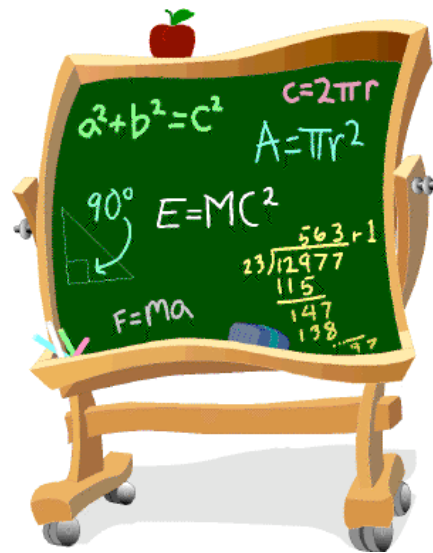


Aligning Curriculum Sequences to Meet Student Needs



VISION 2020 Goal 1: Establish an appropriate, **rigorous**, authentic curriculum for each student.

Need for New Math Sequences

Algebra I standards have become the core of the Pennsylvania Eighth Grade Math Standards (PDE SAS Website). The newly adopted Keystone Exams can be administered in middle school after the completion of the course.

Twenty percent of school districts in Pennsylvania have students complete Algebra I by the end of eighth grade as a normal expectation. (2010 Quality Counts Report, Ed.Week and Pew Center)

Students in Lewisburg are not able to advance to the second AP Calculus Course in the current math sequence alignment. Only one section per year (typically about 15-20 students) take the first level of AP Calculus at the high school.

All students need a solid understanding of Algebra and Geometry Concepts prior to high school graduation for success in college, skilled trades, and the modern workforce.

Upgrades to Math Sequences

Sequence	7th Grade	8th Grade	9th Grade	10th Grade	11th Grade	12th Grade
1	Algebra I	Algebra II	Geometry	Trig/Adv. Math	AP Calculus (AB)	AP Calculus (BC) AP Statistics Statistics
2	Algebra I	Algebra II	Geometry	Trig/Adv. Math	Calculus Pre-Calc AP Statistics Statistics	AP Calculus (AB) Calculus AP Statistics Statistics
3	7th Grade Math (With Pre-Alg)	Algebra I	Algebra II or Geometry	Algebra II or Geometry	Trig/Adv. Math AP Statistics Statistics	AP Calculus (AB) Calculus Pre-Calculus Trig/Adv. Math AP Statistics Statistics
4	7th Grade Math (With Pre-Alg)	Algebra I	Algebra I for New Students or those repeating (Everyday)	Algebra II or Geometry	Algebra II or Geometry	Trig/Adv. Math Statistics
Sequence to be phased out	Algebra A	Algebra B	Geometry	Algebra II	Trig/Adv. Math	Calculus Pre-Calc
Sequence to be phased out	7th Grade Math (With Pre-Alg)	Algebra A	Algebra B	Geometry	Algebra II	Integrated Math Trig/Adv. Math
Sequence to be phased out	7th Grade Math (With Pre-Alg)	Algebra A	Algebra A Repeated	Algebra B	Geometry or Algebra II	Integrated Math Algebra II Geometry

Time for Math is Critical

Algebra I is a critical course for students and students must be given the appropriate background knowledge prior to the course to be successful.

Adequate time must be devoted to teaching Algebra I as this is the gateway to higher mathematical courses at the high school and post-high school level.

Currently, middle school students have math every day for 78 minutes (234 hours per year) in grades six and seven. However, students only have math every other day for 78 minutes (117 hours per year) in grade eight when many are taking Algebra I or Algebra II.

We need to provide adequate time for the critical teaching of Algebra at the middle school by expanding math instruction in eighth grade to match the instructional time in sixth and seventh grade.

Beginning with the 2010-2011 school year, all eighth grade students will have math every day for 78 minutes at the middle school. Algebra A and Algebra B taught over two years will not be necessary in this alignment.

