Killingly Public Schools Profile of a Graduate

PURSUER of KNOWLEDGE

- Applies strong foundational literacy and mathematical skills to everyday situations.
- Learns from errors, accepts criticism, builds on knowledge, and applies learning to new circumstances.
- Raises questions driven by curiosity to enhance understanding.
- Is a self-motivated, lifelong learner who takes intellectual risks.

EFFECTIVE COMMUNICATOR

- Speaks and writes with clarity by recognizing audience, understanding purpose, and choosing precise, accurate language and information.
- Communicates clear definitions, accurate calculations, and carefully formulated explanations.
- Collaborates by listening actively, building on ideas, making productive contributions, and demonstrating a flexible mindset.
- Communicates with respect and understanding for others' ideas and perspectives.

TECHNOLOGICALLY FLUENT

- Utilizes technology as a tool for discovery, communication, and problem solving.
- Designs, creates, and revises solutions to real-world problems with technology.
- Uses technology in a socially responsible and ethical manner.

PERSONALLY RESPONSIBLE

- Takes action to ensure personal success and achievement.
- Recognizes, reflects and grows from setbacks.
- Advocates for self and others.
- Demonstrates empathy for others and values diversity.
- Serves the community through civic-minded actions.
- Demonstrates honesty and integrity.

CRITICAL THINKER

- Organizes and analyzes information using literacy and mathematical skills.
- Interprets, evaluates and synthesizes information to defend or support a position with evidence.
- Designs, creates and revises original work in response to problems or challenges.
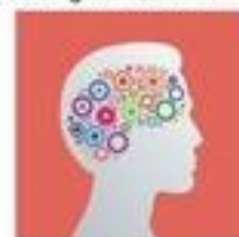
1

Killingly Public Schools

Mathematics Performance

November 13, 2019

"Mathematics is the door and key to the sciences."

—— Roger Bacon

Mathematics in Killingly

Go Math

K-6 program first implemented in 2016-2017.

KPS is in our fourth year of implementation at all levels.

AVMR training

AVRM is the acronym for Advantage Math Recovery. AVMR training involves training in dynamic, diagnostic, and individual assessments. These assessments cover topics such as words and numerals, structuring numbers, and addition and subtraction strategies.

In KPS one staff member is Level IV trained as a certified coach. K, 1, 2 & 3 are all Level I trained. The three interventionists have all received training beyond Level I.

Connecticut State Curriculum

Originally adopted by Killingly in 2012. Utilized in grades 9-12.

Illustrative Math

This is first year of implementation for grades 7 & 8.

As we reflect on the progression of our mathematics instruction in the past year, a clear story emerges…

Continued Curricular Progress

Students are progressing through a greater number of curricular units than in previous three years.

Student Performance

Students are achieving a higher level of mastery in their academic units than in previous years at most levels.

Focused Professional Development

Dedicating resources to creating mathematics expertise.

MATH

SBA- Smarter Balance Assessment Results

Grade	KPS Percent Scoring Level 3 and Above					State Average by Grade 2018-2019
	2014-15	2015-16	2016-17 *Year one Go Math	2017-2018	2018-2019	
3	42%	37%	37%	58%	58%	55%
4	28%	39%	26%	46%	46%	53%
5	24%	29%	31%	22%	29%	47%
6	42%	42%	35%	42%	45%	45%
7	29%	39%	26%	36%	44%	46%
8	16%	26%	21%	23%	30%	44%
All Grades	30% (CT 42%)	35.4% (CT 44%)	29.3% (CT 45.6%)	38.15% CT (46.7%)	42% CT(48%)	48%

Math

Growth Rate & Target Percentages

Grade	Growth Rate School Year				Average Percentage of Target Achieved School Year			
	2016-17	2017-18	2018-19	State Average 2018-19	2016-17	2017-18	2018-19	State Average 2018-19
4	18.00%	47.80%	32.9%	43.6%	46.20%	80.00%	64.1%	71.3%
5	28.90%	40.30%	15.7%	44.7%	49.00%	60.20%	34.4%	65.1%
6	46.20%	52.40%	68.8%	41.2%	66.10%	76.00%	85.6%	59.1%
7	15.00%	36.60%	30.7%	42.7%	32.90%	54.90%	51.0%	59.6%
8	10.30%	28.30%	28.0%	42.5%	20.20%	44.90%	43.9%	57.7%

