Mission

The mission of Montessori de Santa Cruz Public Charter School is to create an environment wherein the highest potential of each child – cognitive, emotional, social, physical, and spiritual - can be realized. By emphasizing whole child development, respect for all life, and personal empowerment in a nurturing, safe environment, students will become well-educated, thoughtful and responsible global citizens.

Vision

Montessori de Santa Cruz Charter School embraces the spirit and philosophy of Maria Montessori in creating an educational environment which nurtures a life-long passion for learning. Involving teachers, children, their families, and the community, the village of Tubac and surrounding area provides an extraordinary milieu for the experiential approach to student acquisition of knowledge, skills, and wisdom.

Goals

- All students will have an Individualized Educational Work Plan
- All students will demonstrate a minimum of one year's academic growth over the course of a school year
- All students will demonstrate respect for themselves, respect for others, and respect for the environment

Value and Accountability

Montessori de Santa Cruz Public Charter School (MdSC) offers an invaluable service to the future and growth of Tubac and Santa Cruz County Arizona. By providing what is generally considered a type of education available only to children from the upper socioeconomic level, students from this rural, socioeconomically disadvantaged region are offered a rare opportunity to receive an education that supports development of the whole child. The impact of the learning will benefit not only the students and their families, but will eventually have a positive effect on the entire region. Currently, approximately 55% of our students are identified as FRL, 7% as ELL, and 25% as needing 504 learning accommodations. These numbers reflect the regional population statistics.

Montessori de Santa Cruz Public Charter School (MdSC) is striving toward an A on the 2014-2015 Arizona School Report Card. In support of accomplishing that achievement, the better part of FY14 was spent designing and implementing a comprehensive, systematic and sustainable Data-Driven Education System encompassing all school operations. We are only now able to begin gleaning the student growth and proficiency data. The outcomes are just beginning: the best is yet to come.

Curriculum

Overview

MdSC's education system is designed to meet the needs and interests of individual students. To address this need, MdSC teachers compared the Arizona model K-6 school curriculum with the Montessori K-6 curriculum to ensure that all required areas are covered. The expansive nature and enormous scope of MdSC's curriculum also means students have the opportunity to cover many topics not covered by the state curriculum and explore areas in greater depth. Rooted in our Mission philosophy, methodological ideology, and operational structure, MdSC's course of study is designed as an inclined spiral plane with lessons introduced simply and concretely in the early years and reintroduced several times during the following years at increasing degrees of abstraction and complexity. The multiple, sequential learning opportunities are aimed at internally motivating students not only to explore and learn, but also to:

- ignite a life-long passion for learning,
- ingrain a propensity for reflective thinking,
- establish a conscientious accountability for global peace and sustainability.
- think clearly
- do their own research
- express themselves well in writing and speech, and
- put their knowledge to practical application as an active community participant.

Albanesi

The foundation of MdSC's K-6 Curriculum is the Albanesi, a Montessori Curriculum, along with it's updated, specifically designed teaching materials, tools, and techniques. During the 2012-2013 school year, the Albanesi was aligned at the national level with the Common Core Standards. It is used at MdSC as a guide for teaching all core academic content and skills. Prior to the beginning of each school year , the Education Teams assess student growth and progress using their corresponding grade level review tests and other test scores (such as AIMS and Stanford 10) to determine areas of success and areas for improvement. The "best fit" grade level or advanced work plan in each content area is selected to guide each student's individualized study. Curriculum presentations and materials are adjusted,

reworded, supplemented, and incorporated into the classroom as needed. Over the course of the year students complete individualized progressive work plans using task cards and review tests until they have completed all necessary work plans for their grade level. Students must achieve 80% success on all assessments to move on to the next consecutive set of work plans which may be at their current or an advanced grade level. Each Student is held responsible for successfully completing his/her Work Plans and Task Cards (see examples of a Work Plan and Task Card below).

MATH WORK PLAN #9	STUDENT'S NAME										**JE-M GRADE 3**	
USE MATH TEST **JRT 81-90** AS A **PRE-TEST** FOR PLACEMENT IN THIS WORK PLAN AND AS A **POST-TEST** WHEN THIS WORK PLAN IS COMPLETED.												
DIVISIBILITY	81a	81b	81c	81d	81e	81f	81g					
OPERATIONS - ABSTRACT	82a	82b	82c	82d	82e	82f	82g	82h	82i	90a	90b	90c
	90d	90e	90f	90g	90h							
MEMORIZATIONIMULTIPL.	83a	83b	83c	83d	83e	83f	83g					
NUMERATION	Ma	84b	84c	84d	84e	84f	84g	84h	84i			
FRACTIONS	85a	85b										
MULTIPLES	86a	86b	86c	86d	86e	86f	86g					
ROUNDING	87a	87b	87c	87d								
MEMORIZATION - DIVISION	88a	88b	88c	88d	88e	88f	88g	88h	88i	88j	88k	881
SPECIAL COMBINATIONS	89a	89b	89c									

NOTE• When all the cards are checked off, the student is ready to take the Post-test.

MULTIPLES **TASK CARD** **LEVEL 86.A**

Observation: **A multiple of a number is the product of a multiplication by that number. A multiple of a number always contains that certain number exactly.**

- **Use the materials of the Long Bead-chains and select one long chain at a time. Begin with the chain of two. Skip count and match the arrow markers of the multiples of two. Since the most important multiples to remember by heart are the first ten of each number from 2 to 9, write the first ten multiples of two on your paper in linear formation as shown below.**

2	4	6	8	10	12	14	16	18	20

- **Study the first ten multiples of 2, 3, and 4 by heart. When you are ready, ask your teacher to test you orally and see if you can remember them without counting on your fingers.**

3									
4									

- **Study the first ten multiples of 2, 3, and 4 by heart. When you are ready, ask your teacher to test you orally and see if you can remember them without counting on your fingers**

JE-MATH LAB © 2011 — The Albanesi Educational Center — www.MontessoriResources.com

Virtues Project

The Virtues Project is the cornerstone of MdSC's K-6 Curriculum. A global grassroots initiative founded in Canada in 1991, the Virtues Project is recognized as a "model global program for families of all cultures". The Virtues Project™ is a character education program intended to raise conscious awareness and benefits of living meaningful, contributory, compassionate, and ethical lives. The program is used as a guide in communication and community-building by the entire MdSC learning community (board members, students, faculty, staff, administration, and parents). Four (4) virtues are selected each month as "Virtues of the Month" (ie., respect, patience, compassion,

and self-discipline). Monthly ceremonies are held school-wide with student presentations on examples of practice of the out-going virtues and introductions of the incoming virtues via story, game, activity, or other technique.

Supplemental Programs

MdSC utilizes the following programs to supplement the Albanesi curriculum and Virtues Project:

1) Scholastic Guided Reading Program (used to develop reading strategies and skills);
2) Reading A to Z (used for supplemental practice in all grades as needed);
3) Raz-Kids (used for independent and supplemental instruction in grades 1-3);
4) Literature Circles (used for character development, vocabulary, and research in grades 4-6);
5) Six Traits of Writing (used to teach writing in grades K-6);
6) Handwriting Without Tears (K-5);
7) Evan Moor Spelling (1-6); and
8) Harcourt Language Arts workbooks (1-6).

