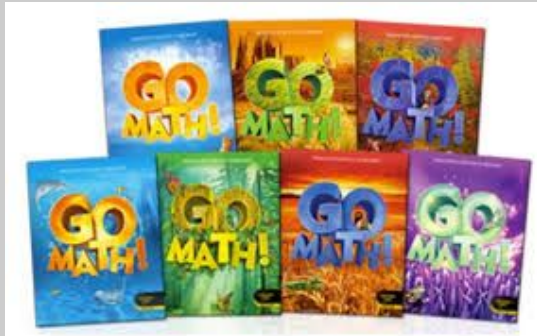


Herricks School District

Elementary Math Program



Philosophy of math program at Herricks

- Students learn mathematics best by actively building new knowledge from prior mathematical experiences
- Students should be provided a curriculum which is coherent, well articulated, and integrates real-world mathematical situations
- Students should develop an appreciation of mathematics;
- Communicating and speaking mathematically is essential for all learners;
- Promote the use of critical thinking skills through the use of questioning and authentic real-world tasks;
- Encourage the use of multiple problem solving strategies;
- Develop a community of learners that fosters student participation and discourse;
- Provide flexible, differentiated and balanced instruction that is student centered and teacher facilitated;
- Utilize appropriate resources and technology to enhance and support student learning;

NYS Math Standards progression

An important subset of the major work in grades K–8 is the progression that leads toward middle school algebra.

K	1	2	3	4	5	6	7	8
Know number names and the count sequence	Represent and solve problems involving addition and subtraction	Represent and solve problems involving addition and subtraction	Represent & solve problems involving multiplication and division	Use the four operations with whole numbers to solve problems	Understand the place value system	Apply and extend previous understandings of multiplication and division to divide fractions by fractions	Apply and extend previous understanding of operations with fractions to add, subtract, multiply, and divide rational numbers	Work with radical and integer exponents
Count to tell the number of objects	Understand and apply properties of operations and the relationship between addition and subtraction	Add and subtract within 20	Understand properties of multiplication and the relationship between multiplication and division	Generalize place value understanding for multi-digit whole numbers	Perform operations with multi-digit whole numbers and decimals to hundredths	Apply and extend previous understandings of numbers to the system of rational numbers	Analyze proportional relationships and use them to solve real-world and mathematical problems	Understand the connections between proportional relationships, lines, and linear equations**
Compare numbers	Add and subtract within 20	Use place value understanding and properties of operations to add and subtract	Multiply & divide within 100	Use place value understanding and properties of operations to perform multidigit arithmetic	Use equivalent fractions as a strategy to add and subtract fractions	Understand ratio concepts and use ratio reasoning to solve problems	Use properties of operations to generate equivalent expressions	Analyze and solve linear equations and pairs of simultaneous linear equations
Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from	Work with addition and subtraction equations	Measure and estimate lengths in standard units	Solve problems involving the four operations, and identify & explain patterns in arithmetic	Extend understanding of fraction equivalence and ordering	Apply and extend previous understandings of multiplication and division to multiply and divide fractions	Apply and extend previous understandings of arithmetic to algebraic expressions	Solve real-life and mathematical problems using numerical and algebraic expressions and equations	Define, evaluate, and compare functions
Work with numbers 11–19 to gain foundations for place value	Extend the counting sequence	Relate addition and subtraction to length	Develop understanding of fractions as numbers	Build fractions from unit fractions by applying and extending previous understandings of operations	Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition	Reason about and solve one-variable equations and inequalities		Use functions to model relationships between quantities
	Understand place value		Solve problems involving measurement and estimation of intervals of time, liquid volumes, & masses of objects	Understand decimal notation for fractions, and compare decimal fractions	Graph points in the coordinate plane to solve real-world and mathematical problems*	Represent and analyze quantitative relationships between dependent and independent variables		
	Use place value understanding and properties of operations to add and subtract		Geometric measurement: understand concepts of area and relate area to multiplication and to addition					
	Measure lengths indirectly and by iterating length units							

