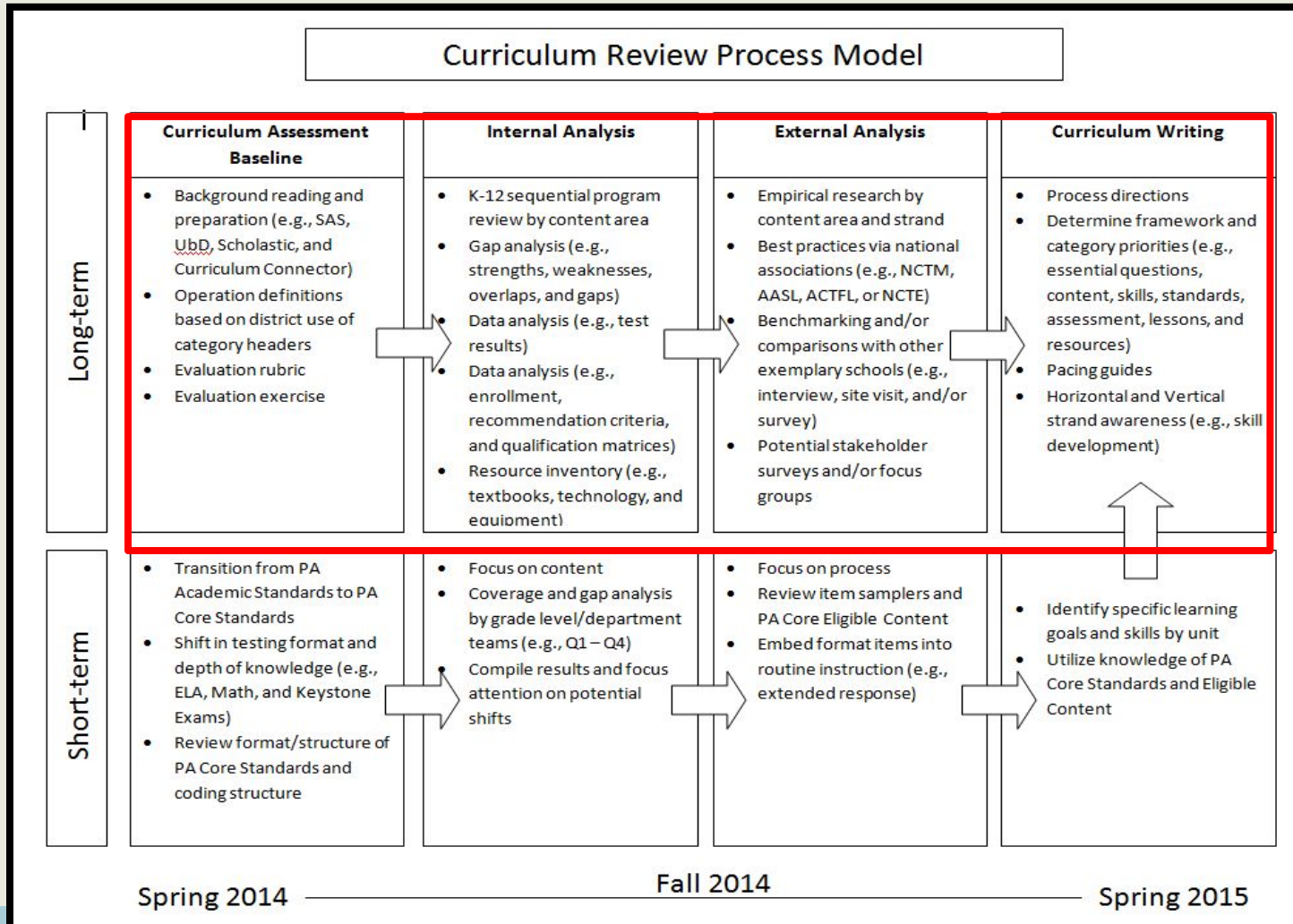


K-8 MATHEMATICS PATHWAYS INFORMATION



CURRICULUM REVIEW
UPDATED PATHWAYS
DATA MATRICES
SAMPLE UNITS
BREAK-OUT QUESTIONS/CONVERSATIONS

Curriculum Review

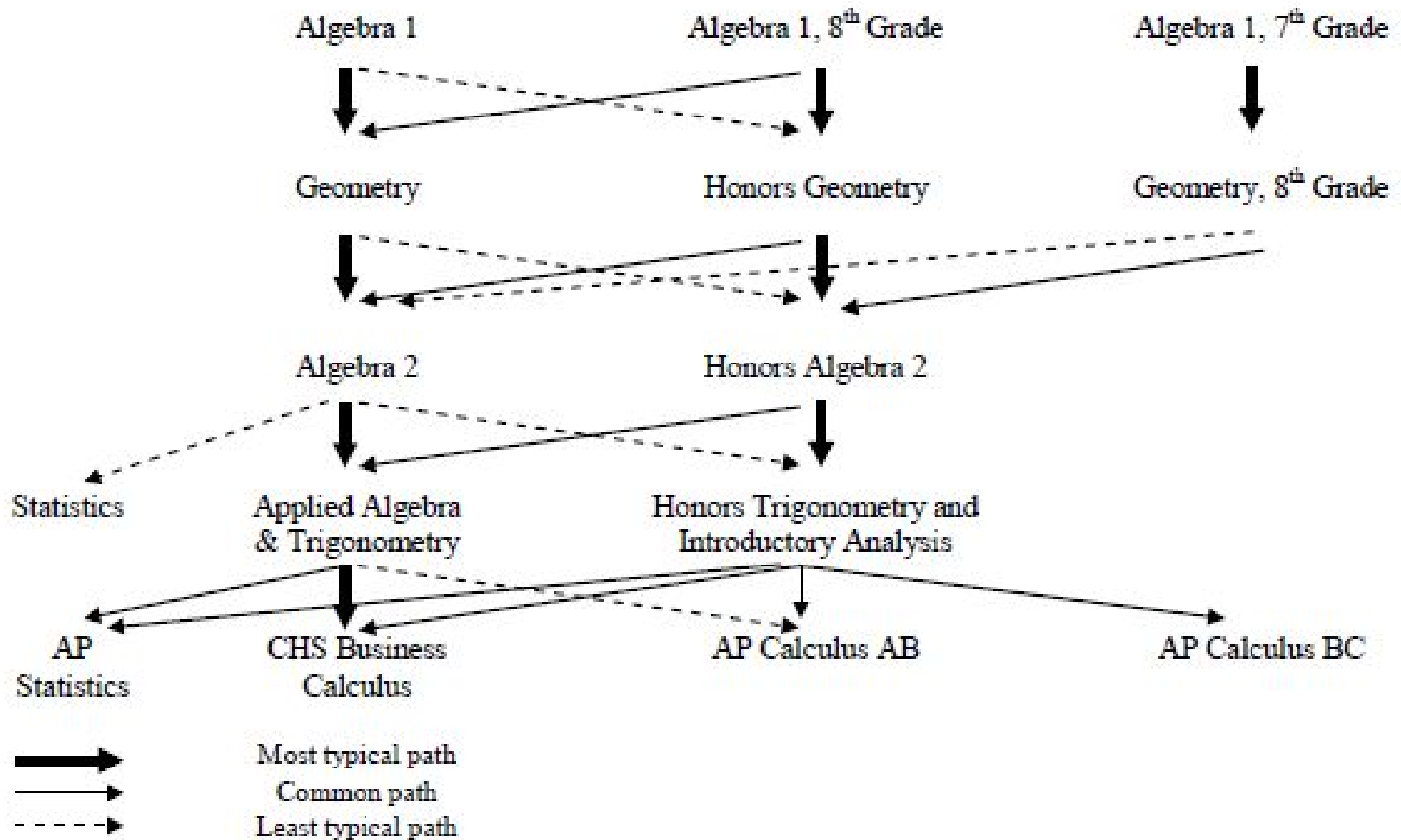


FINDINGS FROM CURRICULUM REVIEW



- Diversity of readiness in the “at grade level” pathway
- Meeting the needs of all students
 - Acceleration/Enrichment
 - Remediation
- PVAAS results and stakeholder input related to learners at the “advanced” performance level
- Math Pathway Updates
 - 15-16 Grades 3-8 narrowing the range of math aptitude
 - 16-17 Course addition (third level of trigonometry), course name changes (Honors Pre-Calc. and Pre-Calc.)
 - 17-18 New math resources for grades 6-8
- Course recommendation process
 - Matrices and data points