Intervention Program

In the spring of 2013, MdSC staff began the procedure of aligning the Montessori curriculum with the Arizona Common Core Standards (ACCS). The curriculum analysis enabled the Data Review Team to detect gaps in math teaching process and activities and to ascertain critical problem areas that need additional learning opportunities. Mathematics and Data, Operations and Algebraic Thinking, and Geometry were pin-pointed as problem areas in for MdSC students. Staff then began researching best practices to shore up the curriculum gaps and expand math learning opportunities in those areas. Research revealed strong linkages between math and music, math and dance movements, math and visual arts, as well as math and performing arts. Addressing the problem of low math scores with an integrated art program emerged a viable solution. Thus, the genesis of the School – Arts Partnership in Tubac (LMA) was born. The LMA initiative draws from local assets to meet school needs. Collaborative teams comprised of Tubac Center for the Arts and Evolution Studio teaching artists, MdSC classroom teachers, and the LMA Academic Coordinator are vital to the success of the initiative. Each of the partners provide team members with separate, but over-lapping roles. Implemented in October 2013, Learning Math Through the Arts (LMA), focuses on enhancing student growth and progress and increasing student proficiency in math through creative

expression. Grounded in brain-based research, multi-intelligence theories, neurological development, and encompassing hands-on, active learning, LMA expands the MdSC Curriculum via math concepts presented through integrated dance, theatre, painting, and performance activities to all K-6 students.

SPED/504 Program

From its inception in 2000 until Spring Semester 2014, MdSC offered a Special Education Program for those students whose needed specialized instruction. MdSC hired a certified Special Education Consultant to:

- lead MdSC's Multidisplinary Evaluation Team meetings;
- write the Individualized Education Plans for the identified SPED students;
- confer with the regular classroom teachers on modification of the Albanesi materials to instruct SPED students in regular classrooms;
- ensure compliance of SPED student records; and
- meet and confer with MdSC's AZDE ESS liaison on annual site monitoring visits.

Currently (mid Spring Semester 2014), the MdSC Board of Education is considering replacement of the IDEA Special Education Program with an Office of Civil Right 504 Plan to accommodate the learning needs of the four (4) students now being served in the regular education classrooms.

Strategies for Continuous Improvement

In early Fall Semester 2013, the MdSC Education Team completed an alignment analysis of the MdSC K-6 Curriculum and the Arizona Common Core Standards (ACCS, grades K-6) to identify the congruencies and gaps between the two (2). The outcome was a comprehensive and cohesive MdSC K-6 Curriculum Scope and Sequence Map (see a one page example on the next page). The MdSC Curriculum Map was used as a guide for the:

- MdSC K-6 Curriculum Review and Update;
- 2013-2014 Move On When Reading Plan for Tier III;
- selection of supplementary curriculum materials;
- development of pacing guides;
- development of content proficiency benchmarks; and

2013-2014 Montessori de Santa Cruz Scope and Sequence
Math – 3rd Grade

Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May
Circle Activities (Money, Time, Sequencing, Place Value, Patterns, Problem Solving, Critical Thinking Exercises, Graphing, Estimating) → (3.MD.A.1, 3.OA.D.8, 3.OA.D.9, 3.NBT.A.2, 3.MD.B.3, 3.MD.B.4, 3.MP.1, 3.MP.4, 3.MP.5, 3.MP.6, 3.MP.7, 3.MP.8) Place Value to Thousands Review: Golden Beads, Stamp Game, Bead Frames, Numeral Cards (3.NBT.A.1, 3.MP.5, 3.MP.7, 3.MP.8) Addition, Subtraction, Multiplication Fact Review: Combination Boxes, Charts (3.OA.A.1, 3.OA.A.3, 3.OA.A.4, 3.OA.B.5, 3.OA.C.7, 3.OA.D.8, 3.NBT.A.2, 3.MP.1, 3.MP.2, 3.MP.4, 3.MP.5, 3.MP.6, 3.MP.7, 3.MP.8) Plane Figure names, properties and vocabulary review: Geometry Cabinet, Geometric Solids (3.G.A.1, 3.MP.5, 3.MP.6, 3.MP.7)	Circle Activities → MITM (Math in the Mind; Math fact Drills) → (3.OA.A.1, 3.OA.A.2, 3.OA.A.4, 3.OA.B.5, 3.OA.B.6, 3.OA.C.7, 3.MP.1, 3.MP.2, 3.MP.4, 3.MP.6, 3.MP.7, 3.MP.8) Money Box → (3.OA.D.8, 3.NBT.A.2, 3.MP.1, 3.MP.2, 3.MP.4, 3.MP.5, 3.MP.7, 3.MP.8) Operations on a → Number Line (3.OA.A.3, 3.OA.A.4, 3.NBT.A.1, 3.MP.1, 3.MP.2, 3.MP.4, 3.MP.5, 3.MP.6, 3.MP.7,) Expanded and Contracted Notation, and Reading of Numerals: Bank Game, Stamp Game, Numeral Cards, Bead Frames (3.NBT.A.1, 3.MP.5, 3.MP.7, 3.MP.8) Multiplication Facts through 9's, properties of multiplication: Multiplication Bead Board, Charts, Combination Boxes (3.OA.A.1, 3.OA.A.3, 3.OA.A.4, 3.OA.B.5, 3.OA.C.7, 3.MP.1, 3.MP.2, 3.MP.4, 3.MP.6, 3.MP.7, 3.MP.8)	Circle Activities → MITM → LMA (Learning Math Through the Arts) → Money Box → Operations on a → Number Line Roman Numerals Static Multiplication: Bank Game, Stamp Game, Short Bead Frame (3.OA.A.1, 3.OA.A.3, 3.OA.B.5, 3.OA.C.7, 3.NBT.A.3, 3.MP.1, 3.MP.2, 3.MP.4, 3.MP.7, 3.MP.8) Dynamic → Addition and Subtraction: Problem Cards, Large Bead Frame (3.OA.D.8, 3.NBT.A.2, 3.MP.1, 3.MP.2, 3.MP.4, 3.MP.5, 3.MP.7, 3.MP.8) Identifying Fractions: Fraction Circles, Fraction Bars (3.NF.A.1, 3.G.A.2, 3.MP.1, 3.MP.2 3.MP.4, 3.MP.5, 3.MP.7) Types of Lines and Interactions Between Lines: Box of Sticks	Circle Activities → MITM → LMA → Money Box → Operations on a → Number Line Measurement: → Measurement Cards, Measuring Tools (3.OA.A.3, 3.MD.A.2, 3.MP.1, 3.MP.2 3.MP.4, 3.MP.5, 3.MP.6) Rounding: Golden Beads, Stamp Game, Bead Frames, Numeral Cards (3.NBT.A.1, 3.MP.5, 3.MP.7, 3.MP.8) Reducing and Comparing Like Fractions: : Fraction Circles, Fraction Bars (3.NF.A.1, 3.NF.A.3, 3.MP.1, 3.MP.2, 3.MP.3, 3.MP.4, 3.MP.6, 3.MP.7, 3.MP.8) Time (to one minute): Time Cards, Mini Clocks (3.MD.A.1, 3.MP.1, 3.MP.4, 3.MP.6) Angles: Box of Sticks, Montessori Protractor, Traditional Protractor, Geometry Cabinet	Circle Activities → MITM → LMA → Money Box → Operations on a → Number Line Measurement Adding and Subtracting Money to $10: Money Drawer, Fake Coins/ Bills (3.OA.D.8, 3.NBT.A.2, 3.MP.1, 3.MP.2, 3.MP.4, 3.MP.5, 3.MP.7, 3.MP.8) Adding and Subtracting Like Fractions: Fraction Circles, Fraction Bars Graphing: Bar → Graphs, Line Graphs, Line Plot, Pictographs (3.MD.B.3, 3.MD.B.4, 3.MP.1, 3.MP.4, 3.MP.6, 3.MP.7) Quadrilaterals: Geometry Cabinet (3.G.A.1, 3.MP.5, 3.MP.6, 3.MP.7) Pythagoras Board, Equivalency materials: Geometry Cabinet (3.G.A.2, 3.MP.2, 3.MP.4, 3.MP.5)	Circle Activities → MITM → LMA → Money Box → Operations on a → Number Line Dynamic → Multiplication: Bank Game, Stamp Game, Large Bead Frame (3.OA.A.1, 3.OA.B.5, 3.OA.C.7, 3.NBT.A.3, 3.MP.1, 3.MP.2 3.MP.4, 3.MP.7, 3.MP.8) Adding, Subtracting, Reducing like fractions: Fraction Circles, Fraction Bars Graphing Area: Yellow → Area Material (3.MD.C.5, 3.MD.C.6, 3.MD.C.7, 3.MP.1, 3.MP.2, 3.MP.4, 3.MP.5, 3.MP.6)	Circle Activities → MITM → LMA → Money Box → Operations on a → Number Line Dynamic Multiplication Numeric Patterns: Hundred Board, Working Charts → (3.OA.D.9, 3.MP.1, 3.MP.2, 3.MP.3, 3.MP.6, 3.MP.7) Fractions on a Number Line → (3.NF.A.2, 3.MP.1, 3.MP.4, 3.MP.7) Area	Circle Activities → MITM → LMA → Money Box → Operations on a → Number Line Division Facts, → properties of division: Stamp Game, Test Tubes, Bead Board, Charts, Combination Boxes (3.OA.A.2, 3.OA.A.3, 3.OA.A.4, 3.OA.B.5, 3.OA.B.6, 3.OA.C.7, 3.OA.D.8, 3.MP.1, 3.MP.2, 3.MP.4, 3.MP.5, 3.MP.6, 3.MP.7, 3.MP.8) Numeric Patterns Fractions on a Number line Operations with Time: Word Problem Cards, Mini Clock (3.OA.A.3, 3.OA.D.8, 3.MD.A.1, 3.MP.1, 3.MP.2, 3.MP.4, 3.MP.5, 3.MP.6, 3.MP.7) Perimeters of Polygons: Geometry Cabinet (3.MD.D.8, 3.MP.1, 3.MP.4, 3.MP.7)	Circle Activities → MITM → LMA → Money Box → Operations on a → Number Line Division Facts Division of Units of 10, 100, or 1000: Bank Game, Stamp Game (3.OA.A.2, 3.OA.A.3, 3.OA.B.5, 3.OA.B.6, 3.OA.C.7, 3.MP.1, 3.MP.4, 3.MP.7, 3.MP.8) Comparing → unlike fractions: Fraction Circles, Fraction Bars Perimeters of Polygons	Circle Activities MITM LMA Money Box Operations on a Number Line Comparing unlike fractions

