

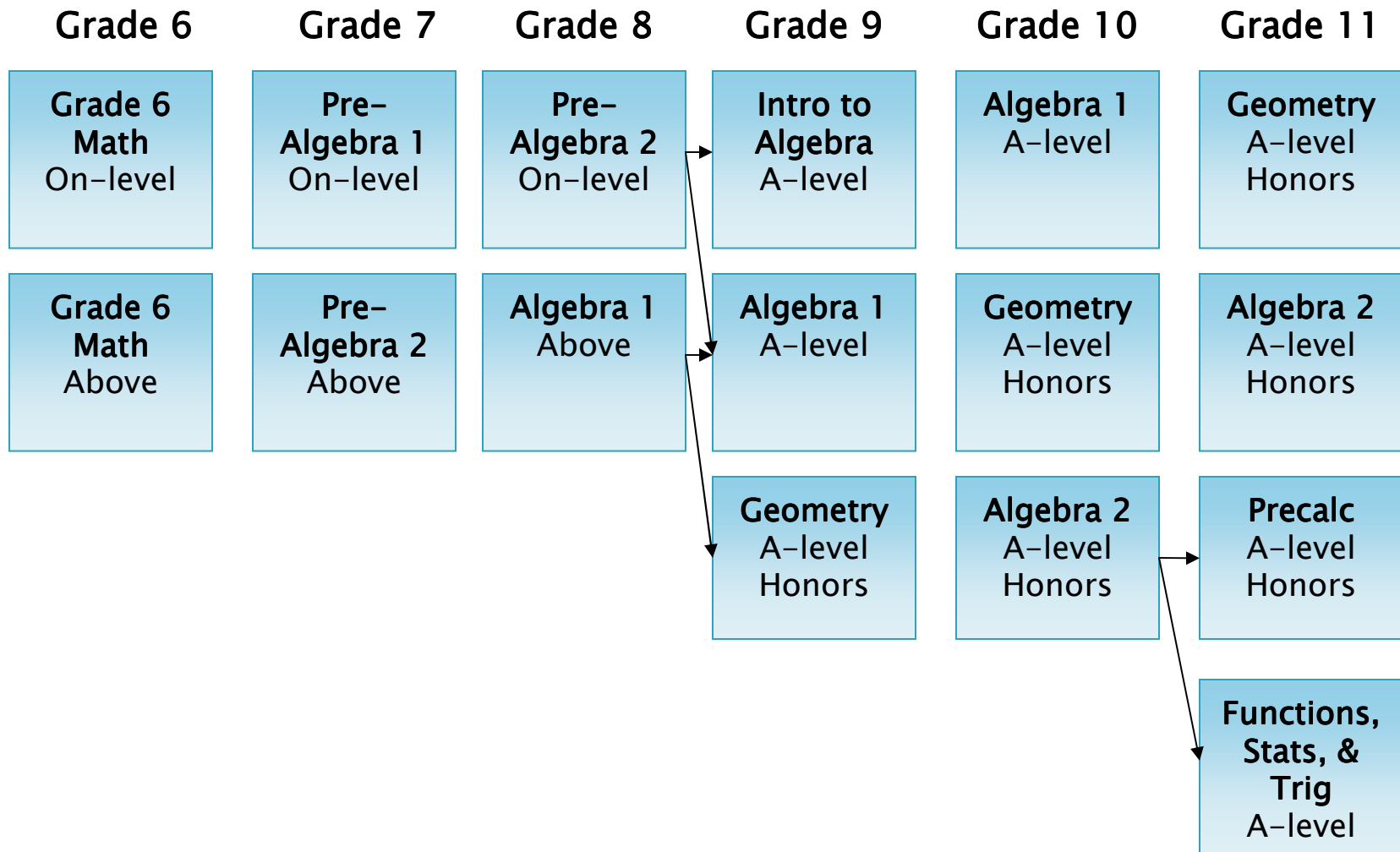
MPS Math Curriculum

Changes for Grades 6 - 12

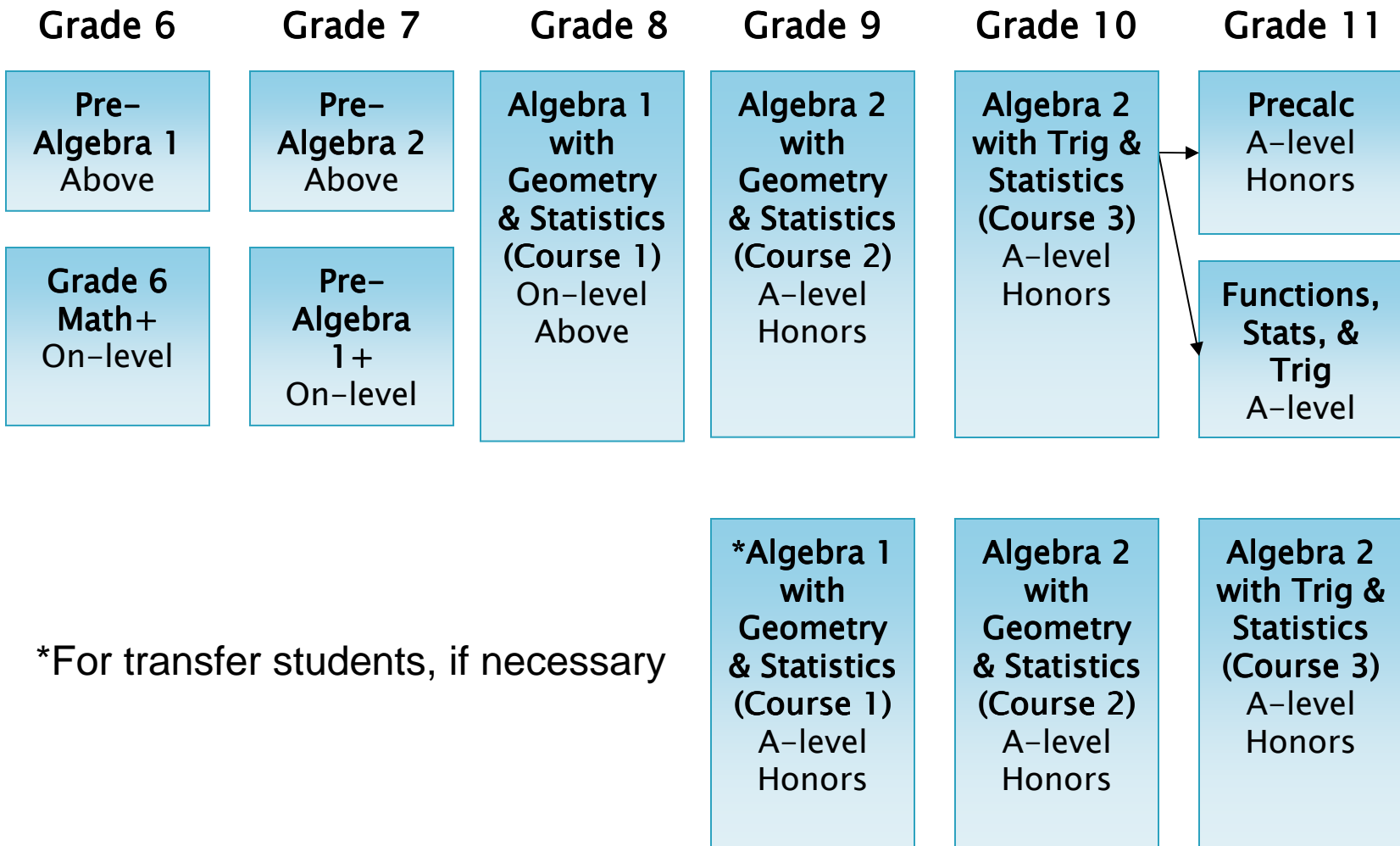
Why Change?

- To increase the rigor in all grades at the middle school level
- To increase the amount of algebra and geometry at all grade levels starting in grade 6
- To address the new Common Core standards
- To address timing concerns for testing at the high school (MCAS & SAT) due to the current course progression of Algebra 1, Geometry, Algebra 2

Current Path



Goal 2013-2014



Three-Year Trajectory

	2011/12		2012/13		2013/14
6	Grade 6		Grade 6		Grade 6
On	Some Pre 1		Some Pre 1		some Pre 1
A	Pre Algebra 1		Pre Algebra 1		Pre Algebra 1
7	Pre Algebra 1		Pre Algebra 1		Pre Algebra 1
On	Some Pre 2		Some Pre 2		Some Pre 2
A	Pre Algebra 2		Pre Algebra 2		Pre Algebra 2
8			Pre Algebra 2		
On	Pre Algebra 2		Some Course 1		Course 1
A	Course 1		Course 1		Course 1
9	Course 1 (A level)		Course 1 (A level)		
On	Course 1 (Honors)		Course 1 (Honors)		Course 2 (A level)
A	Course 2 (A level)		Course 2 (A level)		Course 2 (Honors)
	Course 2 (Honors)		Course 2 (Honors)		

Benefits of Changing the Curriculum

Grades 6 - 8

- Increases the level of rigor at all three grade levels
- Ensures a “true” three-year preparation for the grade 8 MCAS
- Prepares all students for an Algebra I experience in grade 8
- Continued support classes (Math Plus, Investigations)

Overall: it addresses the changes for the new common core standards

Benefits of Changing the Curriculum

Grades 9 – 12

- Ensures that all students have been exposed to Algebra & Geometry standards before taking the grade 10 MCAS
- Reinforces algebra skills throughout three courses