Grades K-1

Mathematics at KCS

Kindergarten

Chapter:	2016-17	2017-18	2018-19
1	86	88	91
2	89	86	90
3	88	84	85
4	90	89	90
5	inc. data	87	89
6	inc. data	85	89
7	inc. data	86	91
8	inc. data	88	89
9	inc. data	96	96
10	inc. data	90	91
11	inc. data	inc. data	91
12	inc. data	inc. data	* 92
Units Covered	4	10	12

Grade 1

Chapter:	2016-17	2017-18	2018-19
1	80	87	91
2	85	85	90
3	77	82	85
4	85	83	90
5	83	86	89
6	inc. data	79	82
7	inc. data	84	89
8	inc. data	inc. data	87
9	inc. data	inc. data	84
10	inc. data	inc. data	83
11	inc. data	inc. data	inc. data
12	inc. data	inc. data	inc. data
Units Covered	5	7	10

GO MATH!
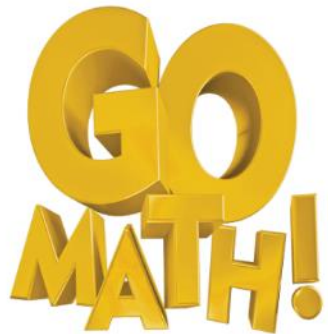
Grades 2-4 — Mathematics at KMS

Chapter:	Grade 2 2016-17	2017-18	2018-19
1	79	82	87
2	80	81	84
3	86	85	88
4	82	85	86
5	80	78	81
6	Inc. data	85	85
7	90	86	88
8	inc. data	89	inc. data
9	inc. data	inc. data	inc. data
10	inc. data	89	97
11	inc. data	88	94
Units Completed	6	10	9

Chapter:	Grade 3 2016-17	2017-18	2018-19
1	71	68	79
2	72	74	82
3	82	82	93
4	78	84	79
5	inc. data	inc. data	inc. data
6	inc. data	88	93
7	inc. data	inc. data	inc. data
8	inc. data	73	72
9	inc. data	84	83
10	inc. data	inc. data	inc. data
11	inc. data	82	86
12	inc. data	80	84
Units Completed	4	9	9

Chapter:	Grade 4 2016-17	2017-18	2018-19
1	75	76	83
2	69	74	78
3	76	82	89
4	67	70	78
5	77	75	77
6	73	75	79
7	80	81	84
8	79	73	82
9	inc. data	83	85
10	inc. data	71	86
11	inc. data	70	75
12	inc. data	67	76
Units Completed	8	12	12

Grades 5-6

Mathematics at KIS Unit Progression

Chapter:	Grade 5 2016-17	2017-18	2018-19
1	79	82	82
2	79	83	87
3	83	Inc. data	86
4	Inc. data	Inc. data	84
5	Inc. data	Inc. data	83
6	Inc. data	84	86
7	Inc. data	Inc. data	83
8	Inc. data	Inc. data	Inc. data
9	Inc. data	Inc. data	Inc. data
10	Inc. data	Inc. data	Inc. data
11	Inc. data	86	Inc. data
Units Completed	3	4	7

Chapter:	Grade 6 2016-17	2017-18	2018-19
1	79	82	78
2	84	80	81
3	81	79	80
4	88	90	89
5	80	81	86
6	Inc. data	Inc. data	Inc. data
7	78	82	81
8	Inc. data	82	76
9	Inc. data	Inc. data	Inc. data
10	Inc. data	Inc. data	Inc. data
11	Inc. data	Inc. data	Inc. data
12	Inc. data	Inc. data	84
Units Completed	6	7	8
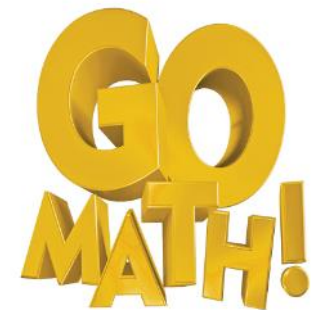
Grades 7-8

Our current schedule is to complete 8 units during the 2019-2020 school year. At this time grades 7 and 8 are both in unit 3 and on pace to complete all units.

Grade 7 Units

Unit 1: Scale Drawings

Unit 2: Introducing Proportional Relationships

Unit 3: Measuring Circles

Unit 4: Proportional Relationships and Percentages

Unit 5 Rational Number Arithmetic

Unit 6: Expressions, Equations and Inequalities,

Unit 7: Angles Triangles and Prisms.