Design of our Math Curriculum

-Clear learning targets based on NYS Standards

-Go Math textbook and resources

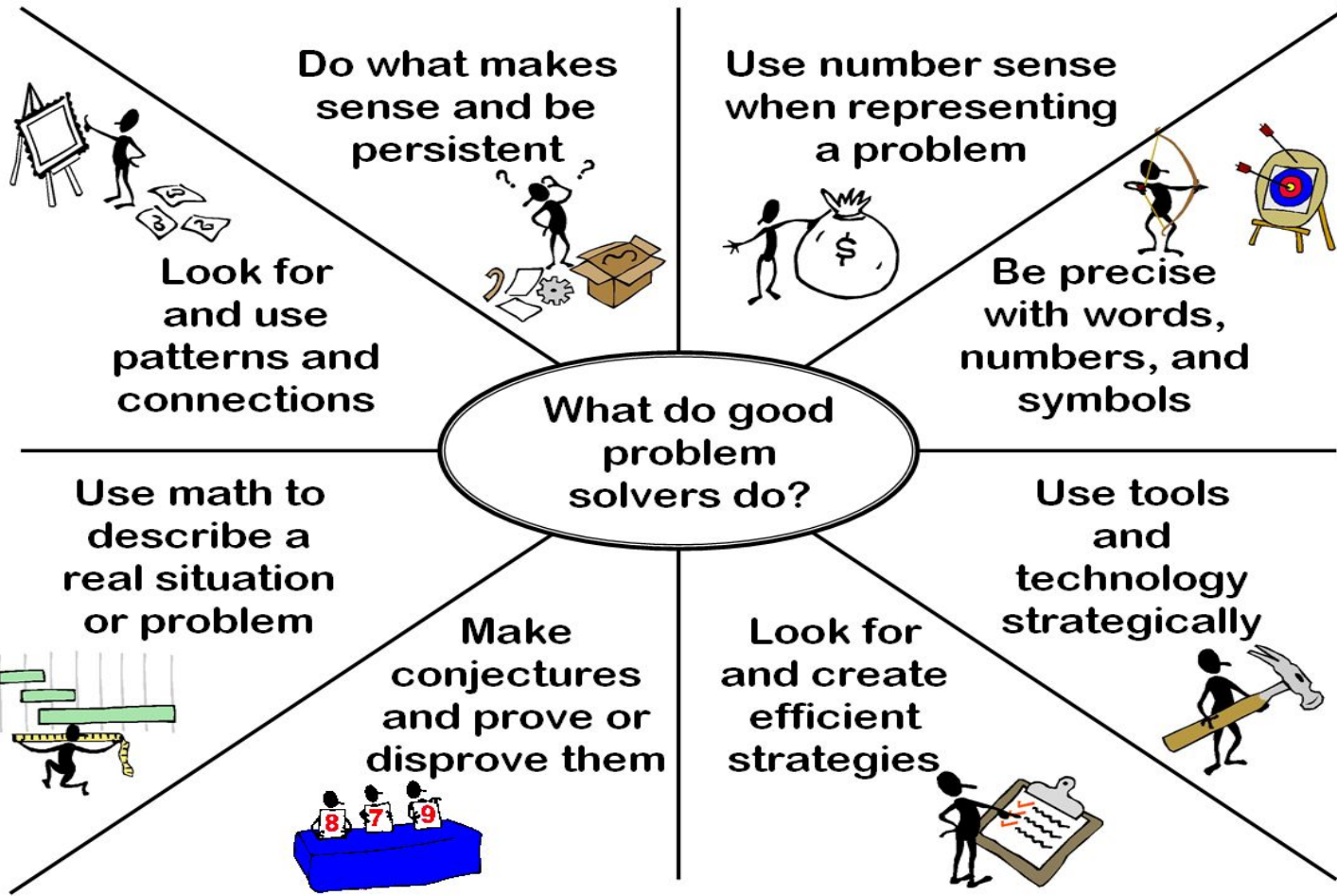
-Engage NY modules and other complementary resources

