

8th Grade Algebra Initiative



BOARD PRESENTATION

12/4/08

A shift begins



- Three years ago we began our shift in math instruction with a new purchase of a math textbook for the elementary schools.
- For the first time we were using the same resources across buildings and grade.

The 8th grade discussion begins



- Last year we began a discussion with Middle School Administration and math teachers around offering Algebra for all in 8th grade.
- This has been a collaborative process.
 - The middle school math department has been involved throughout the process.
 - Teachers have “bought in” to the change.
 - The MS administration is very much in favor of this initiative as outlined..

Fundamental Beliefs



- Middle School students are emerging math learners.
- Additional support will be needed for a part of the population.
- Research clearly shows that when moving to this model of acceleration all student groups' standardized scores rise.
- The “achievement gap” will close.
- More students will have opportunities to pursue higher math as they pass through high school.
- Student will have conquered higher math skills which will allow them to achieve more success in higher level math-based science classes.

Math Acceleration for All

By Carol Corbett Burris, Jay P. Heubert and Henry M. Levin

- In 1995, South Side Middle School in Rockville Centre, New York, eliminated tracked math classes, adopted a universal accelerated math program starting in 6th grade, and instituted heterogeneous grouping, with dramatic results. After briefly reviewing studies that show the strong correlation of taking advanced math classes in high school and future success, the author reports on her longitudinal study that compared the last three cohorts before universal acceleration was instituted with the first three cohorts to receive universal acceleration.
- **By every measure, all students—regardless of their initial level of achievement, socioeconomic background, or race—benefited from studying accelerated math in heterogeneously grouped classes; they were more likely to take advanced math classes in high school, and they demonstrated generally higher overall mathematics achievement.**
- Because critics often complain that heterogeneous grouping occurs at the expense of high-achieving students, the study paid special attention to the achievement levels of this group. **The study shows that high achievers did better, and more students became high achievers.** The author concludes that we must not reserve accelerated courses in math and other subjects only for the most fortunate, but rather make rigorous courses accessible and available to all. The potential long-term benefits for students and for society are enormous.

What we have done so far



- A scope and sequence has been created for this year's algebra class.
- As this is the first time we are teaching the newly revised algebra course, we are confident the sequencing will best prepare our students for the upcoming exam.
- Some topics have been “pushed down” to the 6th and 7th grade curriculum.
- Summer Curriculum Writing.

What we are proposing



- Next year (2009-10) all 7th graders will take accelerated pre-algebra.
- This will be done with built in math lab classes for students who might find math more challenging. We project there will be between 2 and 3 sections of math lab, which would meet on an every other day schedule.
- The pre-algebra class will be identical to the one that is taught this year.
- The only change is that there will no longer be “7th grade math.”
- Next year’s 6th grade will absorb more topics in an effort to boost their knowledge base as they move into the pre-algebra cycle in 7th grade.
- Next year’s 8th grade students will be unchanged by this model.

What we are proposing (cont.)



- The following year (2010-11) we move to accelerated algebra for all students in the 8th grade.
- Research honors is maintained for our most talented math students.
- Double accelerated Research honors is also maintained.
- This has no effect on the HS program.
 - Students will have the same choices of geometry, honors geometry and research honors geometry.

School Comparison

	Roslyn High School	South Side High School
Classroom Profile (2006)		
Enrollment	1,052	1,178
Breakdown by Ethnicity		
American Indian/Alaska Native	0.0%	0.1%
Asian/Pacific Islander	9.5%	3.1%
Black	5.2%	8.4%
Hispanic	4.0%	12.3%
White	81.3%	76.1%
Performance on State Tests (2006)	Roslyn High School	South Side High School
School wide Math Proficiency	91.1%	96.9%
Female	93.3%	97.4%
Male	89.2%	96.5%
Economically Disadvantaged	80.8%	91.4%
White	94.3%	98.6%
Black	79.0%	84.6%
Hispanic	60.0%	95.7%
Asian/Pacific Islander	83.3%	100.0%

Questions?