

MC² STEM High School Core Design Principles

Excerpted from the MC² STEM High School proposal, submitted by the Cleveland Metropolitan School District on January 18, 2008, to The Partnership for Continued Learning STEM Subcommittee.

Central to MC² STEM High School's vision are its seven core design principles. These design principles, crafted by the MC² STEM Hub (2007), provide the backbone for every aspect of the school's design and operation. They will be the basis for instructional change in existing schools and serve as a mechanism to advance teaching and learning for all students. MC²STEM HS will:

1. Ensure opportunities for all students to be academically challenged while appropriately supported.

2. Use multiple metrics to measure success and assess the demonstration of mastery.

3. Provide an instructional program that reflects the need for all STEM education to be trans-disciplinary:

Students will master core literacy skills of writing, reading, speaking, listening, viewing, and presenting.

Students will master STEM literacy skills of design, inquiry, invention, and teamwork.

4. Deliver an instructional program that is highly differentiated:

Teachers will ensure a culture of discovery, collaborative learning, content integration, and workforce relevance using a problem-based learning approach.

5. Hire and train a diverse faculty:

The faculty will include industry partners, professionals from institutions of higher education and from the skilled-trades, and PreK-12 education instructors.

The leadership will ensure regular professional development focused on cross-training experiences, thorough development of trans-disciplinary instructional units, and systemic strategies for knowledge-sharing amongst the STEM disciplines.

6. Serve as a microcosm of the global STEM community:

All STEM school partners, including students, families, faculty and staff, and community participants, will be engaged in an array of opportunities to work collaboratively in leadership, internship/fellowships, advisories, mentorships, and service learning roles.

7. Recognize the importance of citizenship

The leadership and staff will create and support ongoing outreach opportunities promoting the strengths of the school community and ensuring that families are actively engaged in their child's education in relevant and meaningful ways.