Grade 5

Scope and Sequence

Mathematics

Unit 1 Developing Fluency with Multiplication and Division				
Days	Learning Targets	Expectations	Core Resources	Complementary Resources
3-4 times per/week	I will use mental math strategies to add and subtract by...	- Participating in Grade level fluency activities - Developing long term problem solving skills - Visualizing math concepts.		- Sprints - Games - Number lines - Number bonds
1-2	I can set rules and goals with my class by....			
3	I can engage in Mathematical Practices by...	- build on others' ideas and express ideas clearly by asking thoughtful questions. - Listening attentively and respectfully to others. - Appropriately challenging others' ideas. - Effectively following set behaviors and norms for discussion.		- Talk Moves - EngageNY Mathematical Practices - Discussing Protocols i.e. Fish Bowl etc...
4-5	I can explain the relationship between digits in different places of a multi-digit number by...	- Building numbers with base-ten blocks. - Using a place-value chart. - Using a vertical number line. - Comparing the value of different digits by using phrases such as, "___ is 10 times as much as ___" and "___ is 1/10 of ___." - Writing multi-digit numbers in standard form, word form and expanded form.	Ch. 1, Lesson 1.1, 1.2, 1.3	
6-8	I can explain the relationship between digits in different decimal places by...	- Using base-ten blocks. - Explaining the pattern for how the number of zeroes in a product relates to the power of 10. - Multiplying a whole number by a power of 10. - Using a basic fact and a pattern to multiply mentally by multiples of 10, 100, and 1000.	M1L1 M1L3 M1L5 Omit lesson 1.4 and 1.5	Use M1L1 Template 2 for all place value
9-10	I can read, write and	Using a place-value chart.	M1L6	Do not use PV Chart from



Grade 3 Subtraction

Procedural Thinking--Not Mathematical Thinking

You can't take 7 from 3, so borrow
1 from the 6, and make it a 5.

Put the 1 by the 3, making it a 13.

Now subtract 7 from 13 to get 6.

Then subtract 2 from 5 to get 3.

$$\begin{array}{r} 5\cancel{6}^13 \\ - 27 \\ \hline 36 \end{array}$$

Mathematical Thinking

I took 30 away from 63 and I got 33.
Then I added 3 back on because I
took too many away. And $33 + 3 = 36$.

$$63 - 27$$

$$63 - 30 = 33$$

$$\begin{array}{r} + 3 \\ \hline 36 \end{array}$$

I added 3 to 27 to get 30, and then
I added 3 to 63 and got 66.
And $66 - 30$ is 36.

$$63 - 27$$

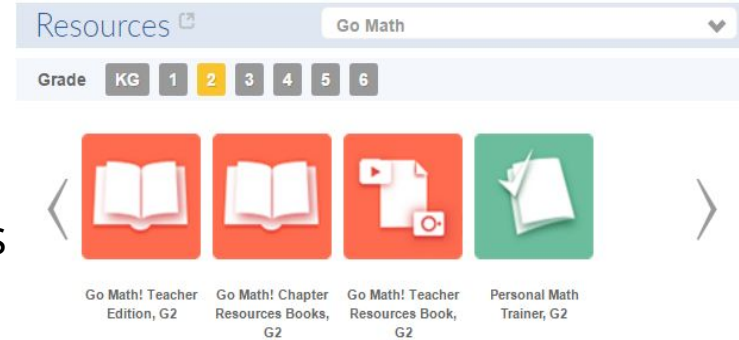
$$27 + 3 = 30$$

$$63 + 3 = 66$$

$$66 - 30 = 36$$

Go Math Program Resources

- Student workbooks embedded in the textbook
- ThinkCentral (Online Platform)
 - Access to online textbook
 - Videos
 - Interactive tasks and practice problems
- Reteach and enrichment resources
- Performance tasks and assessments
- Hands-on manipulatives
- Strategic and intensive intervention resources



School-Home Connections

- All students have an ID and password allowing them to access online Go Math resources at home.
- All materials are available in both English and Spanish
- There are opportunities to access resources for struggling students, including games, reteach exercises, and videos.



Dear Parent:

Your child's school is providing your student this user name and password to access online materials at Houghton Mifflin Harcourt's ThinkCentral web site. ThinkCentral is an all-in-one learning site that provides access to digital books, activities, readers, and more.

