HIGHLINE PUBLIC SCHOOLS

January 19, 2006

Memorandum

TO: All Employees
FROM: John P. Welch

John's Journal

Reflections from the Superintendent

Dear Colleagues:

Over the past several weeks I have been engaged in various conversations around math and what our math system looks like in Highline. At our last *Administrative Forum,* administrators from across the district spent time reviewing data that shows that an alarming number of our students are earning Ds and Fs in high school math classes. As we reflected on the deeper issues behind this data, these are some of the issues that came up:

- The belief (internal and external to our system) that not all students need to be or have the ability to be mathematical thinkers. (How many times have we all heard someone say "I don't do math"? No wonder our students learn to think that way!)
- Grading practices and weighting assignments.
- Lack of clarity for teachers around the important core mathematical concepts.
- A focus on content vs. content PLUS the learning process.
- Is the curriculum appropriately sequenced, aligned with grade-level expectations, and is there room for any creativity?

Then we talked about ways each one of us could contribute to a solution, and the following thoughts emerged. We can:

- Engage staff at all schools in a discussion about the importance of math and of putting our beliefs and discomforts about math on the table for examination.
- Ensure our curriculum aligns with the grade level expectations and that our pedagogy is focused on the learning process and helping our students to become mathematical thinkers.
- Review the sequence of math courses as a possible system problem.
- Create additional supports and scaffolding for the struggling student.
- Support the learning of math in ways that allows students to see its relevance to life.
- Create a culture where math is highly valued: celebrate student success; recognize faculty members who embody the love and thrill of teaching math to kids.

The purpose of this discussion with administrators was not to come up immediate solutions but to begin a deeper dialog about the systemic issues that may be in play and the role each of us has in improving the system.

We have begun to examine how Highline's graduation requirements align with college entrance and our goal of having all students ready for post-secondary success, whether that be in two-year college, four-year university, apprenticeship programs, or other post-secondary training. Some ideas we are discussing are restructuring our math courses (i.e., Do algebra and geometry have to be separate courses?); communicating effectively with parents and students about the courses that are needed for their future; eliminating low-level courses that do not lead to our goal of post-secondary success. Dr. Carla Jackson, along with members of her team, will continue this conversation and will convene a group of teachers and administrators to get their perspectives about what is needed and how those changes might impact our system. Our new Math Improvement Facilitator Rick Jennings has joined others on our Teaching and Learning team to help us map out the right steps to take while we work to improve the overall system.

What we know is that our reality looks something like this:

- Approximately four out of ten students meet standard in math.
- Significant numbers of students are discouraged and think that they are unable to succeed in math.
- Many students who are successful in 9th and 10th grade math do not enroll in upper-level math courses during their junior and senior years even when they say they want to go to college.
- Too many students are not successful in algebra and geometry. Too many students do not pass lower-level math classes also.
- Our current graduation standards require students to pass only two math courses with a D or better.
- Passage of the WASL in math is required for the 2008 graduating class.

The future looks something like this:

- Students need to be successful in math in order to graduate and to be successful in post-secondary learning.
- Global trade demands high-level of math and science and a higher degree of knowledge and skill, regardless of your profession.
- Two-year and four-year colleges suggest a minimum of Algebra 2 and a continual sequence of rigorous math courses in high school.
- Students who take rigorous high school math courses are more likely to succeed in post-secondary education.

The *National Council of Teachers of Mathematics* calls for a shift in mathematics teaching:

- Toward classrooms as mathematical communities – away from classrooms as simply a collection of individuals.
- Toward logic and mathematical evidence as verification – away from the teachers as the sole authority for the right answers.
- Toward mathematic reasoning – away from merely memorizing procedures.
- Toward connecting mathematics, its ideas, and its applications-- away from treating math as a body of isolated concepts and procedures.

The implications of re-designing our math system are many. Please join me in this journey – I need your best thinking to ensure we make the right steps toward improvement.