Montessori teachers are dual certified as ELL teachers. <input type="checkbox"/> ELL Resource Teachers are Montessori trained or oriented and work in collaboration with Montessori teachers to provide special services within the prepared environment.	<input type="checkbox"/> ELL students are pulled out for small portions of the day, or specialists come in the classroom but work with the ELL students apart from the rest of the group and primarily through non-Montessori materials.	<input type="checkbox"/> ELL students are pulled out of the Montessori classroom for large portions of the day.	<input type="checkbox"/> ELL students have a separate program for most or all of the day.

Domain 3—Family Engagement				
STANDARD	EXEMPLARY	SATISFACTORY	NEEDS IMPROVEMENT	UNSATISFACTORY
A strong partnership between home and school is evident in all formal and informal communications.	<ul style="list-style-type: none"> <input type="checkbox"/> A well-developed <i>Family Handbook</i> elaborates mutual expectations in clear, accessible language. <input type="checkbox"/> Robust, two-way communication begins prior to enrollment and is visible in a website, newsletters, letters home, and processes for parent-teacher conferences. <input type="checkbox"/> All relevant documents are translated into languages reflecting the school's population <input type="checkbox"/> The school's Parent Engagement plan may include home-visits. <input type="checkbox"/> Faculty and staff reflect the ethnic, linguistic and racial makeup of the student-body. 	<ul style="list-style-type: none"> <input type="checkbox"/> A well-developed <i>Family Handbook</i> elaborates mutual expectations in clear, accessible language. <input type="checkbox"/> The school maintains an active website. <input type="checkbox"/> Most classrooms distribute newsletters and other regular communications such as websites, blogs, or Google groups. <input type="checkbox"/> Highest priority documents are translated into the languages reflecting the school's population. <input type="checkbox"/> Efforts are made to hire faculty and staff that reflect the ethnic, linguistic and racial makeup of the student- body. 	<ul style="list-style-type: none"> <input type="checkbox"/> A <i>Family Handbook</i> exists, but is out-of-date and not widely distributed. <input type="checkbox"/> Communication between home and school is limited to informing families of events, deadlines, and other administrative matters. <input type="checkbox"/> Some classrooms distribute newsletters and other regular communications, but there is no coordinated system for ensuring that all members of the community are informed. <input type="checkbox"/> Translation services are limited. 	<ul style="list-style-type: none"> <input type="checkbox"/> A <i>Family Handbook</i> may exist, but is out-of-date and not widely distributed. <input type="checkbox"/> Communication between home and school is sporadic, and usually in the form of announcements from the administration. <input type="checkbox"/> Translations are sporadic or non- existent.
The school provides ongoing opportunities for family education, including information sessions, discussion groups, observation of classrooms, and parent-teacher-student conferences	<ul style="list-style-type: none"> <input type="checkbox"/> The enrollment process features multiple opportunities for parents to learn about Montessori and the family commitment expected by the school. These events are well planned and executed, and attended by large numbers of prospective families. <input type="checkbox"/> A robust family induction process, includes open houses, orientation evenings, and networking with experienced families. <input type="checkbox"/> Family education opportunities are offered monthly. 	<ul style="list-style-type: none"> <input type="checkbox"/> The enrollment process features some opportunities for parents to learn about Montessori and the family commitment expected by the school. <input type="checkbox"/> The school offers an orientation evening for new families. <input type="checkbox"/> Family education opportunities are offered quarterly. 	<ul style="list-style-type: none"> <input type="checkbox"/> The enrollment process may feature events such as open houses, but they are poorly advertised and sparsely attended. <input type="checkbox"/> The school offers an annual Open House. <input type="checkbox"/> Family education opportunities are offered sporadically. 	<ul style="list-style-type: none"> <input type="checkbox"/> The enrollment process includes no opportunities for families to learn about the school, and any families enroll without any knowledge of Montessori education. <input type="checkbox"/> No family education opportunities are offered.

Domain 3—Family Engagement				
STANDARD	EXEMPLARY	SATISFACTORY	NEEDS IMPROVEMENT	UNSATISFACTORY
The school cultivates a strong school-home association, in which parents have authentic opportunities to contribute meaningfully to the school's mission and communicate with school leadership.	<ul style="list-style-type: none"> <input type="checkbox"/> The school maintains a designated space for adults to gather, which includes a resource library filled with material related to Montessori, child development, parenting, and other topics of interest. <input type="checkbox"/> The school employs a Community Engagement specialist, who supports the family community by partnering with parent leaders, assisting in the coordination of volunteer opportunities. <input type="checkbox"/> There is an active school board and/or governance council with significant family representation. <input type="checkbox"/> Minutes of all meetings are shared with the entire community. 	<ul style="list-style-type: none"> <input type="checkbox"/> The school's School-Home or Family Association is active, with parent/adult leaders visible in the school. <input type="checkbox"/> Minutes of all meetings are shared with the entire community. 	<ul style="list-style-type: none"> <input type="checkbox"/> The school has a School-Home Association, but it is not active. <input type="checkbox"/> The school's Board or governance council may have family representation, but families do not regularly attend meetings. <input type="checkbox"/> Minutes of meetings are not regularly shared with the community. 	<ul style="list-style-type: none"> <input type="checkbox"/> There are no formal structures through which families can participate in the school.

Domain 4—Leadership and Organizational Development				
STANDARD	EXEMPLARY	SATISFACTORY	NEEDS IMPROVEMENT	UNSATISFACTORY
An experienced Montessori educator guides the implementation of the Montessori program, as Principal, Program Director, Curriculum Coordinator or Instructional Coach.	<ul style="list-style-type: none"> <input type="checkbox"/> A Montessori trained school leader communicates and advocates effectively for full Montessori implementation. <input type="checkbox"/> At least one instructional coach, with Montessori training for at least one program level, supports full Montessori implementation as a primary responsibility. 	<ul style="list-style-type: none"> <input type="checkbox"/> The school leader is not Montessori trained, but is enthusiastically engaged in ongoing Montessori professional development. <input type="checkbox"/> A trained Program Director or Montessori Coach supports the untrained school leader. 	<ul style="list-style-type: none"> <input type="checkbox"/> The school leader is not Montessori trained, and has engaged in minimal Montessori professional development. <input type="checkbox"/> The school does not employ a Montessori Program Director or Coach, but does rely on the expertise of experienced teachers or consultants in making program decisions. 	<ul style="list-style-type: none"> <input type="checkbox"/> The school leader is unwilling to engage in Montessori professional development <input type="checkbox"/> The school leader regards Montessori as an aspect of the school program rather than the essence of the school program. <input type="checkbox"/> The school leader engages in teacher evaluation and program development systems that are in conflict with Montessori principles and practice.
The school has a clear vision for how it delivers Montessori education, and has an active cycle of reflection and self-review.	<ul style="list-style-type: none"> <input type="checkbox"/> The school has a current and active strategic/school improvement plan, which is grounded in Montessori principles, informed by multiple constituents, and widely understood and embraced by the school community. <input type="checkbox"/> The school regularly employs Montessori consultants to provide internal and external audits of program quality, and incorporates consultant feedback into an ongoing strategic planning process. <input type="checkbox"/> The school has a well-articulated and transparent process for inducting, mentoring and evaluating teachers. <input type="checkbox"/> Teachers are evaluated based on a protocol designed to support fully implemented 	<ul style="list-style-type: none"> <input type="checkbox"/> The school has a living strategic/school improvement plan, which is grounded in Montessori principles, informed by multiple constituents, and made available to the school community. <input type="checkbox"/> The school has employed a Montessori consultant within the past three years to provide internal support for strategic planning and instructional improvement. <input type="checkbox"/> Teachers are evaluated based on a protocol that is friendly to Montessori pedagogical principles. 	<ul style="list-style-type: none"> <input type="checkbox"/> The school is in the process of developing a strategic/school improvement plan, which includes goals for improving Montessori practice. <input type="checkbox"/> The school does not look to outside resources for Montessori support. <input type="checkbox"/> Teachers are evaluated in part or whole based on a protocol that does not reflect Montessori practice. 	<ul style="list-style-type: none"> <input type="checkbox"/> The school's strategic/school improvement plan includes no goals for improving Montessori practice. <input type="checkbox"/> Teachers are evaluated based on a protocol that has no relationship to Montessori pedagogical practice.