The login for your child, _____, is:

User name: _____

Password: _____

Follow these simple steps to access online materials and assignments:

1. Go to <http://www.k6.thinkcentral.com>.
2. Select your state, district, and school.
3. To make it easier to log in later, check **Remember My Organization** (Optional).
4. Enter your user name and password.
5. Click **Log In**.

Once logged in, the student welcome page will appear. *Things to Do* displays a list of assignments and their due dates. *My Scores* shows your child's progress in assessments and assignments. *My Library* gives you access to the online version of the text, as well as any other material the teacher has made available.



Things to Do

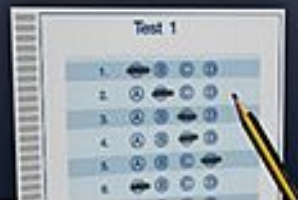
Access all assignments, their due dates, and status



My Library



My Scores

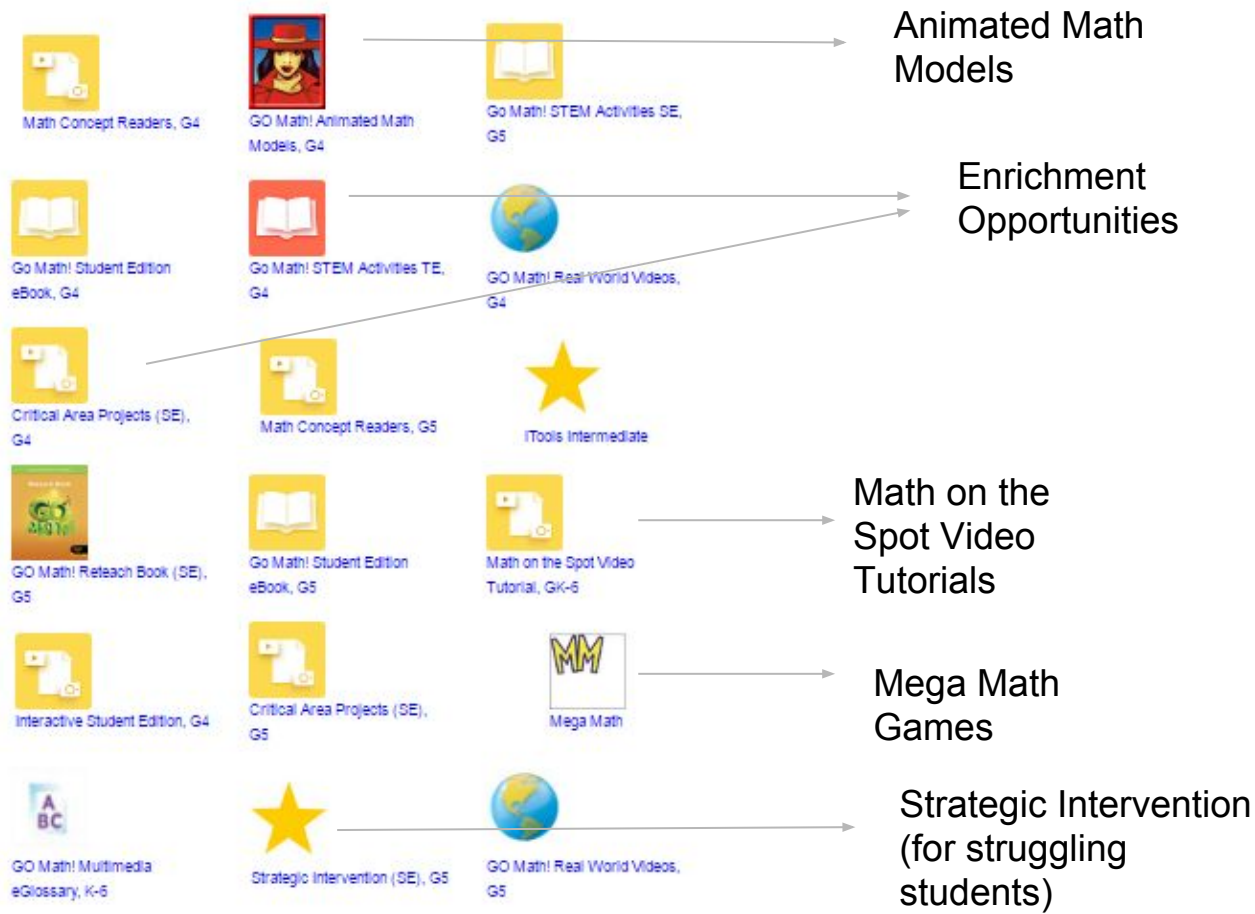




My Library

Can't find it?

Try searching the library. If you still can't find what you are looking for then ask your teacher to help.





Interactive Student Edition



GRADE
4

CHAPTER

Chapter 1 Place Value, Addition, and Subtraction to One Million

Chapter 2 Multiply by 1-Digit Numbers

Chapter 3 Multiply 2-Digit Numbers

Chapter 4 Divide by 1-Digit Numbers

Chapter 5 Factors, Multiples, and Patterns

Chapter 6 Fraction Equivalence and Comparison

Chapter 7 Add and Subtract Fractions

Chapter 8 Multiply Fractions by Whole Numbers