Schedule Changes to Accommodate Math

Various Options Explored

1. Move to a separate 5 period schedule vs. 4 periods for eighth grade reducing time in language arts, science, social studies, and foreign language to increase math time.
2. Make foreign language an elective taken on-line with weekly face-to-face time with the teacher.
3. Move foreign language to the mid-day activity period.
4. Reduce time from language arts to increase math time and keep foreign language in the core academic schedule.
5. Move foreign language to the Life Skills and Arts Rotation and stretch it over three years in grades 6-8 to meet level I competency.

MS Life Skills and Arts

Day	Quarter	Sem	2011-2012 Sixth Grade	2011-2012 Seventh Grade	2011-2012 Seventh Grade	2011-2012 Eighth Grade	2011-2012 Eighth Grade
1	1	1	Phys Ed./FCS	Phys Ed.	Phys Ed.	Phys Ed.	Phys Ed.
	2		Phys Ed./Tech				
	3	2	Phys Ed./Music				
	4		Phys Ed./Music				
2	1	1	Library	Art	FCS	Art	FCS
	2		Foreign Lang				
	3	2	Library	FCS	Art	FCS	Art
	4		Foreign Lang	Tech Ed	Tech Ed		
3	1	1	FCS/Phys Ed.	Music	Foreign Lang	Music	Foreign Lang
	2		Tech/Phys Ed.				
	3	2	Music/Phys Ed.	Foreign Lang	Music	Foreign Lang	Music
	4		Music/Phys Ed.				
4	1	1	Phys Ed./FCS	Phys Ed.	Phys Ed.	Phys Ed.	Phys Ed.
	2		Phys Ed./Tech				
	3	2	Phys Ed./Music				
	4		Phys Ed./Music				
5	1	1	Art	Art	FCS	Art	FCS
	2		Tech Ed				
	3	2	Art	FCS	Art	FCS	Art
	4		Tech Ed	Tech Ed			
6	1	1	FCS/Phys Ed.	Music	Foreign Lang	Music	Foreign Lang
	2		Tech/Phys Ed.				
	3	2	Music/Phys Ed.	Foreign Lang	Music	Foreign Lang	Music
	4		Music/Phys Ed.				

Special 2010-2011 Schedule

2010-2011 ONLY						
Day	Quarter	Sem	Sample 1 (No FL)	Sample 2 (FL All Year)	Sample 3 (FL All Year)	Sample 3 Extra Time (FL All Year)
1	1	1	Phys Ed.	Phys Ed.	Phys Ed.	Phys Ed.
	2					
	3	2				
	4					Foreign Lang
2	1	1	Art	Art	Music	Music
	2					
	3	2	FCS	FCS	Art	Art
	4		Tech Ed	Tech Ed		
3	1	1	Music	Foreign Lang	Foreign Lang	FCS
	2					Tech Ed
	3	2	21st Cent. Skills	Foreign Lang	Foreign Lang	Music
	4					
4	1	1	Phys Ed.	Phys Ed.	Phys Ed.	Phys Ed.
	2					
	3	2				
	4					Foreign Lang
5	1	1	Art	Art	Music	FCS
	2					Tech Ed
	3	2	FCS	FCS	Art	Music
	4		Tech Ed	Tech Ed		
6	1	1	Music	Foreign Lang	Foreign Lang	Foreign Lang
	2					
	3	2	21st Cent. Skills	Foreign Lang	Foreign Lang	Foreign Lang
	4					
			<i>(No Foreign Lang.)</i>	<i>(No Music)</i> <i>(No 21st Cent. Skills)</i>	<i>(No FCS/Tech Ed)</i> <i>(No 21st Cent. Skills)</i>	<i>(No Art)</i> <i>(No 21st Cent. Skills)</i>

Effect of Changes

Advantages:

Math instructional time will be increased by 50% in eighth grade.

Completion of Algebra I becomes the normal expectation for eighth graders.

Foreign language is taught in grades 6-8, instead of just grade 8.

100% of students will have foreign language compared to about 87% that take it now.

Disadvantages:

Scheduled foreign language instructional time is reduced by 17% compared to current schedule.

Additional foreign language personnel will be needed for at least one year.

Middle School Personnel Changes

- Eagle Teacher becomes full time eighth grade math teacher.
- A part-time foreign language teacher is hired to help with the one-year eighth grade program.
- The part-time special education teacher position will not be filled in the 2010-2011 school year.
- The personnel changes are budget neutral.