	Montessori practice.			
The school maintains membership in one or more Montessori professional organizations, and seeks accreditation to ensure consistent quality.	<input type="checkbox"/> The school is accredited or recognized by at least one major Montessori professional organization.	<input type="checkbox"/> The school maintains membership in at least one major Montessori professional organization.	<input type="checkbox"/> The school is not be a full member (due to costs or other constraints), but leaders and staff attend at least one major Montessori professional organization's conference.	<input type="checkbox"/> The school has no connections with any Montessori professional organization.

Domain 4—Leadership and Organizational Development				
STANDARD	EXEMPLARY	SATISFACTORY	NEEDS IMPROVEMENT	UNSATISFACTORY
The school has a pipeline for recruiting, training, hiring, and retaining high quality Montessori teachers.	<input type="checkbox"/> The school sponsors two or more teachers for Montessori training annually. <input type="checkbox"/> The school provides a robust annual Assistant's/Fundamentals Course. <input type="checkbox"/> The school has a strong relationship with a MACTE accredited or AMI Montessori training center. <input type="checkbox"/> The school recruits broadly and provides a substantive interview and induction process for all prospective and new hires.	<input type="checkbox"/> The school's budget supports sponsorship for Montessori training for at least one new teacher a year. <input type="checkbox"/> The school offers orientation and professional development designed to support classroom assistants.	<input type="checkbox"/> The school's operating budget does not support annual sponsorships, but efforts are made to raise funds for the specific purpose of supporting the talent pipeline.	<input type="checkbox"/> The school has no systems in place to ensure a reliable pipeline of high quality Montessori teachers.
All adults engage in ongoing Montessori professional development.	<input type="checkbox"/> All adults engage in ongoing Montessori professional development.	<input type="checkbox"/> 50 – 90% of adults engage in ongoing Montessori professional development.	<input type="checkbox"/> Some, but fewer than half, of adults engage in ongoing Montessori professional development.	<input type="checkbox"/> Adults do not engage in ongoing Montessori professional development.

Adults treat one another with respect and model grace and courtesy in their interactions.	<input type="checkbox"/> All adult interactions are respectful, gracious, and courteous. <input type="checkbox"/> Respect, grace, and courtesy characterize formal and informal school activities. <input type="checkbox"/> Respect, grace, and courtesy characterize interactions with families.	<input type="checkbox"/> Most adult interactions are respectful, gracious, and courteous. <input type="checkbox"/> Respect, grace, and courtesy characterize most formal and informal school activities. <input type="checkbox"/> Respect, grace, and courtesy characterize most interactions with families.	<input type="checkbox"/> Adults are sometimes disrespectful, preemptory or dismissive with one another. <input type="checkbox"/> There are notable status divisions among trained teachers, support staff, and administrative staff.	<input type="checkbox"/> Adults are generally disrespectful, preemptory or dismissive with one another. <input type="checkbox"/> Non-teaching staff are blatantly disrespected or delegitimized.
Montessori practice is supported by a clearly defined Montessori scope and sequence, integrated with (but not driven by) state standards.	<input type="checkbox"/> Faculty and staff understand and can explain the Montessori approach and how it meets state standards. <input type="checkbox"/> A Montessori scope and sequence aligned with state standards is shared widely in the school and available to families, district staff, and other stakeholders. <input type="checkbox"/> Teachers lead with their Montessori training and refer back to state standards as necessary.	<input type="checkbox"/> Most faculty and staff understand and can explain the Montessori approach and how it meets state standards. <input type="checkbox"/> An alignment of the Montessori scope and sequence with state standards is in process. <input type="checkbox"/> The Montessori scope and sequence is part of internal and external communications. <input type="checkbox"/> Teachers mostly lead with their Montessori training and refer back to state standards as necessary.	<input type="checkbox"/> Many faculty and staff members are unclear on the Montessori approach and how it meets state standards. <input type="checkbox"/> No alignment of the Montessori scope and sequence with state standards is in use. <input type="checkbox"/> The Montessori scope and sequence is available but not part of community understanding or regular practice. <input type="checkbox"/> Teachers mostly lead with state standards and use some Montessori materials and lessons to teach them.	<input type="checkbox"/> Faculty and staff are following a scope and sequence that conflicts with Montessori pedagogy. <input type="checkbox"/> Teaching is entirely driven by state standards.

Domain 5—Assessment				
STANDARD	EXEMPLARY	SATISFACTORY	NEEDS IMPROVEMENT	UNSATISFACTORY
Assessment protocols integrate measures of academic achievement with measures of executive functions such as self-regulation, initiation, and cognitive flexibility.	<ul style="list-style-type: none"> <input type="checkbox"/> The school tracks multiple indicators of success through means such as alumni, parent, and receiving teacher surveys. <input type="checkbox"/> The school uses cognitive measures such as the Flanker Inhibitory Control Task, or the Minnesota Executive Function Scale (MEFS), to document wide-scope developmental outcomes. <input type="checkbox"/> The school maintains profiles of all students based on narrative appraisal and work sampling, as well as performance on standardized academic measures. 	<ul style="list-style-type: none"> <input type="checkbox"/> The school is in the process of developing a protocol that allows the documentation of social and emotional and executive function outcomes. <input type="checkbox"/> The school maintains profiles of all students based on narrative appraisal and work sampling, as well as performance on standardized academic measures. 	<ul style="list-style-type: none"> <input type="checkbox"/> The school includes narrative appraisals of social and emotional development as part of its assessment and reporting protocols, but has no larger system for tracking wide-scope student outcomes. 	<ul style="list-style-type: none"> <input type="checkbox"/> The only form of assessment is state-mandated tests. <input type="checkbox"/> Results are reported without context. <input type="checkbox"/> Minimal standards of proficiency drive instruction.
Ongoing, personalized qualitative assessment, in the form of observation and documentation, drives all instructional decisions.	<ul style="list-style-type: none"> <input type="checkbox"/> Regular, recorded observation is the basis of planning and assessment. <input type="checkbox"/> The school uses an on-line record-keeping system to ensure that data are collected and managed effectively. <input type="checkbox"/> Teachers make time daily to record observed activity within the environment. <input type="checkbox"/> An observer's chair is visible in the environment. <input type="checkbox"/> Teachers meet weekly as teams to discuss student progress, reflect collectively on challenges, and share potential solutions. 	<ul style="list-style-type: none"> <input type="checkbox"/> Regular, recorded observation is the basis of planning and assessment. <input type="checkbox"/> Some teachers use an on-line record-keeping system to ensure that data are collected and managed effectively. <input type="checkbox"/> Teachers make time daily to record observed activity within the environment. <input type="checkbox"/> An observer's chair is visible in the environment. <input type="checkbox"/> Teachers meet occasionally as teams to discuss student progress, reflect collectively on challenges, and share potential solutions. 	<ul style="list-style-type: none"> <input type="checkbox"/> Some teachers make time daily to record observed activity with the environment, but there is no link to a larger system of data management. <input type="checkbox"/> Some classrooms have an observer's chair. 	<ul style="list-style-type: none"> <input type="checkbox"/> There is no evidence of ongoing, recorded observation. <input type="checkbox"/> Teachers do not meet to reflect on student progress.