- alignment of lesson plans and student performance expectations with ACCS

Emanating from those endeavors, a continuous data-driven MdSC K-6 Curriculum revision process was implemented in the beginning of Spring Semester 2014. Montessori Records Xpress (MRX), a Montessori based student record system, is used to monitor the integration of ACCS into the updated Montessori curriculum and MdSC student progress, growth, and achievement at all grade levels. MRX ensures relevant and timely support for all MdSC students' quest for growth, progress, and proficiency in learning.

Instruction

Overview

Instruction in the MdSC classrooms is a child-centered, and observation-based. Students are perceived as naturally eager for knowledge and capable of initiating learning in a supportive, thoughtfully prepared learning environment. It is an approach that values the human spirit and the development of the whole child—physical, social, emotional, cognitive. MdSC students learn to think critically, work collaboratively, and act boldly—a skill set for the 21st century.

Classroom Organization

One of the major instructional responsibilities of MdSC teachers is the organization of the classroom. A full complement of specially designed Montessori learning materials for each classroom are meticulously arranged and available for use in an aesthetically pleasing environment. MdSC teachers lay out their classrooms in specific arrangements that allows for small group instruction, encourages independent student learning, freedom within limits, and a sense of order. Classroom environments are prepared with materials and activities that meet students' unique interests, academic level, and developmental needs. Those materials and activities are arranged so they are introduced to each child sequentially, laying the foundation for independent learning. In Kindergarten, MdSC students learn through sensory-motor activities, working with materials that develop their cognitive powers through direct experience: seeing, hearing, tasting, smelling, touching, and movement. In the elementary years, MdSC students continue to organize their thinking through working with the teachers' specifically arranged learning materials, passing from the concrete to the abstract, then application of knowledge to real-world experiences. An MdSC classroom is a close-knit community, fertile ground for nurturing the qualities that help children and

youth become citizens of the world and stewards of the planet. This organization of information prepares MdSC students for the world of adolescence, when thought and emotion evolve into understanding more abstract, universal concepts such as equity, freedom, and justice.

Methodology

At MdSC, all students (regular, ELL, FRL, SPED/504) are taught in the regular classrooms. Multiage groupings are a hallmark of the Montessori Method. At MdSC, younger and older students are grouped together based on learning level, ability, and content interest. Peer tutoring is employed with older students teaching younger students concepts they have already mastered. This arrangement also mirrors the real world, where individuals work and socialize with people of all ages and dispositions. Students are given instruction individually and in small groups (ability, learning level, and interest based). Learning strategies are taught through group instruction. MdSC students then expand their understanding and skills independently using the pre-arranged learning materials. If learning accommodations are needed, students are given guided or direct instruction. Teaching and learning practices at MdSC enable teachers to develop enhanced awareness of individual student interests, strengths, and ways of learning. Examples include:

- Teachers have students in their class for three years: thus, they become very aware of their students' learning styles, strengths and areas requiring further development.
- Lessons are presented to individuals or small groups: teachers easily observe and record student levels of mastery.
- Materials are self-correcting: thus, teachers know when students master the knowledge, skills and understanding in the material.

Students choose their own work: thus, teachers observe a great deal about their interests and abilities which they then record.Students over the age of six become co-assessors of their work with the teacher. Beginning in Spring 2014, MdSC teachers use newly developed teaching and monitoring tools (pacing guides, MRX records tracking lesson outcomes and student concept mastery) to guide their lesson planning. By checking MRX student assessment scores, teachers monitor student growth, progress, and proficiency in the varying concepts and revise/develop lesson plans accordingly. The following four (4) pages contain copies of an MdSC Kindergarten student's MRX math progress records illustrating: 1) Progress Analysis; 2) Progress on Linear Counting; 3) knowledge of Kindergarten and 1st grade concepts related to ACCS; and 4) mastery of specified math concepts related to ACCS at both Kindergarten and Grade 1 levels.

Progress Analysis

https www.montessorirx.com

Buy and Sel...rency Group | MontessoriRX | Pinterest | The Whole Li...inara Sauce | Miniature St...tPalette.com | Pumpkin Pie...People Blog | Pin It | - LEARNING T...ll a friend!

