

MADISON UNITED FOR ACADEMIC EXCELLENCE

December 12 meeting

Topic: Everything You Ever Wanted to Know About the District's Math Curriculum: Don't Be Afraid to Ask

Guest Speaker: Lisa Wachtel, Ph.D., Director of MMSD Teaching and Learning Department

Here are the questions that were sent to Dr. Wachtel before tonight's meeting. (Many thanks to everyone who submitted a question!)

- 1) We'd like an update on the District-wide end-of-fifth-grade math assessment, which has now been in place for four years. Please explain where we are in terms of the details of the assessment (that is, how it is done and what happens each spring). As well, what has been the impact on the number of students taking algebra and geometry at each of our 11 middle schools? The increase in the racial, ethnic and socioeconomic diversity of the group of middle school students taking algebra and geometry?

- 2) We'd also like an update on the implementation of CMP in our middle schools and Core Plus (and other integrated math curricula) in our high schools. What percentage of each middle school's math classes are now CMP? What percentage of each of our high schools' math classes are Core Plus (or some other integrated math curriculum)? What does the District's evidence show regarding how these students fare in their schools' higher level math classes?

- 3) The explanation offered for the implementation of constructivist approaches to math is that many students did not have success learning math under the traditional approaches. What is the evidence (from our own District; from elsewhere) that the constructivist approach is working for these students? What is the evidence that the approach is working for the students who did fine with the traditional curriculum?

- 4) How do you respond to the UW math professors' rather grave concerns about the constructivist curricula and the low level of math comprehension of MMSD students who enter the UW?

5) How many (that is, what percentage) of our elementary school teachers are certified in math? (We assume all middle and high school math teachers absolutely must be math-certified. Is that correct?)

6) What improvement are we seeing for the different math categories (Advanced, Proficient, etc.) in our standardized testing — there are breakouts by areas (for example, computation, etc.) — in grades 4, 8, 10?

7) Since CMP has been instituted, how many more students, in total (and by demographic categories) are:

- a) scoring higher in testing – more proficient and advanced in Grade 10 and
- b) taking higher level math classes?

8) Is there any plan to streamline the 5th grade assessment? Our son took 3 different written exams followed by an InSTEP meeting before being placed in a class for 6th grade. The process dragged on for many weeks with little communication about the many steps to the process. We found out about each step only when he came home and told us he was taken out of class for another test today.

9) How do the math requirements/expectations of the UW compare with what students actually learn in our District? Do we have any follow-up data on our students? Our minority students?

10) The purpose of this question is to get a better understanding of how students are performing in the 9th grade Algebra I classes across the District. The District's data on completion of Algebra I by the beginning of 10th grade show that number to be about 74%. This includes the many students that pass Algebra in middle school and excludes the students that, due to multiple failures, do not attain 10th grade status after 1 year of high school.

— Please give us a breakdown of the grades (A,B,C,D,F) earned by students in the 9th grade Algebra I and Core-Plus classes.

— For the students that earned grades of D in one or both semesters, what percentage of these students go on to pass Geometry on their first try?

11) The District's priority that Algebra I be taken in 9th grade and Geometry in 10th grade was based upon the desire to have all MMSD graduates prepared for college as

these courses are prerequisites for other important college-prep courses such as Math Chemistry, Math Physics, and Algebra II/Trig. Please provide trend data on the percentage of students that are taking and passing these courses.

12) I am interested in knowing more about the background of our middle school math teachers. How many middle school math teachers are there? What type of certification/licensure process do they go through? How many of them are specifically certified/credentialed to teach algebra and geometry?

13) What sort of data are being collected in the District to evaluate the success/failure of CMP?

14) I have heard that because the CMP curriculum is heavily language based, it winds up NOT helping the very students it was designed TO help, mainly because their reading skills are below grade level. To what extent has this been our experience in the MMSD?

Here are a few math questions that we didn't get a chance to ask Art the other night:

15) Many parents in the school district are concerned/dissatisfied or simply not confident with the math curriculum. My own two elementary school children are completely unchallenged in math. At what point would you be willing to seriously consider changing course on the MMSD approach to math instruction?

16) A math curriculum question. When one does comparisons of constructivist math curricula such as CMP and the Keymath series Discovering Algebra/ Discovering Geometry/Discovering Advanced Algebra side-by-side with more traditional texts such as Passport (McDougal/Littell) for middle school followed by the high-school math that begins with Algebra Structure and Method the Classic, it is immediately apparent that they do not differ in delivery alone. The constructivist texts teach at a much lower level. Proofs are not given or required in high school texts. Subject development is simplified. Examples and homework are much simpler, both in problem complexity and difficulty of numbers used. This may (or may not) make the math more accessible to students who struggle with math, but these texts are clearly not suitable for those students who love math and/or hope to have math-related careers. They need a different curriculum. Please comment.

17) Why can't students who are demonstrably advanced and talented in math have a curriculum which suits their needs? They do not benefit in any way from being forced

into heterogeneous classes of CMP. (Ask them! They'll tell you.) They are not given their next level challenge by being given the next level of a stripped down curriculum. At many middle schools these students presently spend 1 or 2 years in CMP followed by the Keymath. Would you consider instead giving them the 8th grade Passport book followed by Algebra the Classic and its sequel Geometry or some other similar texts to enable them to achieve their potential in math? If not, then why? Surely you agree that ALL students have the right to a math education which challenges their ability and meets their needs? What would we need to do to convince you that this is a real need? Please don't tell me about the research that shows that high-achieving students' test scores are raised by CMP, etc. Many of these students already test out of the top of these tests and these tests can't measure what they could be doing with a better curriculum. Would YOU like to be taught from a CMP text, sit through a CMP class day after day???

Tentative spring semester calendar:

Tuesday, January 23: A Close Look at Our High Schools

Wednesday, February 21: Summer Programs Information Swap Night

Thursday, March 22: Second Annual BOE Candidates Forum

We are hoping to have DPI Gifted Education and AP Consultant Chrys Mursky join us in either April or May.