Assessments are delivered in the least obtrusive manner possible	<input type="checkbox"/> Formative and summative assessments are delivered to individual students during work periods. <input type="checkbox"/> Tests are treated as Practical Life activities, with minimal emphasis or work disruption. <input type="checkbox"/> Test preparation is limited to practice experiences designed to familiarize students with format and language.	<input type="checkbox"/> Summative assessments are delivered during testing windows. <input type="checkbox"/> Total test preparation constitutes no more than one week of student work time.	<input type="checkbox"/> Formative and summative assessments are delivered to the whole school/whole class during prescribed testing windows. <input type="checkbox"/> Test preparation constitutes more than two weeks of student work time.	<input type="checkbox"/> Testing windows take over the entire school day, with work periods suspended, students grouped in grade-level cohorts, and assessments proctored by unfamiliar teachers. <input type="checkbox"/> Preparing for tests drives the school's program.
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Domain 5—Assessment				
STANDARD	EXEMPLARY	SATISFACTORY	NEEDS IMPROVEMENT	UNSATISFACTORY
As students mature, they are increasingly involved in monitoring their own progress	<input type="checkbox"/> Beginning in the elementary level, students keep daily journals of their work. <input type="checkbox"/> Teachers regularly confer with students to assist in the development of personal learning goals and to reflect on progress. <input type="checkbox"/> Beginning in the elementary, students regularly participate in parent-teacher discussions of student progress.	<input type="checkbox"/> Students keep work journals, but they are not regularly employed in the self-assessment process. <input type="checkbox"/> Teachers sometimes confer with students to assist in the development of personal learning goals and to reflect on progress.	<input type="checkbox"/> Students are given assigned “work plans” which they have little input in developing or reflecting on. <input type="checkbox"/> Work plans require the teacher to “check-off” completed work rather than allowing students to manage their time and productivity.	<input type="checkbox"/> Students are disconnected from the assessment process, except to receive grades.

APPENDIX B. SAMPLE PRINCIPAL INTERVIEW RUBRIC

The Importance of Strong Montessori Leadership

As in any school, leadership in public Montessori programs is crucial. In most public Montessori programs, the instructional leader will hold the title of Principal. In some programs the Principal is assisted by a *Montessori Coach*, *Program Coordinator* or *Lead Teacher*. As a rule of thumb, the more Montessori knowledge there can be at the top, the better for the program. The ideal instructional leader for any Montessori school is an individual with a Montessori diploma from a highly respected training center. Without this theoretical and practical background, leaders are significantly impeded in their ability to

- ❖ Evaluate Montessori instruction
- ❖ Communicate with teachers about their work
- ❖ Make programmatic decisions consistent with Montessori tenets
- ❖ Represent the program to parents, public officials, and other stakeholders

In most public Montessori programs, administrators will need to have state certification, which limits the pool of individuals with strong Montessori experience. Likewise, some individuals without formal Montessori training demonstrate the capacity to lead a Montessori school. These individuals have usually had direct experience with Montessori education. These individuals are able to articulate the logic and language of Montessori and – just as important – they are aware of the gaps in their knowledge and seek opportunities to fill those gaps through ongoing consultation with Montessori trainers and/or continuing adult Montessori education.

This rubric presents types of responses to key interview questions for the position of instructional leader. Responses that indicate strong knowledge of Montessori theory and practice are represented on the left side of the rubric. Because the language of Montessori theory and practice is specific, interviewers should listen for words and phrases such as **normalization**, **work** (including **work cycle** and **work period**), **prepared environment**, **materials**, **independence**, and **concentration**. Interviewees who demonstrate no use of this vocabulary or who confuse self-direction with free play or center-based work do not have a strong foundation for leading a Montessori school.

Question	Strong Knowledge of Montessori theory and practice	Some awareness of Montessori theory and practice	Answer characterized by misconceptions, partial understandings
<i>What are the “non-negotiables” for you in terms of ensuring authentic Montessori practice within a public school environment?</i>	<ol style="list-style-type: none"> 1. Classrooms must have a full complement of Montessori materials. 2. Classroom must be staffed with Montessori-trained teachers (guides)- from a highly regarded training center. 3. Lengthy work periods (ideally three hours in the AM & 2 hours in the PM) must be preserved. 4. Classrooms must be mixed-age, and in three-year spans. 5. The environment must be meticulously prepared and maintained, free of clutter and equipped only with Montessori materials or extensions that have been shown to support student development. 6. Students who are working well in a Montessori environment will be able to succeed on standardized tests. Difficulties children are demonstrating must be addressed early. 	<p>Some of the activities may have to be adjusted to meet accountability requirements, but I believe that Montessori education, done well, is an effective way to meet those requirements; and that many students exceed standards when learning in a high-quality Montessori school.</p> <p><i>Such an answer indicates a general awareness of Montessori, including that some key elements differ from traditional schooling, as well as a willingness to learn more.</i></p>	<ol style="list-style-type: none"> 1. Students should work in “centers” 2. Teachers should differentiate instruction 3. Montessori may not work for all students 4. Any answer that indicates a lack of awareness of significant difference between Montessori and traditional early childhood education.
<i>What are “look for’s” in a high functioning Montessori 3-6 classroom?</i>	<ol style="list-style-type: none"> 1. In a “normalized classroom¹” most children should be working independently – most three-year-olds will choose to work alone and observe older children work. It should be difficult to locate the teacher (guide), who would most likely be on the floor, working with an individual child. 2. Teacher (guide) should spend about 60% of his/her time presenting individual lessons, 20% responding to questions and/or needs and 20% observing and recording student activity. 3. The room should be clutter-free, with no extraneous “activities” or wall decoration. Shelves should be dust-free, orderly, with materials ready for use. 4. Adults should not be interfering with students’ work. 5. In a classroom with a full complement of 3-6 year-olds, sandpaper letters and movable alphabets should always be out and in use. 6. The interviewee refers to the “areas” of the primary environment: language, math, sensorial, practical life, cultural studies. 	<ol style="list-style-type: none"> 1. Children should have a high degree of choice in the work they do. 2. There should be one Montessori-trained teacher and one para-professional in every class. 3. Children should be engaged in hands-on activities, using Montessori materials. 4. The classroom should be orderly and clutter-free. 	<ol style="list-style-type: none"> 1. Answers that indicate lack of awareness of 2. Mixed-age grouping 3. The “prepared environment” i.e.: the candidates speaks of “lots of stimulation/wall décor” or “lots of play” 4. Choice or “spontaneous activity” in student work. 5. Having Montessori-trained staff.

APPENDIX C. MARZANO RESEARCH SCHOOL LEADER INTERVIEW PROTOCOL

QUESTIONS

1. Describe your history as the principal of Drachman Montessori.
2. What efforts have you made, as principal, to align the school with the Montessori model?
3. How did you respond after losing a small cohort of Montessori trained teachers in 2010?
4. Tell me about Drachman Montessori's performance on the Adequate Yearly Progress (AYP)?
5. How do you engage families?
6. Could you explain the rationale behind the gifted and talented education program and self-contained special education classrooms?
7. Have you considered expanding to include pre-K (ages 3–4), as suggested by the Montessori approach?
8. In what ways are you building capacity for your teachers to better align their instructional methods with the Montessori approach?
9. What are some strengths that you can identify for Drachman Montessori?
10. What supports do you feel you have in leading Drachman Montessori?