Progress Analysis

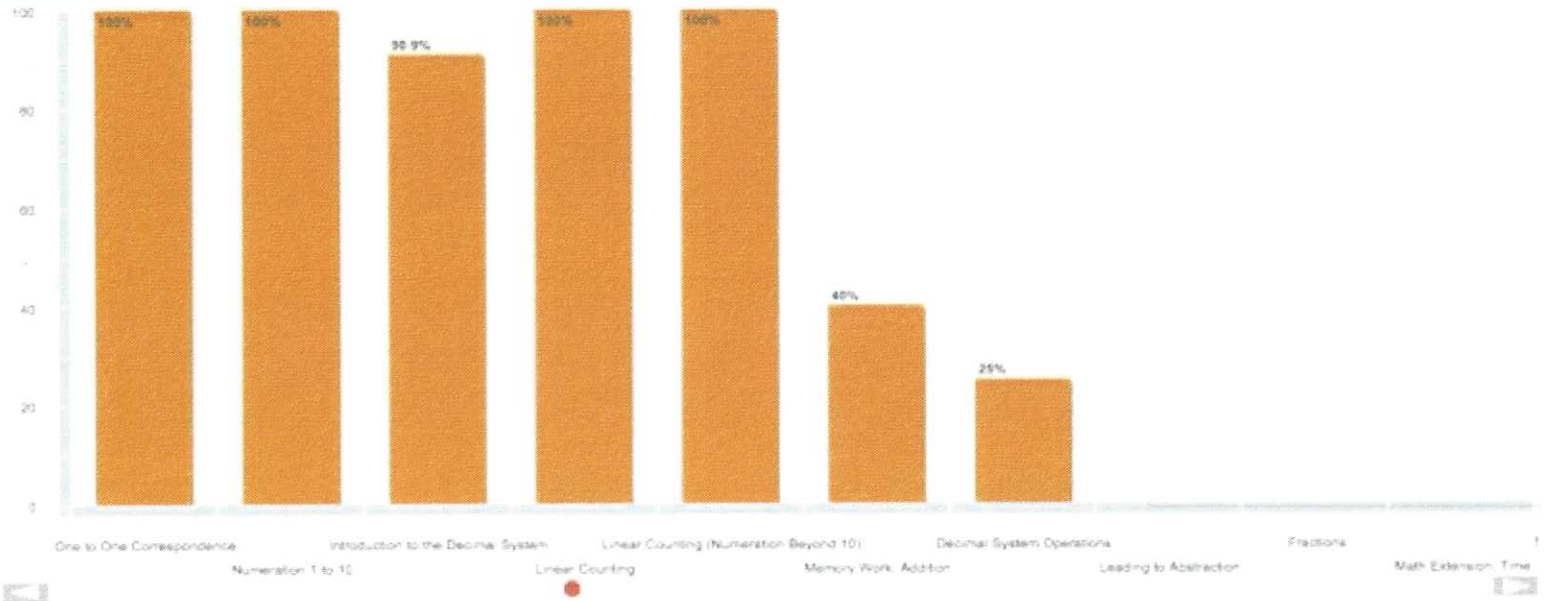
Attendance | Record/Plan | Student Info | Conference | Administration | Resources | Progress Analysis

Select Student(s):

Name

Change Selection Criteria

View Progress Analysis as Percentage of Total Area



Topic

Click a bar to drill down for more detail.

All | Name A-Z

Ms. Durden | Class Preprimary | Multi | Log Out | Home | Help | Support | Record Date 03/27/2014

Record Progress

https://www.montessorirx.com/mrx.cfm#view=state_recordPlanProgress

MRX

Attendance | Record/Plan | Student Info | Conference | Administration | Resources | Record Progress

Name	Plan	Pres	Prac	Impr	Prof

Area: Math

Topic

- Decimal System Operations
- Fractions
- Introduction to the Decimal System
- Leading to Abstraction
- Linear Counting
- Linear Counting (Numeration Beyond 10)
- Math Extension Measurement
- Math Extension Money
- Math Extension Time

Pres./Mat.

Seq	Plan	Pres	Prac	Impr	Prof	Score	High	Recent	Com
7							Prof	Prof	
8							Prof	Prof	
9							Prof	Prof	
10							Prof	Prof	
11							Prof	Prof	
12							Prof	Prof	
13							Prof	Prof	
14							Prof	Prof	
15							Prof	Prof	
16							Prof	Prof	
17							Prof	Prof	
18							Prof	Prof	
19							Prof	Prof	
20							Prof	Prof	
21							Prof	Prof	
22							Prof	Prof	
23							Prof	Prof	
24							Prof	Prof	

Show Hide

All | Name A-Z

Auto Open

Grp Lesson | History | Save

Leah | Class | Proprimary | Multi | Log Out | Home | Help | Support | Record Date 03/24/2014

Montessori Records Xpress

Seq	Area	Topic	Pres./Mat.	Lesson
20	Math	Linear Counting (Numeration Beyond 10)	Teen Bead Box	Quantity: 11 to 19

Category	Concept	Grade
K » Mathematics » Counting & Cardinality	Kindergarten - Know number names and the count sequence - K.CC.2. Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	Kinderg
K » Mathematics » Counting & Cardinality	Kindergarten - Count to tell the number of objects - K.CC.5. Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.	Kinderg
K-5 » Mathematics » Number & Operations in Base Ten	Grade 1 - Understand place value. 1.NBT.2. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: 10 can be thought of as a bundle of ten ones — called a "ten." The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).	1st
	Grade 1 - Understand place value. 1.NBT.3. Compare two two-digit	

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https://www.montessorirx.com/Report_Output/Conference_Report304096337025.pdf

Age: 0 years / months	Spring 2013-2014
K - Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from. K.OA.4. For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.	Impr
Grade 1 - Represent and solve problems involving addition and subtraction. 1.OA.1. Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.	Impr
Grade 1 - Represent and solve problems involving addition and subtraction. 1.OA.2. Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.	Impr

K-5 » Mathematics » Number & Operations in Base Ten

Grade 4 expectations in this domain are limited to whole numbers less than or equal to 1,000,000.

K - Work with numbers 11-19 to gain foundations for place value. K.NBT.1. Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (such as 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.	Mast
Grade 1 - Extend the counting sequence. 1.NBT.1. Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.	Mast
Grade 1 - Understand place value. 1.NBT.2. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: 10 can be thought of as a bundle of ten ones — called a "ten." The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.	Mast
Grade 1 - Understand place value. 1.NBT.3. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <	Mast
Grade 1 - Use place value understanding and properties of operations to add and subtract. 1.NBT.4. Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones, and sometimes it is necessary to compose a ten.	Impr
Grade 2 - Use place value understanding and properties of operations to add and subtract. 2.NBT.5. Fluently add and subtract within 100 using strategies based on place value, properties of operations,	Impr

Three (3) additional methods of student learning support is provided to all students. Those supplemental methods include:

- community volunteers who come into the classrooms and listen to the students read for fluency;
- therapy dogs (and their masters) also come into Kindergarten and Lower Elementary to listen to students read; and
- during the Spring Semester 2014 after-school tutoring is being offered targeting identified concepts in reading, writing, and math.