- Prepares students to take the SAT I Reasoning Test at the end of sophomore year
- Aims to prepare all students to take Pre-calculus during junior year and an AP math course during senior year
- Allows for students to see the connections between different areas of mathematics
- Support classes for all A-level students (Directed Study)

Overall: it addresses the changes for the new common core standards

Impact to MCAS & SAT

- Geometry is built into grade 8 curriculum
- Better preparation in grades 6, 7, and 8 – the common core has more emphasis on pre-algebra skills starting in grade 6
- Addresses weaknesses in MCAS, Patterns, Relations, and Algebra strand in the middle school
- All students will be exposed to both the geometry and algebra needed to be successful on the grade 10 MCAS
- Students will be ready to take the SAT I Reasoning and SAT II, Level 1 at the end of course 3 (end of grade 10)
- Students will be ready to take the SAT II, Level 2 test at the end of Pre-calculus (grade 11)
- More students will be prepared to take an AP math course senior year

Costs

Textbooks (MHS – Hillside Funds; PMS – Budget Priority)

Year 1

- Geometry student textbooks, teacher's editions – PMS
\$ 5000.00
- Pre-Algebra 1 student textbooks, teacher's editions – PMS
\$16,938.35
- Math Tools for Smartboard - PMS/MHS **\$2000.00**
- Algebra 2 student textbooks, teacher's editions – MHS
\$16,140.00

Years 2 & 3

- Pre-Algebra 2 student textbooks – PMS
- Algebra 1 student textbooks – PMS

Professional Development

- Content Area (Middle School Teachers): algebraic thinking & geometry
- Instructional (Middle & High School Teachers): differentiating instruction