

Philosophy

A Montessori middle school is an environment designed to meet the needs of the whole adolescent as they move through the third plane of development. Equal attention is given to both the social-emotional and academic development of the young adult. In addition, strong consideration is given to the well-being of the whole community. Programmatic decisions must be made with an emphasis on these two things - academic/social-emotional health of the individual *and* community.

In keeping with this holistic approach, and as an extension of the Montessori Method in elementary math, Sterling Montessori Middle School students will be grouped by grade level for their scheduled math time rather than aptitude. Studying math concepts with a peer group creates opportunities for students with varying abilities and experiences to contribute, collaborate, and otherwise benefit from each other across a spectrum of both social and academic activities.

Math is more than the correct answer to a problem. It is a process that involves multiple strategies, analysis, concrete and abstract understanding, proofs, and integration with science and the humanities. Our goal is to create an environment that fosters this kind of deep mathematical understanding.

In order to ensure our rigorous math programming is equitable and accessible to all, we will move to a single math grouping for each grade in the Middle School. By creating a single math track, we will allow for what Stanford Professor of Math Education Jo Boaler terms “Relational Equity” - a development of respectful relationships across cultures and genders made possible by a mathematical approach that values different insights, methods, and perspectives in the collective solving of particular problems.

Curriculum

Seventh-graders will be in a Math 7 group and will cover what was previously termed “7+.” All eighth-graders will be enrolled in High School Math 1 (HSM1) and cover the Math 1 curriculum. In addition to core topics, students will engage in practical application activities that encourage critical thinking, collaboration, and an opportunity to use math skills in a creative way.

Class discussions incorporate a Socratic approach to topics, allowing students with different intelligences to engage in the subject matter in a meaningful way. In addition to exploring concepts on a deeper level, skills such as showing the steps to a solution, critiquing various strategies, referencing texts and notes, organization, working collaboratively with peers to develop their own metacognitive thinking skills, and knowing when to seek the help of others are all hallmarks of the Middle School math program.

Differentiating

All math learning experiences will be accessible for all students. For students that have gaps in prior knowledge, instructional tasks will allow for these students to perform on grade level math in a more concrete fashion. These tasks will simultaneously allow students who have mastered a fundamental skill room to move to more abstract thinking and generalizations. This learning will be facilitated by one-on-one and small group sessions throughout the school day.

Suggested Reading

Multiple Intelligences: New Horizons in Theory and Practice by Howard Gardner

From Childhood to Adolescence by Dr. Maria Montessori

Limitless Mind: Learn, Lead, and Live Without Barriers by Jo Boaler

The Stories We Tell by Valerie Faulkner

“Overemphasis on the competitive system and premature specialization on the ground of immediate usefulness kill the spirit on which all cultural life depends, specialized knowledge included. It is also vital to a valuable education that independent critical thinking be developed in the young human being, a development that is greatly jeopardized by overburdening him with too much and with too varied subjects (point system). Overburdening necessarily leads to superficiality. Teaching should be such that what is offered is perceived as a valuable gift and not as a hard duty.”

-Albert Einstein

"Education for Independent Thought" New York Times, Oct. 5, 1952