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TO: Board of Education
FROM: Dale Ellis
DATE: March 5, 2012
SUBJ: INFORMATION ITEM (Secondary Math Plan)

Enclosed is a newly developed Secondary Math plan. With more students taking high school math credits while still in middle school, we felt it was important to clarify expectations for continuous math study when those students reach the high school level so students are better prepared for college. The plan was developed by Phillip Brown with support from middle and high school leadership teams.

I will be available to answer any questions you may have.

Math Success Plan

Rationale: Students who elect to take high school courses in the middle school are doing so to meet specific academic needs. Montgomery County Schools recognizes that truth and understands to develop these mathematical talents, we must provide an increased number of higher level math courses during the junior and senior years. In this situation, students also have a duty to continue their mathematical studies to include rigorous standards at the junior and senior level. Previously, it was possible for students to meet mathematical graduation requirements by taking 1 or more maths at the middle school level. Such a scenario made it plausible that these students could finish graduation requirements as early as their sophomore year, leaving their junior and senior years with no math instruction. As a school system, we feel that such a plan of action is very detrimental to college success. Our consensus led us to this plan.

Benefits: Students who take math courses as a junior or senior are:

- more marketable to colleges and universities
- more prepared for rigorous college life
- more likely to succeed in college level math

Student selection process: Using a combination of EVAAS prediction data, principal/teacher recommendations, and grades, the administration will select students who are most prepared for accelerated content (see page 4). A parent conference or informational session is mandatory. Students, parents and administration must sign the Math Success Plan. (see page 3)

Graduation Requirements: 4 Credits (Algebra I, Geometry, Algebra II) **OR** (Integrated Math, I, II, III) 4th Math Course to be aligned with the student's post high school plans. (A student, in rare instances, may be able to take an alternative math course sequence as outlined under State Board of Education policy. Please see your school counselor for more details.)

State Requirements: "Beginning in the 2007-08 school year, students who pass mathematics or foreign language courses during grade 6-8 that are described in the *North Carolina Standard Course of Study* for grades 9-12 must achieve level III or IV on an EOC, if available, to meet that high school graduation requirement. High school mathematics and foreign language courses taken in grades 6-8 which do not have an EOC shall use high school course codes and shall be aligned to the *North Carolina Standard Course of Study* for grades 9-12. The courses will count toward graduation requirements, but the student's GPA will be computed with courses taken only during the high school years. Students are strongly encouraged to complete at least one unit of mathematics credit in their final year of high school."

Local Recommendations: For each high school math course passed in the middle school, the student is encouraged to take a higher level math course in either the 11th or 12th grades. For example, if John takes Algebra I and Geometry in middle school, it is evident that he has an aptitude for mathematics. To ensure his consistent growth, he is encouraged to take 4 math courses during high school. See the table on page two for available courses.

Montgomery County Schools Accelerated Math Options				
Required for graduation:	Electives: MCS Offered	Electives: CTE Pairs*	Electives: Virtual Classes	Electives: Career and College Promise (MCC)
<ul style="list-style-type: none"> •Algebra I •Algebra II •Geometry OR <ul style="list-style-type: none"> •Integrated Math I •Integrated Math II •Integrated Math III <p>AND 4th Math to be aligned with the student's post high school plans</p>	<ul style="list-style-type: none"> •Honors Pre-Calculus •Honors Discrete Math •Advanced Functions and Modeling •Honors or AP Calculus 	<ul style="list-style-type: none"> •Accounting I and II ** •Drafting I and II •Biotechnology and Agriscience Research I and II** •Computer Programming I and II •Principals of Business and Finance I and II** •Personal Finance I and Small Business Entrepreneurship** •Apparel Development I and II** •Housing and Interiors I and II** •PLTW Intro to Engineering and Design and PLTW Principals of Engineering** •Construction Technology I and II** •Electrical Trades I and II** •Electronics I and II** •Metals Manufacturing I and II** •Foods I and II •Culinary Arts I and II** 	<p>NCSSM:</p> <ul style="list-style-type: none"> •Honors/ AP Calculus •Honors Pre-Calculus •Honors Pre-Calculus Trigonometry •Honors / AP Statistics <p>NCVPS:</p> <ul style="list-style-type: none"> •Advanced Functions and Modeling •Integrated Math I, II •Algebra II <p>If a face-to-face course is available from MCS, students are required to enroll in that option. In rare cases, exceptions may be made by the principal.</p>	<ul style="list-style-type: none"> •College Algebra •Pre-Calculus Algebra •Calculus •Pre-Calculus Trigonometry <p>Additional courses may be added each semester.</p> <p>Additional courses are available from surrounding community colleges.</p>

*Math credits may only be awarded with the principal's approval.

**CTE pairs that are not currently being taught by MCS. Students may have the opportunity to earn these credits from MCC or NCVPS. Consideration may also be made for transferred credits.



Math Success Plan

I, _____, a talented student in Montgomery County Schools, agree to take at least one math class each year during my high school career. I understand that this will increase my chances of getting into college and being successful in college level math. With the support of my family, I commit myself to this plan and will put forth my best effort.

Student's Signature

Parent's Signature

Advisor's Signature

Use this table to map out your math success plan. This is a flexible plan which allows for math substitutions.

	7th	8th	9th	10th	11th	12th
1st Semester						
2nd Semester						

A copy of this plan should be retained in the student's cumulative record.

Student selection process:

This rubric suggests levels of achievement which should be adhered to when choosing students to be admitted into Algebra I or Geometry in the middle school.

The selector will grant the appropriate amount of points for each of the criterion below. Students must qualify with a minimum of **30 points**.

Criteria	Points→	1	2	3	4
Grade 6 Math		< 351	351-358	359-363	≥364
Grade 7 Math		<355	355-359	360-366	≥367
Grade 7 Reading		<358	358-364	365-369	≥370
EVAAS Prediction %		≤69	70-79	80-89	90-100
Teacher Recommendation		NO	N/A	N/A	YES
Principal Recommendation		NO	N/A	N/A	YES
Parent Recommendation		NO	N/A	N/A	YES
Student Willingness		NO	N/A	N/A	YES

This takes into consideration EOG math scores for both 6th and 7th grade math that reflects consistent math achievement. It also includes the 7th grade reading scores. Complex problem-solving requires proficient reading skills.