APPENDIX D. NCMPS FULL REPORT

ESSENTIAL ELEMENTS PROGRAM REVIEW

A report submitted to
Drachman Montessori School

Prepared by
Jacqueline Cossentino, EdD, & Katie Brown, PhD

DRAFT
May 12, 2018

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Introduction

This report provides description and analysis of the performance of Drachman Magnet School as measured by standards and indicators of quality Montessori practice in the public sector. Analysis is based on a site visit conducted over three days between April 23 and 26, 2018. During the visit, the consultants observed early childhood classrooms, elementary classrooms, two adolescent classrooms, and common spaces.

In addition, the consultants reviewed the following documents: *Family Handbook*, schedules, and the school's website.

What follows is a discussion of the school's current strengths, its opportunities for moving forward in its development, areas of growth, and recommended next steps.

Public Montessori: Tensions and Trade-Offs

Like many public Montessori schools, the Drachman experience is, in part, defined by a tension between the goals and methods of fully implemented Montessori education and the expectations of the state and district. Key challenges revolve around balancing external demands for performance and assessment (which, often, do not match the pace or path of the Montessori program) with the full promise of Montessori education for children and families. At Drachman, the tension between meeting external demands and delivering fully implemented Montessori education revolves principally around two issues. The first is teacher training. The second is assessment. The key question raised by nearly everyone we spoke to is: "Can we achieve using Montessori?" A related, and just as important, question is, "What do we lose when we compromise Montessori in order to meet student achievement expectations?"

Drachman's greatest areas of growth revolve around (1) strengthening the teacher pipeline and (2) rethinking its relationship to district expectations related to curriculum and instruction in order to enable fuller Montessori implementation.

Overall Strengths and Opportunities

Respect and Community

Drachman has been providing Tucson families with Montessori education for 12 years. Like many public Montessori schools, Drachman serves close to 80 percent economically disadvantaged families and includes extensive special education, bilingual, and English as a second language programming. Many, though not all, teachers are Spanish speakers, and Spanish is in use as needed across the campus.

The school is a peaceful, well-maintained campus, with ample greenspace, a functional courtyard, and lots of opportunity to use the outdoors for learning.

Teachers who have Montessori training expressed a strong desire for Drachman to deepen its commitment to high-fidelity Montessori practice, or, as one put it, “go all in with Montessori.” Both the desire and commitment are visible in (1) interactions between most of the school’s adults and children, and (2) the school’s financial commitment to moving as many teachers as possible through a Montessori Accreditation Council for Teacher Education (MACTE)-accredited training program beginning this summer.

Opportunities to build on this desire revolve around (1) initiating an ongoing program of in-house, Montessori professional development; (2) providing all classroom/teaching assistants with a robust Montessori orientation; and (3) making more productive use of the three lead teachers who serve as the school’s de facto program directors.

Areas of Growth

Using the *Essential Elements of Montessori in the Public-Sector* rubric, five domains of American Montessori Society (AMS) practice were examined: Montessori Adults, the Montessori Learning Environment, Family Engagement, Leadership and Governance, and Assessment. The appendix includes an annotated version of the rubric that illustrates how the ratings reported here were derived.

Domain 1: Montessori Adults

Exemplary	Satisfactory	Needs Improvement	Unsatisfactory
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The teacher—or, in Montessori parlance, the “prepared adult”—is the secret sauce of Montessori education. The ability to provide entirely differentiated instruction to three age groups, using a repertoire of between 300 (at the early childhood level) and 2000 (at the elementary level) specific lessons requires exceptional training. Teachers must master the theoretical as well as practical elements of Montessori education, and they must work within an environment that allows them to continue to grow through their professional careers.

One of the most notable aspects of Drachman Montessori is a palpably positive school culture. This is a signal strength of the school, made evident in interactions among adults as well as between students and teachers. At the same time, only four Drachman teachers currently hold a MACTE-accredited Montessori teaching credential. Six additional teachers are scheduled to begin training this summer, with additional teachers in the pipeline for subsequent years. This is a positive step, which can be further enhanced by continuing to nurture an extremely positive school culture. All adults we encountered were respectful of students, and students, in turn, were respectful of adults and one another.

Addressing the teacher pipeline effectively will be a cornerstone of Drachman’s progress going forward. Additionally, while training is important, we strongly urge continued attention to coaching and professional development for the entire staff. Drachman is fortunate to have three lead teachers who are Montessori trained to support implementation in the classrooms. The processes of coaching and continuous improvement will benefit from several structural initiatives, including increasing time with focused observation by lead teachers in each classroom. Focused observation means detailed note-taking focused on specific elements of practice, followed by one-on-one discussions about goals and progress. Additionally, regular lesson study—structured discussions about key lessons and how they are implemented across program levels—will help the faculty develop and maintain a shared understanding of quality.

At present, the quality of assistant performance appears to rely primarily on the capacity of the lead teacher to provide skillful mentoring and supervision. The school would benefit from a formal orientation / professional development program for assistants. In order to move into the satisfactory range for this domain, we recommend the following action steps:

- Develop and deliver an on-site professional development program focused on supporting the ongoing growth of all teachers, and particularly novices.
- Provide lead teachers access to ongoing training and support related to their work as Montessori coaches.

Domain 2: Montessori Learning Environment

Exemplary	Satisfactory	Needs Improvement	Unsatisfactory
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Given the importance of prepared environments—both indoor and outdoor—in Montessori education, Drachman is fortunate to be located in a climate that allows for year-round access to nature and a campus that maximizes potential learning outdoors. Two significant gardens, tended by members of the adolescent community; a spacious courtyard surrounding all classrooms; and even chickens, which students are able to interact with, are highlights of the Drachman environment.

Mixed-age grouping, uninterrupted work time, and the preparation of the physical environment are the key focus areas for this domain. Most of these elements will be positively affected by increasing the number of Montessori trained teachers. Further, as described above, additional attention should be directed to rethinking the overall organization of time and space.

Mixed-age grouping requires the knowledge and skills to support student engagement in a highly enriched, hands-on learning environment that prioritizes student-directed exploration, trial and error, and self-correction. Fully implemented Montessori mandates three-year cycles to enable a range of intellectual, social, and emotional benefits. These include community cohesion made possible by only a third of the classroom changing each

year, creating opportunities for younger students to learn from older students—to participate in diverse forms of conversation, observe higher-level reading and cultural work, and to, generally, be mentored by elders in the room. For older students, the opportunity to emerge organically as elders in the mixed-age environment enables the cultivation of empathy, patience, and leadership. To realize these benefits, the environment must be prepared with the full complement of materials, and teachers must know how to use them.

Given that most teachers at Drachman are not yet trained, it makes sense to develop a careful plan to move classroom environments from a Montessori-inspired design to a fully implemented design as more prepared teachers come on board. Montessori-inspired features include set-ups that enable movement and dynamism as well as concentration. A careful review of both shelf and table placement should focus on ensuring that the environment contains only items that are available for children's use; adult items like desks, file cabinets, and so on should be moved to the office areas of the pods.

Dynamic classrooms have space for students to work at tables, on the floor, and at small floor tables, known as "chowkies." Also, setting up environments so that shelves are moved into the center of the room as opposed to around the periphery, will allow for the room to look and feel more homelike. Concentration can be supported by removing visual clutter in the form of posters, notices, and other noneducational material from walls. Also, organizing areas of the classroom so that students can navigate independently—a math area, a language area, a cultural area—with geometry, zoology, botany, and history (for elementary), and sensorial (for kindergarten). Again, these areas can be delineated by shelf and table arrangement.

Most of the activity we observed during our visit involved teacher-directed work. We did witness three classrooms (one kindergarten and the other Lower Elementary classrooms, in which students were engaged with what appeared to be self-chosen Montessori materials. In those cases, most children were deeply engaged in their work. They moved carefully around the classroom, treating the materials, one another, and adults with respect. In order to take full advantage of students' natural (and evident) desire to learn, we recommend beginning each day with student-chosen work rather than morning meetings in which housekeeping issues like attendance and lunch choices are addressed. The classroom should be a place of genuine engagement and industry, and the sooner students can get to work, the better.