Previous HS Math Pathway Chart



PAST MATHEMATICS PATHWAYS



2014-2015 PRSD Math Pathways												
K	1	2	3	4	5	6	7	8	9	10	11	12
Acceleration/Enrichment Differs by Primary School				Math (5 th)	Math (6 th)	Pre-Alg	Hon.Alg1	Hon.Geo	Hon.Alg2 ≥90% in Alg.1	Hon.TIA ≥90% in Geo/Alg.2 OR ≥80% in Hon.Geo/Hn.Al2	APCalcAB ≥90% in AA&T OR ≥80% in Hon.TIA or APCalcBC ≥90% in Hon.TIA or APStats ≥90% in AA&T OR ≥80% in Hon.TIA	APCalcAB ≥90% in AA&T OR ≥80% in Hon.TIA or APCalcBC ≥90% in Hon.TIA or APStats ≥90% in AA&T OR ≥80% in Hon.TIA
MathK	Math1	Math2	Math3	Math4	Math5	Math6	Pre-Al	Algebra1	Hon.Geo ≥90% in Alg. 1	Hon.Alg2 ≥90% in Alg. 1	Hon.TIA ≥90% in Geo/Alg.2 OR ≥80% in Hon.Geo/Hn.Al2	CHSBusCalc ≥80% in Trig or APCalcAB ≥90% in AA&T OR ≥80% in Hon.TIA or APCalcBC ≥90% in Hon.TIA or APStats ≥90% in AA&T OR ≥80% in Hon.TIA
									Geometry Alg. 1	Alg2 Alg. 1 & Geom. Or Concurrent w/ Geom.	Applied Alg & Trig Geom. & Alg. 2 Stats *complete Alg2	CHSBusCalc ≥80% in Trig or BusCalc ≥80% in Trig or Stats *complete Alg2
							Math7	Pre-Al	Algebra 1	Geometry Alg. 1	Alg2 Alg. 1 & Geom. Or Concurrent w/ Geom.	Applied Alg & Trig Geom. & Alg. 2 Stats *complete Alg2
									Algebra 1 w/Lab ≤80% in Pre-Al	Geo w/ Lab ≤80% in Alg1	Alg2 w/ Lab Alg. 1 & Geom. Or Concurrent w/ Geom.	

Findings:

- Lack of clarity and understanding of math pathway by staff and community
- Wide range of readiness levels K-8
- Inconsistencies in “enrichment/acceleration” opportunities K-3

REVISED MATH PATHWAYS

Course Acceleration

PRSD Math Pathways

			K	1	2	3	4	5	6	7	8	9	10	11	12
Course Level Determination							Math (5 th)	Math (6 th)	Pre-Alg	Hon.Alg 1	Hon.Geo	Hon.Alg2 ≥90% in Alg. 1	Hon.TIA ≥90% in Geo/Alg.2 ≥80% in Hn.Geo/Hn.AIG	APCalcAB ≥90% in AA&T ≥80% in Hon.TIA APCalcBC ≥90% in Hon.TIA APStats ≥90% in AA&T ≥80% in Hon.TIA	APCalcAB ≥90% in AA&T ≥80% in Hon.TIA APCalcBC ≥90% in Hon.TIA APStats ≥90% in AA&T ≥80% in Hon.TIA
Math K	Math 1	Math 2	"COMPACTED/EXTENDED" PATHWAY												
			Math 3	Math 4	Math 5	Math 6	Pre-Al	Algebra1	Hon.Geo ≥90% in Alg. 1	Hon.Alg2 ≥90% in Alg.1	Hon.Pre-Calc ≥90% in Alg.2 OR	CHSBusCalc ≥80% in Trig APCalcAB ≥90% in AA&T ≥80% in Hon.TIA APCalcBC ≥90% in Hon.TIA APStats ≥90% in AA&T ≥80% in Hon.TIA			
			"CURRENT" PATHWAY												
			Math 3	Math 4	Math 5	Math6	Pre-Al	Algebra1	Geometry Alg. 1	Alg2 Alg. 1 & Geom. Or Concurrent w/ Geom.	Pre-Calculus ≥80% Alg. 2 or ≥70% H.Alg. 2 OR Trig. & Anal. Geom.	Stats *complete Alg2	CHSBusCalc ≥80% in Trig or BusCalc ≥80% in Trig or Stats *complete Alg2		
												Algebra 1	Geometry Alg. 1	Alg2 Alg. 1 & Geom. Or Concurrent w/ Geom.	Pre-Calculus ≥80% Alg. 2 or ≥70% H.Alg. 2 OR Trig. & Anal. Geom. Geom. & Alg. 2 OR Stats *complete Alg2
									Fund. of Pre-Al	Fund. of Alg. I	Algebra I w/Lab	Geo w/ Lab ≥80% in Alg1	Alg2 w/ Lab Alg. 1 & Geom. Or Concurrent w/ Geom.		

Results:

--Clear understanding and awareness of math pathway by staff and community.

--Narrowed range of readiness levels 3-8.

--Consistent methods for identifying acceleration/enrichment across all grades.

Movement between pathways will be collaborative decisions among teachers, administrators, parents, and students.