Unit 8: Probability and Sampling

Grade 8 Units

Unit 1: Rigid Transformations and Congruence

Unit 2: Dilations, Similarity and Introducing Slope

Unit 3: Linear Relationships

Unit 4: Linear Equations and Linear Systems

Unit 5 Function and Volume

Unit 6: Associations in Data

Unit 7: Exponents and Scientific Notation

Unit 8: Pythagorean Theorem and Irrational Numbers

Warm Up

10.1 Filling the Plate

About how many cheese puffs can fit on the plate in a single layer? Be prepared to explain your reasoning.

Activity

9.3 The Running Track Revisited

The field inside a running track is made up of a rectangle 84.39 m long and 73 m wide, together with a half-circle at each end. The running lanes are 9.76 m wide all the way around.

What is the area of the running track that goes around the field? Explain or show your reasoning.

12

Kahn Academy Connections

Math

Illustrative Mathematics 6-8 Math

Khan Academy created these materials to enable personalized practice alongside the new Illustrative Mathematics curriculum. We worked with the experts at Illustrative Mathematics to create the best possible alignment of our materials to the IM curriculum. To learn more about the IM 6–8 Math curriculum, visit www.illustrativemathematics.org/curriculum.

Course summary

6th grade (Illustrative Mathematics)

7th grade (Illustrative Mathematics)

6th grade (Illustrative Mathematics)

Unit 1: Area and surface area

Unit 2: Introducing ratios

Unit 5: Arithmetic in base ten

Unit 6: Expressions and equations

.3

"

Diving in More Deeply

The essence of mathematics is not to make simple things complicated,
but to make complicated things simple.

—Stan Gudder

Diving Deeper

Reviewing SBAC Results

Performance on the Smarter Summative Mathematics Grade 4 Test, by Target: Killingly Memorial School, 2018-2019

Target	Areas of Strongest and Weakest Performance	Areas Where Performance Indicates Proficiency
Concepts and Procedures		
Target A Use the four operations with whole numbers to solve problems.	▬	🟡
Target B Gain familiarity with factors and multiples.	▬	🟡
Target C Generate and analyze patterns.	▬	🟡
Target D Generalize place value understanding for multi-digit whole numbers.	▬	🟡
Target E Use place value understanding and properties of operations to perform multi-digit arithmetic.	▬	🟡
Target F Extend understanding of fraction equivalence and ordering.	▬	🔺
Target G Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.	➕	🟡
Target H Understand decimal notation for fractions, and compare decimal fractions.	➕	✔
Target I Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.	▬	🟡
Target J Represent and interpret data.	▬	✔
Target K Geometric measurement: understand concepts of angle and measure angles.	➕	✔
Target L Draw and identify lines and angles, and classify shapes by properties of their lines and angles.	▬	🟡

Selecting Focused Interim Benchmark Assessments

1. Identify target areas

2. Align targets with Critical Area Clusters in Go Math

3. Selecting Focused IAB that align to clusters

Grade 4

IAB 4: F Geometry- Cluster L

IAB 4: F Operations: Interpret, Represent and Solve- Cluster A

IAB 3: F Fraction Equivalence and Numbering – Cluster F

Represent and solve problems involving addition and subtraction.

1.OA.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

1.OA.2 Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

Understand and apply properties of operations and the relationship between addition and subtraction.

1.OA.3 Apply properties of operations as strategies to add and subtract.

1.OA.4 Understand subtraction as an unknown-addend problem

Add and subtract within 20.

1.OA.5 Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).