Teacher Roles

MdSC teachers play many roles as they guide student learning and orchestrate the learning environment. They are the instructional leaders in their creative environments, yet it's often difficult to spot a teacher in the classroom. Rather than presenting information from the front of the classroom, the teacher(s) may be demonstrating specially designed learning materials used for investigation and discovery to an individual or small group of students. Or he/she may be sitting in a circle intently listening to and observing a handful of students as they dissect a plant and name its parts. MdSC teachers are skilled observers and creative facilitators. Through careful observation, MdSC teachers come to know each student's interests, learning style, and temperament and understand the student's developmental needs. MdSC teachers are continuously aware of each student's progress, know when to step in to offer special guidance, and when to challenge a student with the next step in a learning sequence. With this information MdSC teachers choose increasingly complex and abstract materials and lessons that will capture the student's attention and entice learning. The student, through individual choice, makes use of what the environment offers for learning, interacting with the teacher only when support and/or guidance is needed. The quiet orchestrations used by MdSC teachers lead to magical moments as students think or exclaim "I learned it myself!"
Implementing the concept that student mastery is best achieved through exploration, imitation, repetition, and trial and error is a teacher expectation at MdSC.

Content Coaches

In the Fall Semester 2011, as designated in MdSC's Performance Renewal Plan, a Math Consultant was contacted to provide informal observations of MdSC math teaching practices and students at work. The Math Consultant gave feedback to MdSC teachers on lesson presentation. That same Fall Semester, a Literacy Coach was consulted to provide training and on-going support to MdSC teachers in

teaching reading to struggling readers. **Note the difference in services**: the Math Consultant gave MdSC teachers feedback: the Literacy Coach provided MdSC teachers with training and on-going support. The increase in MdSC Student Median Growth Percentile (SGP) score (from 49.5 to 69) and Proficiency (Percent Passing) score (from 72 to 81) in Reading/Language Arts on the 2013 AIMS score and grade increase on MdSC's Grade Card (from D to C) is attributed to the training and on-going support provided by the Literacy Coach. Beginning in early Fall 2014 Semester, MdSC will have both a PT Literacy Coach and a PT STEM Coach to provide training and on-going support to MdSC Teachers in teaching reading and math to struggling or at-risk students in those content areas.

LMA

Stemming from and directly addressing MdSC students' low academic math scores on the 2012 AIMS (in the 'Falls Far Below Standards' rating level and the subsequent D grade on the MdSC 'S Arizona School Report Card), three (3) entities from the village of Tubac 'where art and history meet' are working together on the LMA initiative to generate creative lessons in math that will stimulate, motivate, and enhance student growth and proficiency and academic performance in math.

Teaching Artists (TAs) are professional artists, professional dancers or dance instructors, who educate and are dedicated to enriching student learning experiences. First and foremost, they are trained in a specific art form and have a passion for what they're teaching, and serve as positive role models who urge the children to step out of their comfort zone and confidently try new ideas and experiences. MdSC classroom teachers ensure classroom activities such as circle sharing, word walls, and small group instruction are used to link, support, replicate, and enhance the language gap between terms used in teaching math concepts via the MdSC curriculum and terms used in the math questions on the AIMS taught in the integrated arts class. Additionally, classroom teachers make certain the arts integration activities produce student understanding of math concepts, imaginative thinking in application of those concepts, and recognition of connections/patterns between previously established knowledge and new a-ha's! The LMA Academic Coordinator is an Arizona certified classroom teacher who will guide the other classroom teachers in linking the creative structures of the arts with the indentified problem math concepts of the MdSC curriculum.

Research literature suggests learning through the arts requires focused attention, abstract and relational thinking, and fluid intelligence (called "executive control"). Simply put, the arts and math are natural partners — both share sequential learning and habits of mind that support creative

problem-solving, imaginative thinking, and transference of skills and knowledge to new experiences. Working side by side with MdSC classroom teachers, TAs incorporate the arts into MdSC students' learning experiences. While researching innovative integrated arts models such as *Opening Minds through the Arts, Early Childhood STEM Learning Through the Arts, Math in Your Feet, How Math Got Its' Groove Back,* etc., math unit designs and lesson plans were found that 'fit' within the LMA purpose. Thus, LMA draws from local and national integrated arts models in implementing the initiative in the MdSC classrooms. LMA's arts-based teaching methods tap into children's innate desire for active, multisensory learning and fit seamlessly into the Montessori teaching techniques applied by MdSC classroom teachers. MdSC students literally embody the identified problem math concepts through singing, dancing, painting, and theatre production (play-writing, acting, costume and set-construction). This approach to learning math concepts requires MdSC students to acquire such 21st-century skills as critical thinking, creativity, communication, and collaboration, which are key to their future success and to achieve student learning levels that are aligned with MdSC and ACCS expectations in student achievement. MdSC students receive 120 – 135 minutes (depending on grade level) of integrated arts instruction per week. TAs specializing in different art forms, i.e., dance and abstract art, will teach 4 – 6 week units consisting of 30 - 45 minutes of instruction per day 1 – 3 days per week.

During the 2013 – 2014 school year (first year in operation), LMA expected outcomes are:

- MdSC students will demonstrate stronger right and left brain connectivity and functioning in academic and creative problem solving in LMA product and performance evaluations;
- MdSC students in grades 3 – 6 will raise MdSC's academic performance rating in Math Student Growth and Proficiency one level (from Falls Far Below Standard to Does Not Meet Standards) on the AIMS test in 2014; and
- MdSC K – 2 students will increase their foundational math skills and concepts in concert with ACCS by 10% during the 2013 – 2014 school year as measured by Montessori Records Xpress, an online academic management system used by MdSC classroom teachers to monitor student growth and proficiency.

EPAS

In Fall 2013, MdSC's Educator Performance Assessment Plan (EPAS) was developed, approved, and initiated. Rooted in Danielson's Dimensions of Teaching and the Arizona Model for Measuring Educator Effectiveness, EPAS contains an assessment and documentation of

teachers' planning and preparation level, classroom environment management level, level of instruction, and professional responsibility level. The EPAS includes the following forms:

- a walk-though observation checklist;
- a performance expectation checklist;
- a formative pre-observance conference;
- self-assessment;
- formative observation feedback; summative pre-observation conference; and
- summative Teacher Profile and Rating.

Walk-through observations are conducted bi-monthly or weekly when warranted. Formative observations are executed annually in November. Summative Observations and Evaluations are conducted annually the last week of March. See page 14 for a completed Teacher Profile and Rating.

Teacher effectiveness is also monitored (lesson plans and student progress) bi-weekly through MRX. The advent of MRX provides the data for continuous data-driven improvement of instructional practices. Teachers are expected to use MSX to monitor student achievement, guide Work Plan selection, and in adapting lesson plans and learning materials when needed.