Chapter 9 Relate Fractions and Decimals

Chapter 10 Two-Dimensional Figures

Chapter 11 Angles

Chapter 12 Relative Sizes of Measurement Units

Chapter 13 Algebra: Perimeter and Area

LESSON

Lesson 7.1 Add or Subtract Parts of a Whole

Lesson 7.2 Write Fractions as Sums

Lesson 7.3 Add Fractions Using Models

Lesson 7.4 Subtract Fractions Using Models

Lesson 7.5 Add and Subtract Fractions

Lesson 7.6 Rename Fractions and Mixed Numbers

Lesson 7.7 Add and Subtract Mixed Numbers

Lesson 7.8 Subtraction with Renaming

Lesson 7.9 Algebra • Fractions and Properties of Addition

Lesson 7.10 Problem Solving • Multistep Fraction Problems



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1

2



Express your answer as a mixed number.

Payton has a variety of flowers in her garden.

Use the table below. The table shows the average height of the flowers.



Flower	Height
tulip	$1\frac{1}{4}$
daisy	$2\frac{1}{2}$
tiger lily	$3\frac{2}{3}$
sunflower	$7\frac{1}{4}$

Payton says her average sunflower is 7 times the height of her average tulip.

Do you agree or disagree with her statement?

Complete the explanation.



View
Example



Step by Step



Math on
the Spot



Textbook



Glossary



Toolkit



Print

Print Assignment

View Standard



Check
Answer



Next

Example of an Animated Math Model

Find 3×24 .

Activity

You can make a model and use regrouping to find the product.