1.OA.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten (e.g., 13 − 4 = 13 − 3 − 1 = 10 − 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 − 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13).
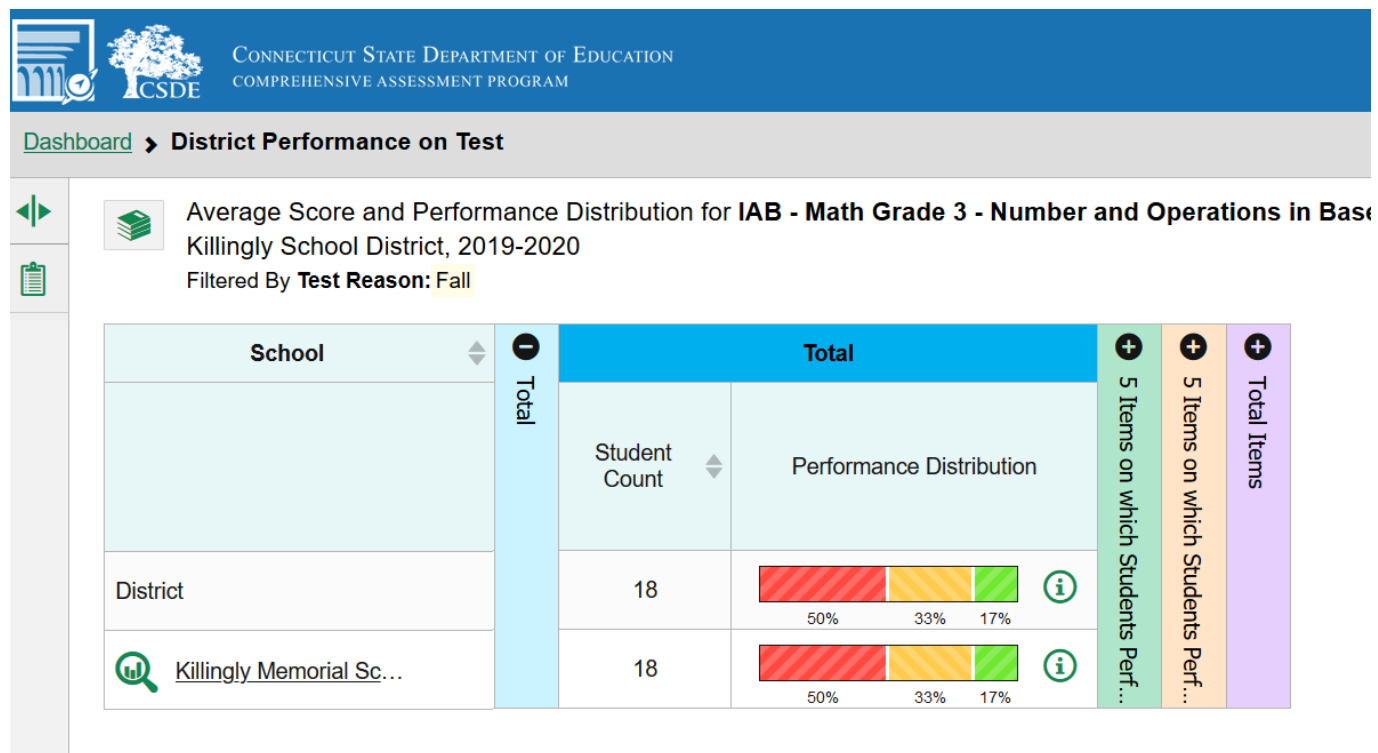
Work with addition and subtraction equations.

1.OA.8 Determine the unknown whole number in an addition or subtraction equation relating to three whole numbers.

Diving Deeper

Working with IAB results

https://cloud.airways.airast.org/12.2/Connecticut/Dashboard

Mathematics

Operations and Algebraic Thinking	0	N/A
Numbers and Operations in Base 10	155	41 46 13
Fractions	0	N/A
Geometry	0	N/A
Measurement and Data	0	N/A
Mathematics Performance Task	0	N/A

CONNECTICUT STATE DEPARTMENT OF EDUCATION
COMPREHENSIVE ASSESSMENT PROGRAM
CSDE

Dashboard ▸ **District Performance on Test**

Average Score and Performance Distribution for **IAB - Math Grade 3 - Number and Operations in Bas**
Killingly School District, 2019-2020
Filtered By **Test Reason: Fall**

School	Total	Total		5 Items on which Students Perf...	5 Items on which Students Perf...	Total Items
		Student Count	Performance Distribution			
District		18	50% 33% 17% ⓘ			
Killingly Memorial Sc…		18	50% 33% 17% ⓘ			

17

Adjustments

What are we adjusting in 2019-2020
to move mathematics forward

?

Areas of Focus

7th and 8th grade Mathematics Shift full implementation in grades 7-8

PD offsite Boston (4 staff)

Onsite Coaching- IM Expert

Additional AVMR training for Grade 3 and new staff

Continued feedback through Math Learning Walks

Supporting Mathematics Practice Behind the Scenes

Paul DiPadua- District Coordinator

Lauren Konicki- KMS

Kelly Davidson- KCS

Patrick Ruffo- KIS

Sean O'Leary- KHS

Elise Guari

Heather Taylor

Emily Caviggia

Tina Chahanovich

Sally Sherman