Practical life is an important part of any Montessori environment, as it offers opportunities to develop executive functioning skills like concentration, fine motor control, and working memory. Children who have had the chance to develop these skills through full engagement with practical life activities such as table and hand washing, dressing frames, and polishing, not only develop hand strength necessary for writing and working memory necessary for reading and calculating, but also habits of order and satisfaction, which can be quite

therapeutic for children experiencing challenges with sensory integration, attentional issues, or the autism spectrum. Hands-on work, particularly work with water, is inherently therapeutic and helps dysregulated students find sustainable ways to regulate.

For these reasons, we strongly urge Drachman to consider ways to offer a full children's house (ages 3–6) program. Children who have had the opportunity to practice basic skills in executive functions (EFs), linguistic and cultural fluency, social fluency, and emotional flexibility prior to age 5 are much more likely to perform at grade level later on. Once this pattern is established, Drachman classrooms can focus more on the “big work” characteristic of fully implemented Montessori elementary and adolescent environments than on remediating low-performing readers and math students.

In the near term, we also urge the inclusion of authentic practical life activities at every level. Plant and animal care, and limited snack should be features of every classroom. Such activities, which involve materials for plant care (watering cans, spray bottles, cotton balls), can be integrated into the classroom environment in ways that are unobtrusive. Likewise, a snack table prepared to serve no more than three students allows students time to practice inhibition and working memory as they go through processes of waiting their turn, eating and talking, and then cleaning up.

To enable deep engagement and self-directed choice, students must have access to large periods of uninterrupted work. A minimum of two hours in which students are not broken into age or grade-level groups would allow students to gain the fuller benefit of an enriched prepared environment.

Specific next steps for this domain also include:

1. Add an “observer’s chair” to each classroom, and schedule time for each adult to sit in it for at least 10 minutes each day. Children may sit in the chair as well, if they are observing.
2. As a community, consider the role of work plans in the life of the school and each individual classroom. Engage in a substantive discussion of how and why they have been used, and consider ways of moving away from an emphasis on monitoring teacher-assigned work to observing student-chosen work. This is a complex challenge. Members of the community have already “tested” this change, and it is important to use this test as an opportunity to reflect on the challenges as well as the opportunities associated with changing a practice that is so embedded in the culture of the school.
3. Consider schedule options to protect the three-hour work period for all students every day.

Domain 3: Family Engagement

Exemplary	Satisfactory	Needs Improvement	Unsatisfactory
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At Drachman, the principal acts as the primary source of internal and external communication. He personally maintains the school’s Facebook page, attends Parent Council meetings, and is an obvious presence at all school functions and throughout daily activities. During our visit, families were welcomed warmly by all members of the staff—often addressed in Spanish if that was the family’s first language. While we did not speak directly with families, we deduced, based on observed interactions and the school’s retention rate, that families are pleased with the school.

As the school moves toward full Montessori implementation, we recommend devoting more attention to assisting families in making an informed choice to attend a Montessori school. That means more focused orientation to the Montessori approach prior to enrollment, a well-coordinated orientation process, and ongoing family education regarding what happens in the Montessori classroom and why it matters.

Specific next steps for this domain also include:

1. Create a more fully developed *Family Handbook*, which includes a parent-school agreement outlining mutual expectations.
2. Ensure ongoing family education sessions—a minimum of four a year—focused on what Montessori is and how it is practiced at school and at home.
3. Ensure ongoing social opportunities—also a minimum of four a year—focused on sharing meals, developing social ties, and spending time as part of a community.

Domain 4: Leadership and Governance

Exemplary	Satisfactory	Needs Improvement	Unsatisfactory
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As mentioned in Domain 1, Drachman has a long-term, committed leader who is both held in high esteem by families and staff and determined to move the school toward fuller Montessori implementation. To that end, he maintains an evergreen plan for moving toward American Montessori Society (AMS) Accreditation, which he shares regularly with staff. Significant funds for professional development have been earmarked for Montessori training, which is the most important variable affecting the school’s fidelity to the model. The school also employs three lead teachers who serve, effectively, as program coordinators for each developmental level.

Apart from the need to increase the number of teachers who are adequately prepared to deliver Montessori pedagogy, the most significant challenge to fidelity and sustainability of the Montessori model is the school’s mandated adherence to a scope and sequence that is at odds with Montessori goals and practices. Teachers and leadership frequently explain that the school is as “Montessori as we can be” given the expectations associated with the district’s accountability scheme. Developing a manageable approach to meeting district outcome expectations without degrading the Montessori program should move to the

forefront of the school's list of strategic priorities. This will mean decoupling outcomes from the district's curriculum guide and asserting a more coherent and confident implementation of the Montessori scope and sequence. Once again, a condition of this action is the presence of more Montessori expertise in the building. Still, planning for a rational move toward fuller adherence to Montessori curriculum and instruction should occur simultaneous to teacher training. Likewise, communicating the schools intentions—as well as rationale for those intentions—to external and district stakeholders must also be carefully planned.

The school can move toward the exemplary range by considering the following steps:

1. Provide on-site assistant training for both assistants (paras) and leads, so the school can begin to develop a shared language and set of practices around best Montessori practice.
2. Develop a whole-school improvement plan that is grounded in Montessori principles and clearly references the *Essential Elements of Montessori in the Public-Sector* rubric.
3. Build ongoing professional development grounded in Montessori principles into the life of the school.

Domain 5: Assessment

Exemplary	Satisfactory	Needs Improvement	Unsatisfactory
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Drachman is in the midst of recovering from a drop-in state assessment scores, which precipitated intensive focus on student performance. The past year has focused on improving those scores and has involved frequent benchmarking and common assessments. The goal of this period has been to move the school out of “high alert” so that there are more degrees of freedom with regard to district curriculum and assessment mandates. This is a common situation for schools to find themselves in, and Drachman's response is completely understandable. Fortunately, benchmark assessments suggest that the state assessment results will be much improved, which should open a window of opportunity to making substantial changes in the school's assessment framework.

To that end, we strongly urge the school to move toward assessing wider-scope outcomes, including measures of executive functions and social-emotional learning. Implementing the *Developmental Environmental Rating Scale* (DERS) will also help trace a more coherent path between inputs (e.g., the quality of the classroom environments) and outcomes.

The school can move into the satisfactory range by considering the following steps:

1. Move observation to the center of the school's understanding of data. See above for the inclusion of an observer's chair in every classroom and use of the DERS and observation rubrics (attached).

2. Collaborate with other public Montessori schools to pilot a set of assessments designed to track holistic outcomes of the Montessori program, including executive functions and social and emotional development.
3. Begin a systematic process of surveying alumni, parents, and receiving teachers in order to track long-term outcomes of the Drachman program.

Next Steps

Drachman is well positioned to move toward healthy maturity. The school has important assets and has taken substantive steps to address areas of weakness and potential threats.

Specifically, immediate priorities related to addressing the tension between full Montessori implementation and external demands of public education include:

1. Review and deliberate on the recommendations of this report with the whole school community. Consider the question of Drachman's commitment to fully implemented Montessori versus Montessori-inspired and what steps the community is ready to take to move toward full implementation.
2. Develop a school improvement plan grounded in these goals and that references the *Essential Elements* rubric explicitly.
3. As part of that plan, consider the following high priority items:
 - Develop an in-house professional development program that emphasizes Montessori principles and practice and includes significant orientation and support for teaching assistants.
 - Develop a family recruitment and pre-enrollment strategy that focuses on assisting families in (a) making an informed choice regarding Montessori education, (b) understanding how school and home can work best as partners, and (c) understanding key Montessori concepts that can be taken from school to home.
 - Engage in a schoolwide focus on observation as the foundational skill for all Montessori education, including assessment.