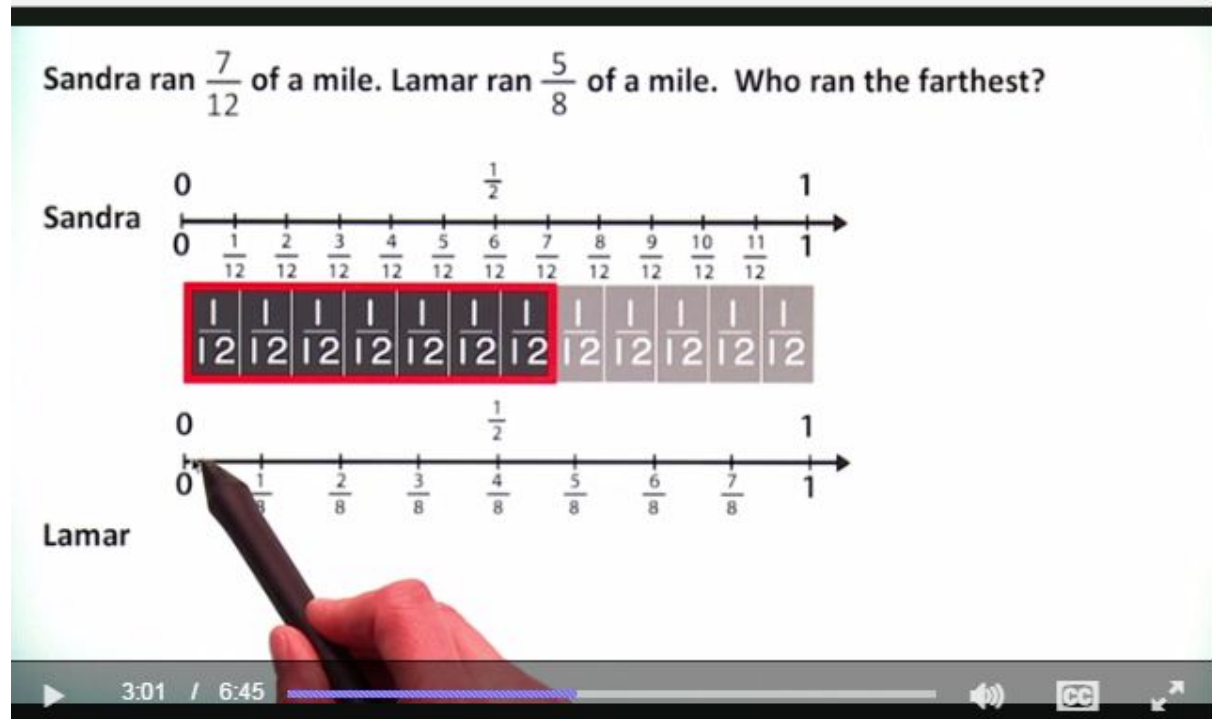
STEP 2

$$\begin{array}{r} 24 \\ \times 3 \\ \hline \end{array}$$



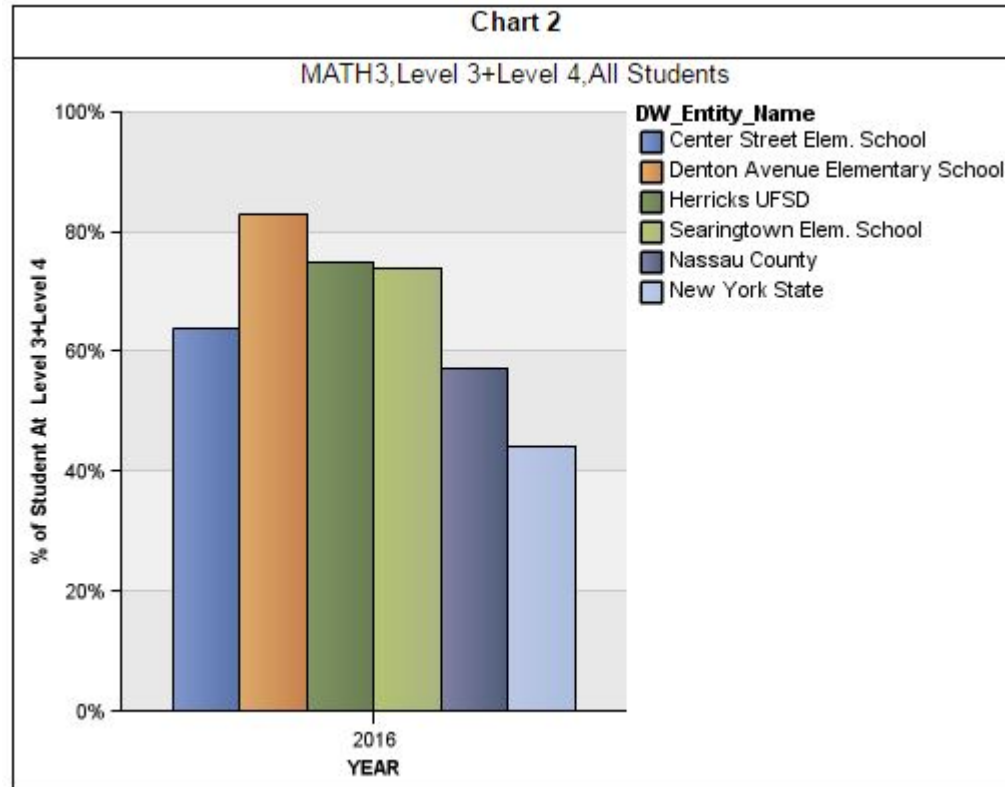
Math on the Spot Video Grade 4- Fraction comparisons

