This is the third of three emails that will provide deeper insight into Ridgeline’s 2019-2020 School Improvement Plan (SIP). The SIP is among the Big Works we are undertaking as a school this year.

Our 2019-2020 SIP Academic Goal is a math goal. The goal is to increase each cohort’s performance in grades 4-7 by at least 3%-8% over last years results.

Dear Ridgeline Families,

Math and standardized test scores are not two things that usually make for the most riveting reading. That lack of enthusiasm is one of the very things that can stand in the way of a student’s math success.

On one level, a student’s ability to do math is expressed by their ability to answer math questions...be they on a test or in their daily lives. But, that point is the last stop on a student’s mathematical journey.

What is the first stop? Engagement. Interest, choice, and collaboration are things that we value highly in our Montessori classrooms. They are key to student engagement. It’s often easy for parents to conceive of how those values might play out in our language or geography work, but it may be less clear how they extend to the math work our students do as well.

Montessori math can appear “too advanced” or “out of order” to an inexperienced (or otherwise experienced) observer. Interestingly, Maria Montessori herself was a keen observer of children’s behavior, and it was those observations that guided the development of the materials Montessori students still use today. How, for example, can simple addition practice continue to captivate students until it is fully learned? Dr. Montessori observed and countless students since have confirmed that students love tackling BIG problems: they will work happily on simple addition when it’s in the context of an enormous problem that they’ve created themselves and get to tackle with friends. Along with that ownership and collaboration comes engagement, and with engagement, comes the practice they need to reach mastery.

The Montessori math materials are beautiful and exact, and they are designed to convey meaning throughout the entire educational sequence. The same bead chains that students use as they learn to count are also tools for learning about multiples and skip counting and appear again when they are thinking about squaring and cubing. Revisiting the materials again and again connects new concepts to things they have already learned in a very concrete way. This connection helps to cement existing knowledge and ground new knowledge.

Montessori math moves deliberately from the concrete to the abstract. It’s easier to understand the difference between 100 and 1000, between a square and a cube, when you actually hold them in your hands and use them every day in your work. Perimeter is an actual measurement exercise, not a series of numbers around a shape to be added together. Math is something students talk and write about every day from kindergarten on. Taken together, all of this work
leads not just to skill, but to understanding. Then, as students reach points where they are ready for abstract concepts, their wealth of experience with the materials leaves them in a position of strength. When they encounter a situation that requires them to transfer their existing knowledge, they can, because that knowledge is real: they understand numbers and operations and what they represent.

This year, we are recommitting ourselves to high quality implementation of the Montessori math curriculum. Our teachers are supporting one another in this work with activities like Lesson Study, and they are also being supported through customized work with our Montessori consultants. We are also tracking student progress and understanding using new tools like work journals and Transparent Classroom.

All of this work is focused on improving math performance. One way we have to measure that is standardized test scores. Our SIP goal, simply put, is to move one or two more students per grade into that “meets or exceeds” column on next spring’s tests. Ensuring that our students meet state standards is one of our responsibilities as a public school.

Test scores certainly aren’t the only thing we’re looking at, though. As Montessorians, our teachers and assistants dedicate a significant portion of every day to observing their students. Through those observations they track their students’ skill and engagement levels and work with them to find the balance between personal interest and curriculum requirements that will best lead to mastery.

Sincerely,

Emily Burton
Lower Elementary Teacher