Ideally, leadership team members and faculty teams will deliberate on these priorities, which will then be incorporated into the school improvement plan and operationalized through committees or task forces drawn from across the school community.

Appendices

1. Sample Family Agreement

THE PARTNERSHIP AGREEMENT

XXXX Montessori School is a family-centered learning community: we take seriously our commitment to serve not only children enrolled in the school but also the entire family. Children thrive when home and school work in harmony, with both environments sharing the same educational values and expectations. Choosing to attend XXXX means agreeing to a set of expectations related to the school's mission, operating principles, and policies. Those principles and policies are described here.

Q. What is the school's most basic expectation of parents?

A. We expect you to make continuing efforts to both understand and embrace the Montessori approach and to work in partnership with the school.

We find that our most constructive relationships with families begin before admission. XXXX expects parents to understand and embrace the mission of the school. To that end, we help parents learn about the Montessori approach by providing information and opportunities for parent education as part of the admission process—so that parents can make an informed decision in choosing to enroll their children—and continue to provide more opportunities throughout a family's years at XXXX. Once children are enrolled, we expect parents to attend regularly scheduled parent-teacher conferences and parent education events, and to familiarize themselves with the philosophy, policies, and procedures contained in the XXXX *Parent Handbook* and other school publications.

Q. What contribution can I make to create a positive school community?

A. You can demonstrate respect for all adults and children, the school, and the school's programs.

Be a role model for your children. Show respect for them, their classmates, parents of classmates, teachers, and other school staff—in short, for everyone associated with XXXX. Respect begins with civility and deepens into trust. Our most fundamental behavioral guidelines for the children are "respect yourself, respect others, and respect the environment." We expect the same from adults, parents, and school staff, at all times and in all relationships within the school community. This includes speech and outward behavior. Support your child by speaking of her teachers, classmates, and school in positive terms. Respect and abide by the school's policies and procedures. Honor your commitments. Look for ways to make a positive contribution to the life of the school. Through your behavior,

you contribute to your children's moral development and to the culture and climate of their school, which they experience on a daily basis.

Q. How can I create consistency between home and school?

A. You can strive to parent according to Montessori principles.

Learn as much as you can about Montessori principles as they apply to the preparation of your child's home environment and the way you, as a parent, interact with your children. This begins with the general principle: "Never do something for your child that he can do for himself." Allow your child to engage in all of the simple tasks of practical life that a child can do for himself at each stage of development. Montessori education may also entail learning a communication style different from the way you were parented. Children develop a love of learning and become responsible, independent, and capable when parents' values and expectations are consistent with those of the school.

Q. What are my responsibilities regarding communication between home and school?

A. We expect you to maintain an active, direct, and respectful two-way communication with the school.

Read communications that are sent home: these may include letters, newsletters, and calendars. Inform the school in a timely fashion of pertinent changes in your child's life. Active communication involves parents sharing observations and concerns about their child with the child's current teacher. In matters large and small, remember the principle of respect: even when there is disagreement, disagree respectfully. For more detailed communication guidelines, please refer to the *XXXX Parent Handbook*.

Q. What can I expect of the school academically?

A. XXXX aspires to fulfill its mission as a Montessori school.

As a Montessori school, we are different from traditional schools. Our first commitment is to the multidimensional development of your child. Montessori children do amass a great deal of factual knowledge in school. However, our aim is for each child to be far more than a repository of this information: we guide each child to think for herself. Cognitive development and a solid academic foundation are important, yet they represent only one dimension of our aspirations for your child. Equally significant are your child's social, emotional, spiritual, and physical developments.

Children are given choices and a great deal of freedom—within limits—during the school day. The choices a child makes, and the accompanying responsibilities, influence the emerging character of your child. By choosing her own work, or shaping it to a

considerable degree, and following that work through to completion while working independently or in cooperation with others, the Montessori child identifies her interests and develops her individual gifts.

XXXX places significant emphasis on community service. Younger children learn by serving their small community, for example, classmates, classroom, and family. As they grow, children reach out to the larger community and experience the many rewards of helping others. The children gain awareness and appreciation of others, of the challenges faced by others, and, equally important, of their own strengths and abilities to help others and affect the world around them. Community service is an integral and important part of their lives and stays with them well beyond their XXXX years.

We treat each child with dignity and respect and expect that she will treat all others in the same manner. We treat each child as an individual and strive to develop each child's unique gifts—within the context of the classroom and the community. With freedom comes responsibility, and each child learns to balance her personal freedom with a clear sense of responsibility to herself, to others, and to the community as a whole.

Q. What can I expect in terms of communication from the school?

A. We aim to maintain open, honest, timely, and respectful communication with you about your child and about information affecting the community.

There are two regularly scheduled parent-teacher (or in the case of older students, parent-teacher-student) conferences each year, accompanied by written summaries, as well as a year-end written progress report. In the event of special concerns, your child's teacher will contact you to discuss these concerns by phone, by email, or in person. In addition to conference reporting, classroom teachers will communicate with you via classroom letters and newsletters, email messages, and short reports as needed for individual children.

Each XXXX teacher is a well-trained professional, and his or her evaluation is confidential and based on the direct observation of your child. Teachers will always offer their current best understanding of your child's progress and his strengths and needs. For all children, this evaluation is based on the teacher's observation, which may be augmented by input from the head of school and/or auxiliary staff. In addition to work sampling and observation, XXXX adheres to XXXX County and XXXX State expectations related to assessment and standardized testing. We report the results of these assessments annually.

Regarding ongoing schoolwide communication, the XXXX distributes a newsletter, as well as a *Parent Handbook*, calendar, and other occasional letters and publications. We also expect you to attend quarterly Parents Association and School Governance Council meetings.

Q. What can I expect of the environment?

A. We strive to ensure an environment that is physically and emotionally safe and supportive as well as aesthetically beautiful.

Dr. Montessori said that the classroom teacher's first responsibility is to prepare the environment. The learning materials should correspond to the developmental characteristics of the child at each level, and those materials must be attractive to the child: correct in size, aesthetically pleasing, well maintained, and complete. More broadly, the whole environment must appeal to the child and inspire her work.

Our community of children and adults comprises a social environment and culture that impacts your child's experience. We strive to make this environment emotionally supportive and safe for every child. This does not mean that there are no problems. It does mean that we will work with your child in developmentally appropriate ways to deal with problems as they arise, empowering her with social skills and aiding her in the development of emotional intelligence to prepare for a lifetime of working with others in different communities and organizations.

Q. What professional standards can I expect of the school and faculty?

A. XXXX aspires to maintain the highest pedagogical standards of Montessori practice.

At a minimum, all lead teachers hold a bachelor's degree; a number have earned master's degrees as well. In addition, primary and elementary teachers have a postgraduate diploma from a Montessori teacher training center and hold XXXX State teaching certificates. Our teachers have a sense of mission in working with children and demonstrate high standards for themselves and their students.

XXXX promotes a culture of professional growth in a number of ways. Teachers work annually with the head of school to create a professional growth plan driven by goal setting for professional development. Over a three-year cycle, Montessori school consultants observe each teacher and work with the school as a whole to maintain the highest standards of Montessori pedagogy. In addition, the school annually hosts workshops and conferences for professional development of faculty, administration, and board.

Q. What can I expect of the school administration?

A. You can expect integrity: a focus on the needs of the individual child in harmony with the life of the community; mission-driven decisions embodying good stewardship and responsible management; and an open door to your questions or concerns.

Administrative team members interface with all the various constituencies of the school: students, parents, extended family, faculty, alumni, prospective parents, professional visitors, government officials, other schools and educational organizations, and the general

public. In your interactions with the administration, you can expect professional, courteous, and business-like conduct, as well as mutually respectful communication.