In these videos prof. Burger demonstrates problem solving step by step. This can be used by parents or students

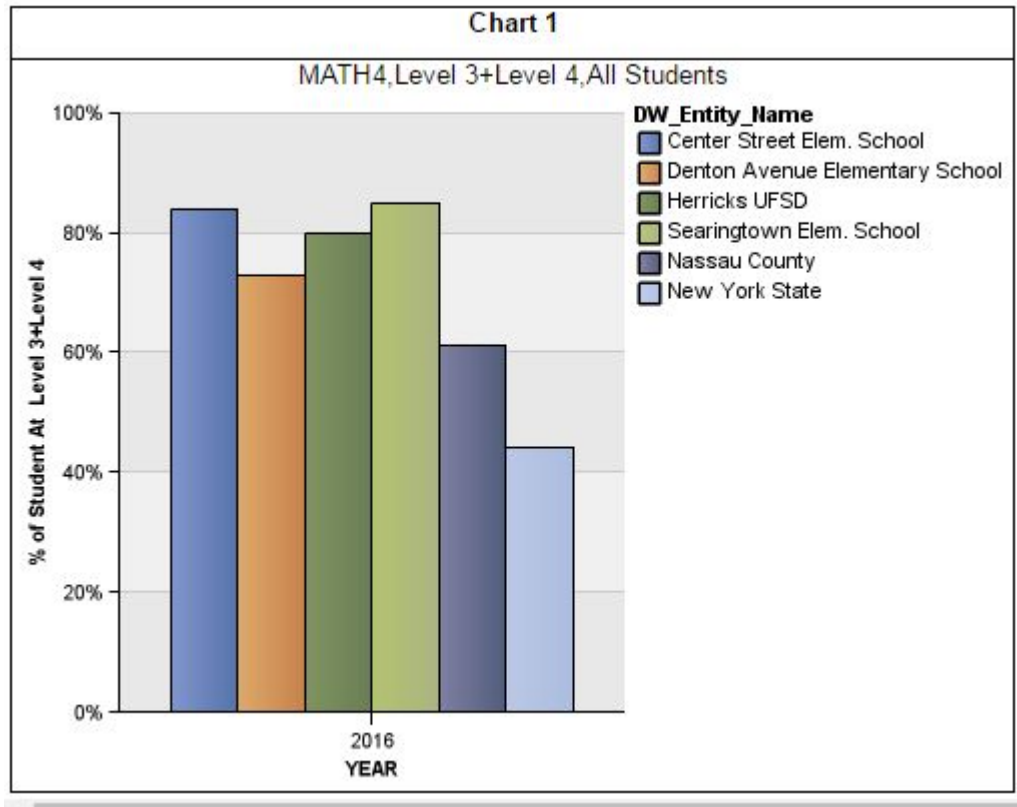


So...how are we doing?