SAMPLE UNIT GRADE 7 – Pre-Algebra

Percents: Numbers, Percents, and Applying Percents (Current Pre-Algebra Course)		
Unit Name: Percents	Estimated Total Number of Days for the Unit: 10 days	
Section	Topic	Days on Topic
8-1	Relating Decimals, Fractions, and Percents	
8-2	Finding Percents	1
8-3	Finding a Number When the Percent Is Known	1
8-4	Percent Increase and Decrease	1.5
Quiz	Administer Quiz on first part of this unit	0.5
8-6 and 8-7	Applications of Percents	3
Review		
Unit Test		

Enrich and Differentiate

Current PR course

Percents: Numbers, Percents, and Application of Percents (Compacted and Extended Pre-Algebra)		
Unit Name: Percents	Estimated Total Number of Days for the Unit: 10	
Section	Topic	Days on Topic
8-1	Relating Decimals, Fractions, and Percents	1
8-2	Finding Percents	1
8-3	Finding a Number When the Percent Is Known	1
8-4	Percent Increase and Decrease	1
	Administer Quiz on first part of Percent Unit	0.5
8-7	Applications of Percents	2.5
	Application of Percents in Real World Problems and Enrich	1
Review	Review all components of Percent Unit	1
Unit Test	Administer Test on Percents	1

Enrich and Differentiate

Current PR course compacted and extended

SAMPLE UNIT GRADE 5

Current PR course

A	B
5th Grade Current Course	
Unit Name: Equations and Graphs	
Estimated Total Number of Days for Unit: 7	
Lesson	Topic
17-1	Understanding Integers
17-2	Ordered Pairs
17-3	Distances on Number Line and Coordinate Planes
17-4	Graphing Equations
17-5	Problem Solving: Working Backwards
Review	Review Topic 17 goals and objectives
Assessment	Demonstrate Topic 17 goals and objectives

Enrich and Differentiate

5th Grade Compacted/Extended	
Unit Name: Equations and Graphs	
Estimated Total Number of Days for Unit: 7	
Lesson	Topic
17-1, 17-2	Understanding Integers and Ordered Pairs
17-3	Distances on Number Line and Coordinate Planes **Extend and enrich to include algorithms for adding and subtracting negative and positive integers
17-4	Graphing Equations **Extend and enrich to include graphing in all four quadrants of a coordinate plane and name the quadrants.
17-5	Problem Solving: Working Backwards
Review	Review Topic 17 Goals and Objectives
Assessment	Demonstrate Topic 17 Goals and Objectives

Enrich and Differentiate

Current PR course compacted and extended

SAMPLE UNIT GRADE 3

Unit #1 Current 3rd Grade Course		
Unit Name: Multiplication Meanings & Facts	Estimated Total Number of Days for the Unit:	14 days
Section	Topic	Days on Topic
5-1	Number Sense: Multiplication as Repeated Addition	1
5-2	Number Sense: Arrays and Multiplication	1
5-3	Number Sense: Using Multiplication to Compare	1
5-4	Number Sense: Multiplication Stories	1
5-5	Problem Solving: Writing to Explain	1
5-6	Multiplication: 2 and 5 as a Factor	1
5-7	Multiplication: 10 as a Factor	1
5-8A	Multiplying by Multiples of 10	1
5-8	Multiplication: 9 as a Factor	
5-9	Multiplying with 0 and 1	
5-10	Problem Solving: Two Question Problems	
Review	Review all components of this chapter should take	
Topic 5 Test	Administer Topic 5 Test: Students should demonstrate strategies and proficiency in multiplying by 0, 1, 2,	

Current PR course

Enrich and Differentiate

Unit #1 Current 3rd Grade Course Compacted and Extended		
Unit Name: Multiplication Meanings & Facts	Estimated Total Number of Days for the Unit:	14 days
Section	Topic	Days on Topic
5-1	Number Sense: Multiplication as Repeated Addition	1
5-2	Number Sense: Arrays and Multiplication	1
5-3	Number Sense: Using Multiplication to Compare	1
5-4	Number Sense: Multiplication Stories	1
5-5	Problem Solving: Writing to Explain	1
5-6	Multiplication: 2 and 5 as a Factor	
5-7 and 5-8A	Multiplication: 10 as a Factor and Multiplying by Multiples of 10	1
5-8	Multiplication: 9 as a Factor	1
5-9 and 5-10	Multiplying with 0 and 1, and Problem Solving: Two Question Problems	1
Review	Review all components of this chapter could take 1 day with this group of students	1
Topic 5 Test	Administer Topic 5 Test: Students should demonstrate an understanding of multiplication strategies and proficiency in multiplying by 0, 1, 2, 5, 9, and 10.	1
Extend and Enrich	Students extend knowledge of multiplication: <ul style="list-style-type: none"> • Multiply by 10s, 100s, and 1,000s (extension of 5-7 & 5-8A) • Use factors 2, 5, 9, and 10 to multiply beyond 12 (extension of 5-6, 5-7, 5-8, & 5-9) • Extend arrays by learning square numbers (extension of 5-2) 	3

Current PR course compacted and extended

Enrich and Differentiate

Small Group or Individual Conversations



- Drs. Silbaugh & Pasquinelli – General Questions
- Dr. Walsh and Mrs. Grover – Grade 3
- Mr. Smith and Mr. Andreassi – Grades 4-6
- Mr. Boyers and Mr. Frank – Grades 7-8