The head of school works closely with the senior leadership of both XXXX and XXXX County Public Schools. They often face decisions requiring a balance of competing priorities. Sometimes those factors are mutually exclusive; sometimes equally well-intentioned adults see matters differently. In making decisions, the administration will focus on the interest of the individual child in balance with the needs of the school.

The Family Agreement Pledge

Parent name: _____

Child name: _____

As a XXXX parent/guardian, I have read and understood the principles and policies described above. To the best of my ability, I will abide by these expectations through my words and actions. Specifically, I agree to (please initial each item below):

1. Attend all parent-teacher conferences ____
2. Attend at least four additional parent information sessions during the year ____
3. Ensure that my child attends school every day and arrives on time ____
4. Create a home environment that supports my child's development through:
 - a. Establishing and maintaining regular routines ____
 - b. Providing work/play and sleeping spaces that are orderly ____
 - c. Whenever possible allowing my child to practice self-care and independence ____
 - d. Limiting screen time (television, computers, hand-held devices) to no more than two hours per week ____
5. Share information with XXXX staff ____

Signature of parent/guardian

date

2. Essential Elements Rubric

See attached

3. Sample Elementary Work Plan

See attached

4. Further Suggestions for Early Childhood Environments

Materials

- Remove transition materials from the environment after the first six weeks of school.
- Remove pre-math materials and present more golden bead and decimal card work in math.
- Replace transfer activities with more complex practical life activities (teachers can rotate between classes).
 - Polishing—wood, brass, glass, and silver.
 - Washing—rotate table, floor, cloth scrubbing, object washing.
 - Sewing—lacing, button sewing, canvas backing, burlap.
 - Food preparation—carrot peeling, orange juicing, apple slicing, celery and cream cheese.

Recommended Work Plan Changes

- Keep classroom rules and procedures the same whether or not a child has a work plan.
- Expect children to support the concentration of their classmates.
- Demonstrate grace and courtesy lessons daily.
 - Ensure that you create a peaceful and respectful community.
 - Teach every needed skill explicitly and offer opportunities to practice.
 - Encourage and acknowledge all efforts toward respectful interactions.
- Provide structure for those who need it.
 - Continue with a work plan for that individual child if needed, with choice options included.
 - Choose a material for a child.
 - Offer a child a choice between two different materials.
- Observe the wandering child before intervening because integration time is often needed.
 - Give the child time to make a selection.
 - Observe if the child is interfering with another child's concentration.
 - Invite the child to work, rather than command, for example: "Find your work ... where's your work?"

- Head teachers can say, “Let’s look at this shelf. What do you know how to do? . . . And this too? You know a lot of things!”
- Assistants can say, “Let’s look at the presentation clipboard the teacher has prepared for all the children. Let’s see . . . Here’s your name! Wow! Look at all these presentations you’ve had.”
 - Read a few presentations and see if this sparks an interest.
 - Learn the names of the materials, which the children can help with.

5. Further Suggestions for Elementary Environments

Room Organization

- Aim for dynamic placement of furniture and opportunities for children to work.
 - Students should be able to work at tables, on rugs, and at low floor tables (sometimes called chowkies).
 - Tables should normally be able to accommodate groups of students, as “big work” (see below) requires collaboration.
- Remove all clutter, visual and otherwise.
 - Walls should emphasize fine art over commercial posters; student work should be carefully selected and hung only if the student wants it displayed.
 - Any material that is not in use should be removed.
- Create clear and usable opportunities for practical life.
- Place at least one adult-sized chair in each classroom and designate this as the observer’s chair.

Student Choice and Work

- Place a premium on “big work.”
 - Research, extended science experiments, or other projects may require teams to complete.
- Rework the work plans so that students have more agency in what they choose. A work journal rather than a work plan is often a better, more “real life” choice for students this age. An interim solution may be a simple grid that students use for planning and reporting weekly (see attached).

Teacher Activity

- Presenting
 - Aim for no fewer than five a day—three in the morning and at least two in the afternoon.
 - Schedule these based in part on your plans and in part on student need.
- Observation.
 - Sit in the observer’s chair at least twice each day for at least five minutes.

- Be sure students understand that this is your “work” and you should not be disturbed.

APPENDIX E. TUCSON–MONTESSORI CROSSWALK

Tucson Support & Innovation Team Classroom Walkthrough	NCMPS/DERS (possible data/alignment)
Domain 2: The Classroom Environment	
<i>Component: [2a] Creating an environment of respect and rapport</i>	
The teacher states clearly, at some point during the lesson, what the students are learning. Evidence of objective posted/articulated/aligned to lesson.	DERS – Students are engaged in self-directed work, and as a result, may not be concurrently engaged in the same content; a teacher stated objective does not apply. However, if an observer were to be present during a small group lesson, objectives are articulated by Montessori teachers.
When asked by an observer, students can state what they are learning.	Not applicable – Observers should never talk to or otherwise interrupt children who are concentrating.
Students engage with the learning task, indicating that they understand what they are to do.	DERS – Children are deeply engaged/concentrating, indicated by extended focus, repetition.
If appropriate, the teacher models the process to be followed in the task.	DERS – Teacher models what is expected of students.
The teacher makes no content errors.	DERS – Teacher demonstrates confidence (rather than confusion) in lesson presentations.
The teacher explains content clearly and invites student participation and thinking.	DERS – Teacher uses language intentionally, focusing on clarity, selective use of vocabulary. DERS – Teacher treats lessons as an invitation to engage in learning.
Vocabulary and usage are correct and completely suited to the lesson.	DERS – Vocabulary is intentionally selected, with focus on conversational exchanges rather than didactic presentation.
Vocabulary is appropriate to the students' ages and interests.	DERS – Vocabulary is intentionally selected, with focus on conversational exchanges rather than didactic presentation.

Tucson Support & Innovation Team Classroom Walkthrough	NCMPS/DERS (possible data/alignment)
<i>Component: [2b] Establishing a culture for learning</i>	
The teacher communicates the importance of the work and expectations that all students can be successful in it.	DERS – The environment is meticulously prepared with materials that invite deep engagement. There is nothing extraneous.
Student work and conduct during a lesson indicate commitment to high quality.	DERS – Students initiate and engage in work without adult prompts. DERS – Students engage in extended, complex work, often choosing to extend study beyond the initial questions posed by the teacher.
The teacher demonstrates a high regard for student abilities.	DERS – Teacher does not interrupt students who are engaged in work. DERS – Teacher converses with, not at, students.
The teacher emphasizes the role of hard work in student learning.	DERS – Teacher does not interrupt students who are engaged in work.
The teacher expects student effort and recognizes it.	DERS – Adults share wonder and joy in student accomplishment and discoveries.
Students put forth good effort to complete work of high quality.	DERS – Children express joy and satisfaction in the process of concentrated work. DERS – Children attempt multiple ways of correcting an error. DERS – Children engage in multi-step tasks and activities and have the opportunity to self-correct.
<i>Component: [2c] Managing classroom procedures</i>	
Smooth functioning of all routines.	DERS – Developmental Outcome Executive Functioning.
Little to no loss of instructional time.	This is not applicable in a Montessori environment, where instruction is less visible than student activity. The environment should be a hive of activity, with teachers inviting students to small-group lessons.