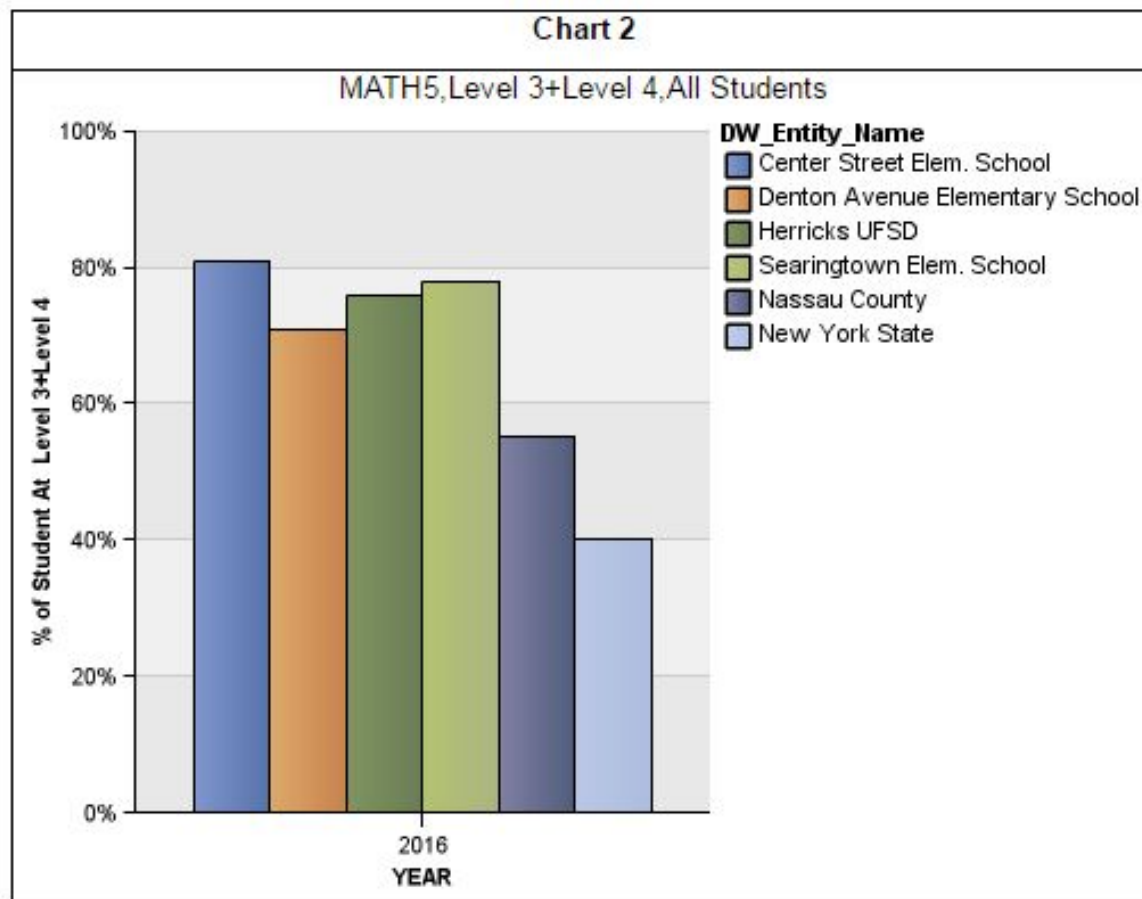
In Grade 3,
74% of
students
scored at
Levels 3 and
4



In Grade 4, 80%
of students
scored at Levels
3 and 4



In Grade 5, 76% of students scored at Levels 3 and 4.



NYS Assessment Data with Comparator schools

Year	Test	District/School Name	% Level 3 + % Level 4	# Students in Subgroup
2016	Math 3	Roslyn UFSD	67%	156
2016	Math 3	Herricks UFSD	74%	242
2016	Math 3	North Shore CSD	81%	130
2016	Math 3	Manhasset UFSD	84%	219
2016	Math 3	Jericho UFSD	85%	181
2016	Math 3	Garden City UFSD	86%	202
Total Count of District and School for Report: 6				

Year	Test	District/School Name	% Level 3 + % Level 4	# Students in Subgroup
2016	Math 4	Garden City UFSD	74%	182
2016	Math 4	Roslyn UFSD	78%	185
2016	Math 4	Herricks UFSD	80%	243
2016	Math 4	North Shore CSD	82%	116
2016	Math 4	Manhasset UFSD	85%	205
2016	Math 4	Jericho UFSD	88%	188
Total Count of District and School for Report: 6				

Year	Test	District/School Name	% Level 3 + % Level 4	# Students in Subgroup
2016	Math 5	Roslyn UFSD	72%	148
2016	Math 5	Manhasset UFSD	74%	209
2016	Math 5	Herricks UFSD	76%	256
2016	Math 5	Garden City UFSD	76%	181
2016	Math 5	Jericho UFSD	82%	185
2016	Math 5	North Shore CSD	83%	129
Total Count of District and School for Report: 6				



Thank You!

Questions?