Teacher Profile and Rating

Teacher Name _____
Educator Stakeholder ID _____ School Year 13-14
Gr/Subject _____
Assessor P. Durden
Status: Probationary ____ Continuing ✓
**See Key Below

	Formative Observation Date 1/31/14				Summative Observation Date 3/20/14				Final Score Date 3/20/14				TOTAL
	U	B	P	D	U	B	P	D	U	B	P	D	
Domain 1: Planning and Preparation													
1a Demonstrating ***Awareness*** and ***Discernment*** of Content & Pedagogy			✓				✓				✓		6
1b Demonstrating an ***Understanding*** of and ***Commitment*** to Students		✓				✓				✓			3
1c Setting the Instructional Outcomes	✓				✓				✓				0
1d Demonstrating Knowledge of Resources			✓				✓				✓		6
1e Designing ***Mindful*** and ***Tactful*** Instruction		✓			✓					✓			2
1f Aligning Montessori Student Assessments with AZ C&CR Standards		✓				✓				✓			3
												Domain 1 Total	20
Domain 2: Classroom Environment													
2a Creating an Ambiance of ***Respect***, ***Trust***, and ***Unity***		✓				✓				✓			3
2b Establishing a Culture of Learning and ***Perceptiveness***		✓				✓				✓			3
2c Managing Classroom Procedures		✓				✓				✓			3
2d Overseeing Student ***Accountability***, ***Diligence***, and ***Self- Discipline***	✓				✓					✓			0
2e Organizing Physical Space			✓				✓				✓		6
												Domain 2 Total	15
Domain 3: Instruction													
3a Communicating with Students		✓				✓				✓			3
3b Using Questioning and Discussion Techniques		✓				✓				✓			3
3c Engaging Students in ***Creativity***, ***Decisiveness***, and ***Perseverance***		✓				✓				✓			3
3d Using Assessment in Instruction	✓				✓					✓			1
3e Demonstrating ***Flexibility*** and ***Certitude***	✓				✓					✓			0
												Domain 3 Total	10
Domain 4: Professional Responsibilities													
4a ***Reflecting*** on Teaching	✓						✓				✓		4
4b Maintaining Accurate Records			✓				✓				✓		6
4c Communicating with Families			✓				✓				✓		6
4d Participating in a Professional Community			✓				✓				✓		6
4e Growing and Developing Professionally			✓				✓				✓		6
4f Demonstrating Professionalism		✓					✓				✓		5
												Domain 4 Total	33

** Key
U Unsatisfactory
B Basic
P Proficient
D Distinguished

Assessment

Overview

The primary purpose of student assessment is to identify children at risk of long-term failure early enough to intervene in a way that will make a difference. Compliance with state and national requirements for student growth and achievement is important at MdSC. However, because MdSC focuses on the development of the whole child – physical, social, emotional, intellectual, and spiritual – test results provide a snapshot of only one portion of our mission rather than providing a comprehensive measure of a MdSC's educational effectiveness. Although MdSC offers a warm, supportive academic environment for student learning, we set high level of expectation for the quality of student thought, work, and mastery of content and skills. The validity of either criteria or norm-referenced assessments and the ranking of students is reduced at MdSC because, in the multi-age classrooms, there are comparatively small numbers of children at the same age and level of learning. While formal testing is used at MdSC, it is used with sufficient contextualization that all students understand the need for the assessment.

MdSC Approach

In Spring 2014 MdSC implemented a comprehensive and continuous assessment system aligned with the MdSC curriculum and instructional methodologies. The MdSC assessment system utilizes MRX as a formalized documentation process that allows teachers and administrators to closely monitor student performance on expectations for student learning. However, the aim of fostering a life-long love of learning favors intrinsic motivation resulting in active, creative, and practical application measures of mastery. Student assessment is based on each student's mastery of knowledge and skills demonstrated at any point in the learning sequence through a variety of indicators, including spoken and written language, interaction with others, creative arts such as drama, visual arts, model-making and, importantly, by applying what they have learned in practical ways.

Assessment Techniques and Tools

The hands-on curriculum materials enable MdSC teachers to use informal observation in assessing student performance in completing guided tasks, learning demonstrations, and gain an understanding of students' developmental needs. . Learner achievement in MdSC classrooms is recorded through observation, the compilation of portfolios and detailed records of progress. Students like to display their

knowledge and often ask for tests, for example, in spelling words. Their pride in achievement and their sense of striving for higher goals motivate the assessment, rather than a need to submit to a curriculum demand.

Using MRX, MdSC teachers keep careful records of the following in order to closely monitor student growth and progress. Detailed documentation is recorded on:

- lessons given
- follow-up work completed by each student
- student progress and achievement
- difficulties encountered by individual students and how they were resolved

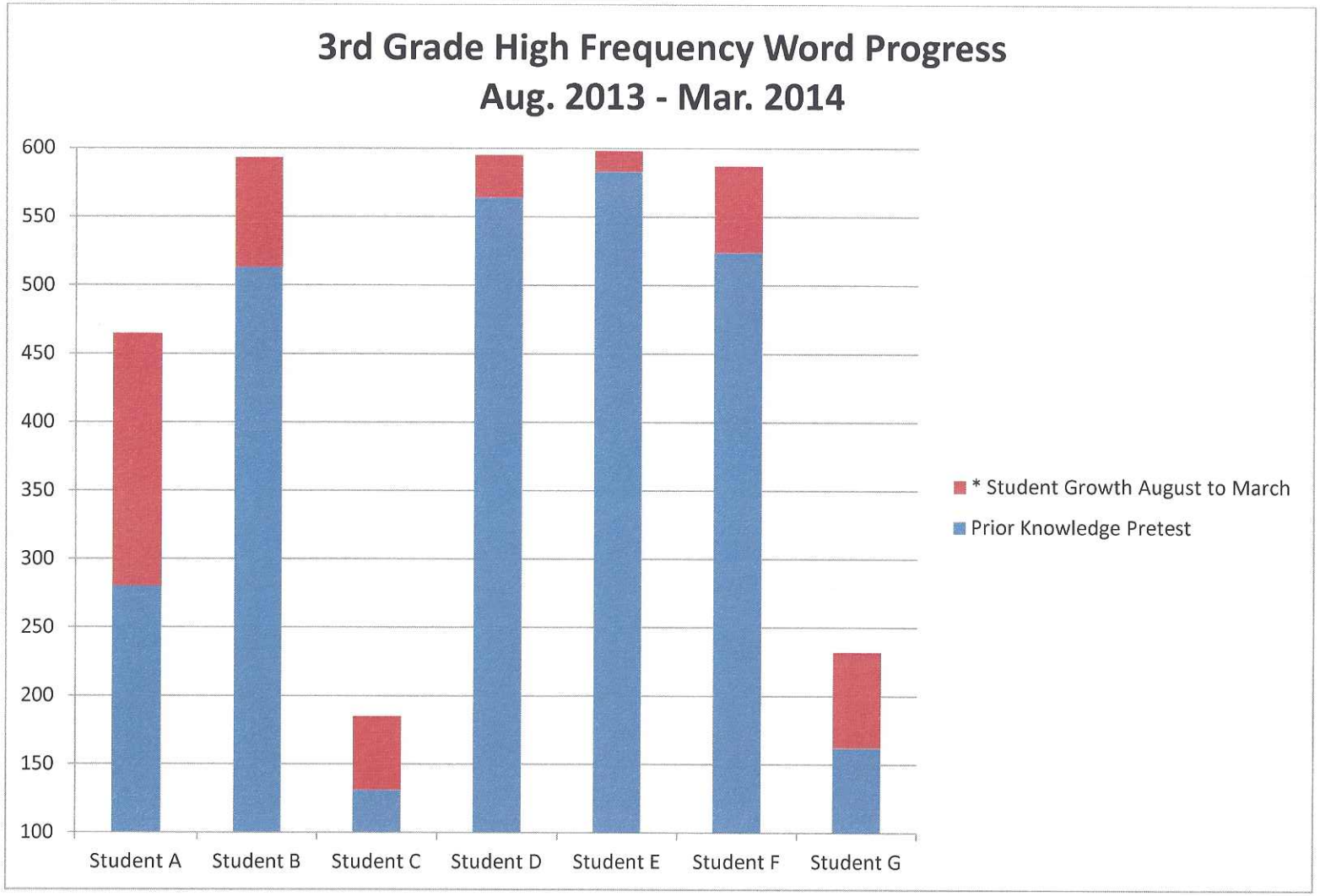
The following assessment tools are used by MdSC teachers to measure student growth and proficiency on specified indicators:

- ✓ Arizona's English Language Learner Assessment (AZELLA) is given to English Language Learners early in the fall semester and mid-spring semester to determine the level of student growth and proficiency in the English Language Proficiency Standard.
- ✓ Spelling and/or vocabulary tests are given to students weekly to assess student growth and proficiency in those skill areas.
- ✓ High Frequency Words lists are given in grades 1-6 at varying intervals to measure student growth and proficiency in vocabulary.
- ✓ Achievement benchmarks are used at the end of each unit to measure student growth and proficiency on standards-based criteria.
- ✓ Unit tests are used in grades 4-6 to assess mastery of math and literacy concepts.
- ✓ Running Records are used quarterly in grades K-3 to measure student growth and proficiency on fluency, accuracy, and comprehension in Language Arts.
- ✓ Junior Review Tests (comprehensive skills tests) are given quarterly in grades K-6 to measure student growth and proficiency on the Albanesi curriculum materials.
- ✓ Grade Achievement Tests (skills mastery grade level tests) are given three (3) times annually in grades K-6 to measure student growth and proficiency on the Albanesi curriculum materials.

- ✓ Dynamic Indicators of Basic Early Literacy Skills Tests are given in grades K-6 at varying times to measure student growth and proficiency in acquisition of early literacy skills. A similar test will be available in acquisition of early math skills soon.
- ✓ Arizona Instrument to Measure Standards test is given to students in grades 3-6 to measure student proficiency of the Arizona Academic Content Standards in Writing, Reading, Mathematics, and Science.
- ✓ Stanford 10 is a norm-referenced test given to students in grade 2 to measure student national percentile ranking in reading, language, and math.

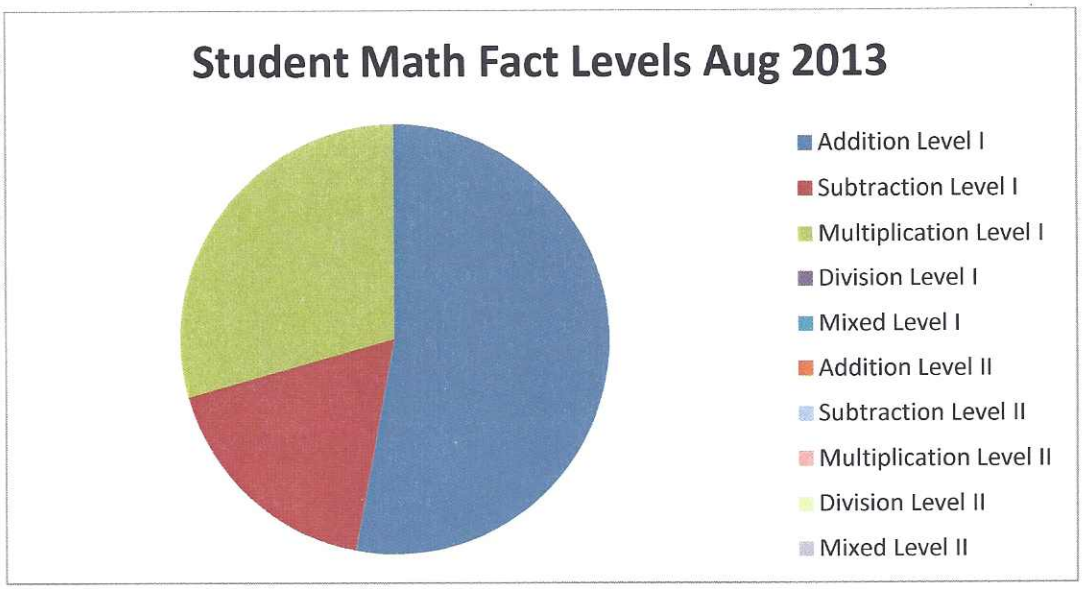
Analysis and Use of Data

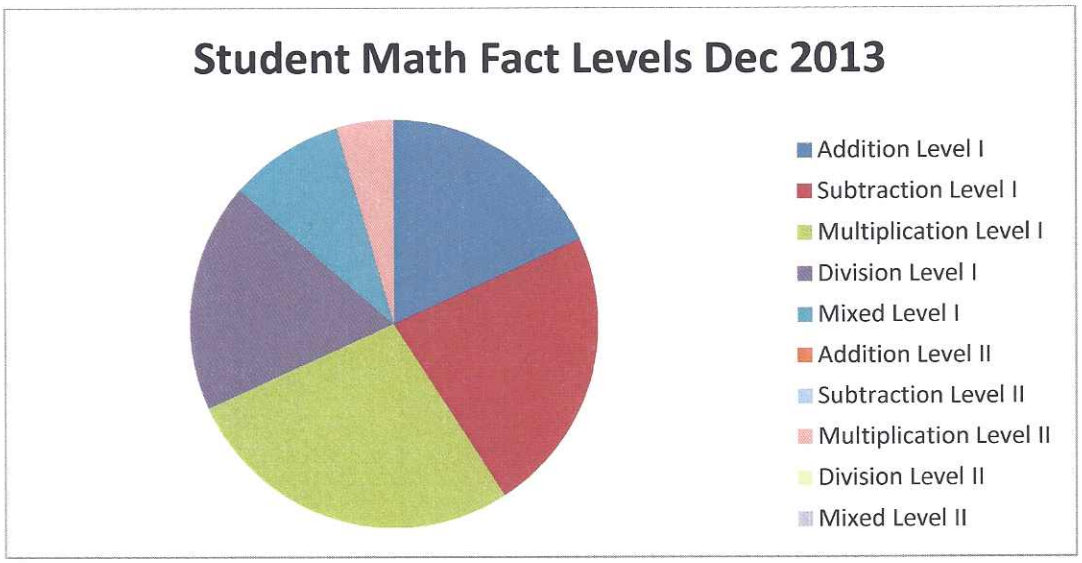
The MdSC Data Review Team conducts a monthly systematic analysis of data drawn from the multiple sources and types of student assessments described above. Based on the student performance analysis findings, both the applied curriculum and instruction are judged effective or ineffective. An ineffective status determination results in Data Team recommendations for adjustments in either or both curriculum and instruction. The recommended adjustments are implemented immediately.

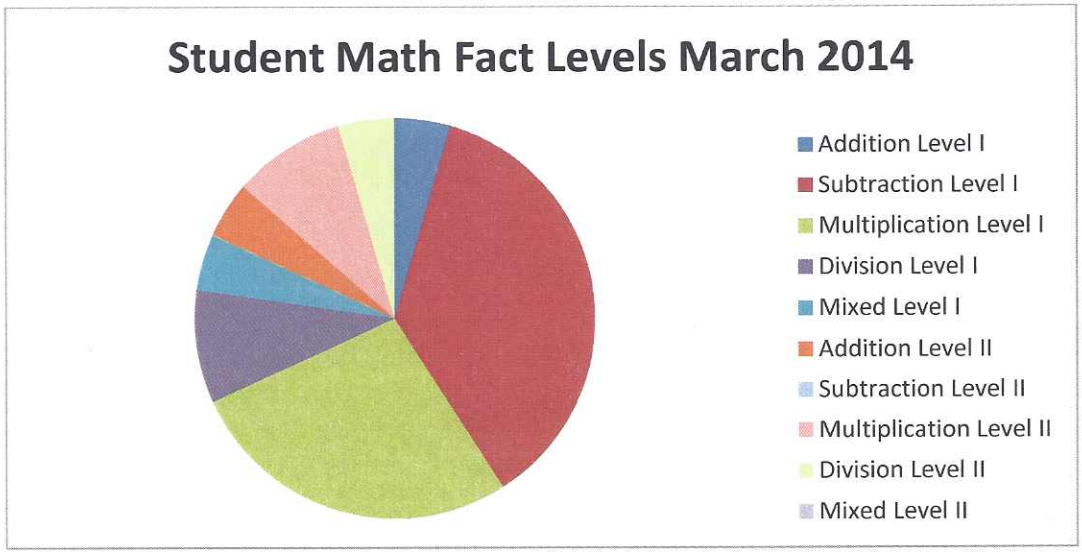


* Please Note: Students are tested only up to 600 words. Students C and G have IEPs in reading.