Tucson Support & Innovation Team Classroom Walkthrough	NCMPS/DERS (possible data/alignment)
Students play an important role in carrying out the routines.	DERS – Students demonstrate obvious ownership of the environment, spontaneously engage in its care, and manage themselves within large blocks of uninterrupted work.
Students know what to do, where to move.	DERS – Students demonstrate obvious ownership of the environment, spontaneously engage in its care, and manage themselves within large blocks of uninterrupted work.
Volunteers and paraprofessionals, if present, work productively and independently.	DERS – All adults, whether Montessori trained or not, support the work of the learning environment through meticulous attention to its preparation and maintenance and respect for students' engagement in learning.
<i>Component: [2d] Managing student behavior</i>	
Clear standards of conduct, possibly posted and possibly referred to during a lesson.	DERS – Students generally regulate themselves, practicing the conventions of “grace & courtesy,” and functioning as a harmonious community of freedom with responsibility. Daily chores and/or community commitments may be posted.
Absence of acrimony between the teacher and students concerning behavior.	DERS – Students generally regulate themselves, practicing the conventions of “grace & courtesy,” and functioning as a harmonious community of freedom with responsibility. Daily chores and/or community commitments may be posted.
Teacher awareness of student conduct.	DERS – Teacher regularly observes all interactions within the prepared environment, pausing to sit and take notes.
Preventive action, when needed, by the teacher.	DERS – Teacher redirects rather than punishes disruptive behavior. DERS – Adults permit children to discover the results of their actions rather than receive a warning about them.
Fairness.	DERS – Children use words to resolve conflicts with one another.

Tucson Support & Innovation Team Classroom Walkthrough	NCMPS/DERS (possible data/alignment)
Absence of misbehavior.	DERS – Students generally regulate themselves, practicing the conventions of “grace & courtesy,” and functioning as a harmonious community of freedom with responsibility. Daily chores and/or community commitments may be posted.
<i>Component: [2e] Organizing physical space</i>	
Pleasant, inviting atmosphere.	DERS – The environment is carefully prepared to be a pleasing, home-like community. The environment should be free of clutter, impeccably clean, organized in a way that allows students to choose from a variety of places to work, and curated with high-quality art, books, and other learning materials.
Safe environment.	DERS – The environment should be free of health or safety hazards.
Accessibility for all students.	DERS – All students to have access to the entire environment all day. There should be no designated teacher spaces.
Furniture arrangement is suitable for the learning activities.	DERS – The environment should be dynamic, with opportunities for students to work at tables, on the floor, or on small floor-tables. Students should also be able to choose to work alone or in groups. There should be sufficient space for students to move about the room freely.
Effective use of physical resources, including computer technology, by both the teacher and students.	DERS – Digital technology should be used prudently, as a resource for research and communication. Curriculum should not be delivered on screens
Domain 3: Instruction	
<i>Component: [3a] Communicating with student</i>	
The teacher states clearly, at some point during the lesson, what the students are learning. Evidence of objective posted/articulated/aligned to lesson.	Not applicable. Each student has individual work plans, and lessons are provided in small groups.

Tucson Support & Innovation Team Classroom Walkthrough	NCMPS/DERS (possible data/alignment)
When asked by an observer, students can state what they are learning.	DERS – Observers shouldn't interrupt students who are concentrating.
Students engage with the learning task, indicating that they understand what they are to do.	DERS – Students demonstrate deep, extended engagement in activities.
If appropriate, the teacher models the process to be followed in the task.	DERS – Teacher regularly models what is expected of students, demonstrating precision in physical gestures and clarity in speech.
The teacher makes no content errors.	DERS – Teacher demonstrates confidence (rather than confusion) in lesson presentations.
The teacher explains content clearly and invites student participation and thinking.	DERS – Clarity.
Vocabulary and usage are correct and completely suited to the lesson.	DERS – Conversation; clarity; soft, conversational voice.
Vocabulary is appropriate to the students' ages and interests.	DERS – Conversation; clarity; soft, conversational voice.
<i>Component: [3b] Using questioning/prompts and discussion</i>	
Most questions are open ended, inviting students to think.	DERS – Lessons are an invitation to learn.
Highly cognitive, challenging questions are formulated by students and the teacher.	DERS – Students and teacher engage in substantive conversations about student-initiated research and study.
Questions are related to the lesson objectives.	Not applicable – Because a student's work is self-directed, each student may have different lesson objectives. This domain may appear differently in a Montessori classroom.
The teacher makes effective use of wait time.	Not applicable – Because there is little whole-group instruction, observers would generally not see strategies such as wait time demonstrated. Students are engaged in self-directed work with little teacher interaction during the work period. However, if an observer were to be present during small group lessons, wait time may be observed

Tucson Support & Innovation Team Classroom Walkthrough	NCMPS/DERS (possible data/alignment)
Discussions enable students to talk to one another, without ongoing mediation by the teacher.	DERS – Free movement, conversation, and peers assisting peers are standards in the Montessori classroom.
The teacher calls on most students, even those who don't initially volunteer.	Not applicable – There is very little whole-group instruction or questioning in a whole-group setting.
Student-to-student discussions are present.	DERS – Free movement, conversation, and peers assisting peers are standards in the Montessori classroom.
<i>Component: [3c] Engagement</i>	
Most learning tasks demand higher-order thinking.	DERS – Students experiment with solutions to problems.
Students have limited choice in how they complete learning tasks.	DERS – Students initiate work without adult prompts.
Learning tasks have multiple correct responses or approaches.	DERS – Students experiment with solutions to problems.
There is a productive mix of different types of groupings, suitable to the lesson objectives.	DERS – The environment is dynamic.
Materials and resources support the learning goals and students' cultures.	DERS – Hands-on materials are present, and materials are a reflection of students' cultures.
The lesson has a clear structure.	DERS – Teacher is confident in lesson presentations.
Most students are intellectually engaged in the lesson.	DERS – Students are deeply engaged.
<i>Component: [3d] Using assessment in instruction</i>	
Students clearly understand the characteristics of high-quality work.	DERS – The environment is filled with carefully organized materials designed to invite students to deep engagement with rigorous work.
The teacher monitors student learning through a variety of means, including specifically formulated questions to elicit evidence of student understanding, for at least groups of students.	DERS – Teacher observes regularly, converses with students.

Tucson Support & Innovation Team Classroom Walkthrough	NCMPS/DERS (possible data/alignment)
Feedback includes specific and timely guidance on how students can improve their performance.	DERS – Friendliness with error.
The teacher elicits evidence of individual student understanding during the lesson.	Not applicable – Students are not expected to develop understanding during teacher-directed lessons in a Montessori classroom. Instead, students develop understanding after the initial presentation, during periods of experimentation and practice. During these work periods, teachers observe student work, and intervene, when necessary, to support student learning.
Students are invited to assess their own work and make improvements.	DERS – Friendliness with error.
<i>Component: [3e] Demonstrating flexibility and responsiveness</i>	
The teacher successfully makes a minor modification to the lesson.	DERS – Teacher observes, modifies lessons based on student needs and interests.
The teacher incorporates students' interests and questions into the heart of the lesson.	DERS – Teacher observes, modifies lessons based on student needs and interests.
The teacher conveys to students that s/he has other approaches to try when the students experience difficulty.	DERS – Teacher encourages peers to assist peers.
In reflecting on practice, the teacher cites multiple approaches undertaken to reach students having difficulty.	DERS – Teacher regularly modifies environment to meet the needs of individual students.

The research department at Marzano Research supports partners in improving education systems, practices, and outcomes for all learners.

Cofounded a decade ago by Robert Marzano and Jeff Jones, Marzano Research began working with state and local education organizations and practitioners to understand the challenges they face and support them in defining the questions, conducting the research, and implementing the answers to enhance educational results.

Today, Marzano Research has grown to become one of the leading research organizations in the country, providing rigorous research, evaluation, and technical assistance to federal, state, local, and private partners. As part of that work, we serve as the lead for the Regional Education Laboratory in the central region, working with state and local education agencies in seven states as thought partners and researchers to address some of the most challenging issues in education.



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