Lower Elementary (Grades 1 – 3) Math Fact Progress 2013-2014







Professional Development

Overview

The increasing complexity of education, the state of Arizona's standards movement, MdSC's increasing emphasis on continuous school improvement, and increasing student achievement led to the development of an MdSC system designed to guide the structure and operations of our school. MdSC is restructuring the parts in the systemic continuum. An extraordinary endeavor and a huge amount of work for MdSC personnel, the system restructuring is guided by and linked to MdSC's Mission, Vision, and Goals. The new system embodies the successive prepared environments, indoors and outdoors, encompassing the natural and human-built worlds through all academic disciplines from concrete to abstract. The difficulty in staying organic and remaining focused on the organic whole, which is simply students and their intrinsic needs in contact with the appropriate "prepared environment," continues to test our capacity for change. MRX, a new electronic student records program developed specifically for Montessori education systems was implemented, which challenged folks at MdSC to learn new 'ways of doing things.' The implementation of MdSC's systems approach is as much a test of character as it is of knowledge. The learning curve as MdSC was very steep. Last, but certainly not least, MdSC's multiple continuous improvement efforts also include improving instruction and assessment for student learning. The FY 14 Plan for Professional Development was aligned with identified student learning target areas in math, and to a lesser degree in reading, and is based on teacher learning needs. The Plan reflects research and best practices in professional learning.

Focus FY 2014

On-site, on-line, and off-site resources provided MdSC's faculty and administration with many hours of learning necessitated by the changes and challenges described above. Also taken into consideration was the need to increase student math scores on the AIMs 2014. In order best address our Professional Development (PD) learning needs and make the best use of our time, an MdSC Profession Development Plan (PDP) was created targeting four (4) areas of faculty and administrator growth and learning:

- ACCS and Standards-Testing;
- Math and Math Instruction;
- MRX Training; and

- Student Services.

Montessori and Arizona State Certification

Included in the Demonstration of Sufficient Progress Accountability Plan submitted to the Arizona State Board of Charter Schools in May 2013 was the goal that ALL MdSC teachers would have both Montessori and Arizona State Certification by 2015. In Summer 2014 two (2) rsof MdSC's current state-certified teachers will receive Montessori Certification. At that point, 50% of MdSC teachers will be dually certified. The culmination of hours spent in training and/or in-service aligned with MdSC's Professional Development Plan at this point in the FY 14 School Year is presented on the chart below.

MdSC Professional Development Chart FY14			
Topic	**Hours**	**Type**	**Resource**
ACCS and Standards-Testing	18	On-site, on-line, and off-site	AZ Charter Schools Ass'n., Santa Cruz Cty. Supt. Office
Math and Math Instruction	6	On-site, on-line, and off-site	Math Consultant
MRX Training	15	On-site, on-line, and off-site	MRX Consultant
Student Services	15	On-site, on-line, and off-site	AZ Charter Schools Ass'n., Santa Cruz Cty. Supt. Office, Tubac Fire Dept.
Teacher Training	300 +	On-site, on-line, and off-site	Khalsa Montessori Teacher Training Program

ACCOUNTABILITY

MdSC acknowledges that our student progress and achievement during the 2011-2012 and 2012-2013 school years did not meet standards, most particularly in math. In order to become accountable, increase student performance, and attain an A on our 2015 Arizona School Report Card, MdSC has spent FY 14 in designing and implementing a comprehensive, detailed, and sustainable data-based system. The system encompasses, strengthens, and directly links curriculum, instruction, assessment, and professional development to student progress and achievement. We anticipate meeting or exceeding standards on all indicators of student performance in FY 14.

Demonstration of Sufficient Progress Plan 3a.

Timeline	Curriculum	Instruction	Assessment	Professional Development
Spring 2013	• Write MdSC Demonstration of Sufficient Progress • Ongoing Alignment of Montessori curriculum to ACCS COMPLETED	Added school director who will monitor, assess, and provide feedback on teacher effectiveness and instructional practices COMPLETED	DIBELS-summative assessments COMPLETED	• Strategic reading strategies K-5 webinar • Teacher review of *Comprehensive Connections* • PARCC assessment overview • Curriculum Mapping Workshop COMPLETED
Summer 2013	• Align Montessori Lesson Plans with ACCS COMPLETED			
Fall 2013-Spring 2014	• Develop a plan for Tier III Move on When Reading • Update curriculum: 1) Develop math proficiency benchmarks 2) Align Montessori math lessons and student performance expectations 3) Create a cohesive curriculum map for all grade levels 4) Select materials to reinforce or enhance student skills in identified math problem areas 5) Develop student (formative and summative) math assessments 6) Develop data-driven annual curriculum evaluation to inform revision process COMPLETED	• Revise and implement teacher evaluation plan with: 1) performance expectation checklist, 2) self-assessment, 3) formative feedback, and 4) summative evaluation • Implementation of MRX to: 1) align Montessori lessons with ACCS 2) track lessons 3) document student growth and progress 4) generate student assessment scores 5) inform data-driven instructional practices IMPLEMENTED	• DIBELS 3x yearly • Math skills benchmark test semi-annually • GATs 3x yearly • JRTs quarterly • spelling/vocabulary tests weekly • math fact test 3-4x weekly • Literacy unit tests • Running records quarterly • High frequency word tests 3x yearly • formative math assessment monthly • summative math assessment semi-annually IMPLEMENTED	• Staff training in use of MRX • Provide intensified math workshops in identified problem areas: 1) Measurement and Data, 2) Operations and Algebraic Thinking, 3) Geometry, and 4) Mathematical Practices im COMPLETED PLUS
Late Spring Semester-Summer 2014	• Evaluate Curriculum via MRX student growth and proficiency data to target needed improvements • Revise Curriculum to strengthen targeted areas • Evaluate Learning Math Through the Arts Curriculum: revise as needed	• Evaluate EPAS via teacher performance data: revise as needed • Expand knowledge and use of MRX tools • Identify, appoint, & designate responsibilities of PT LA and STEM Coaches • Prepare for revised LMA	• Assess value of current MRX data: identify additional useful applications for data collection	• Create Professional Development Plan for teachers and administrators based on EPAS data • Identified teachers will enroll for specified certification programs
2014-2015	Continue data-driven curriculum evaluation and revision	Continue data-driven improvement of instructional practices	Continue systemic assessment of student growth and progress	• All teachers will be AZ State Certified and Montessori Certified • Continue professional development that targets needs