

DARTS

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HANDOUTS

DARTS Components & Summary Memo

Los Angeles Unified School District

Edison Middle School



TO: Math Teachers
FROM: Heather Karuza
SUBJECT: DARTS MODEL

The DARTS Model consists of 4 major components:

- **Weekly Diagnostic & Data**
 - Consists of 10 questions multiple choice questions that follow a specific progression.
 - To be given every Tuesday (unless otherwise specified).
 - The diagnostic should be given in a CST-like testing environment.
 - The data is to be submitted by the end of the day Tuesday via the Google Spreadsheet.
 - Teachers are to review the data to see which items/concepts need re-teaching or misconceptions which need to be addressed.
 - Teachers are to instruct students to chart each diagnostic score in their planner using a line-graph.
 - Diagnostics should be kept in the students' portfolios.
- **Rescue Assignment**
 - If a student misses (or does not answer) a problem on the *Diagnostic*, s/he will do ONLY the corresponding set of questions on the *Rescue Assignment*.
 - The *Rescue Assignment* is distributed after the *Diagnostic* is corrected and is due before the following Tuesday to the teacher.
 - It is the teacher's responsibility to collect, check, and review the *Rescue Assignment*.
- **Translations**
 - 10 *Translations* are to be assigned each week. The teacher may choose to split them up a few per day or all at once.
 - *Translations* are NOT to be solved; simply written in mathematical symbols.
 - There can be several correct ways to write a translation:
 - Consider arithmetic properties and discuss why some answers can be equivalent
 - Discuss the different ways to write "times" or "divided by."
 - If a particular variable is not specified, it is up to the students, and they may choose any letter. The teacher may want to discuss the most commonly used letters.
- **Story Problems**
 - *Story Problems* must be given AT LEAST once per week (ideally twice).
 - The students must follow the common graphic organizer (in the planner) every time.
 - Student work/solutions should be shared and reviewed with the class (recommended the same day or the day after), and are encouraged to be posted around the room.
 - To be graded with the common rubric (in the planner).

This model is in addition to the regular curriculum being taught (see the MIG online). All components are done on a weekly basis, and address key standards. Mastery of these components will lead to proficiency. Should you have any questions, you are welcome to contact Heather Karuza.

_____ 7. Order the following fractions from least to greatest:

$$\frac{13}{25}, \frac{1}{10}, \frac{5}{6}$$

a. $\frac{1}{10}, \frac{5}{6}, \frac{13}{25}$

b. $\frac{1}{10}, \frac{13}{25}, \frac{5}{6}$

c. $\frac{13}{25}, \frac{5}{6}, \frac{1}{10}$

d. $\frac{5}{6}, \frac{13}{25}, \frac{1}{10}$

_____ 8. Write the percent as a fraction in simplest form: 40%

a. $\frac{3}{5}$

b. $\frac{40}{100}$

c. 4

d. $\frac{2}{5}$

_____ 9. $\frac{2}{3} - \frac{2}{9} =$

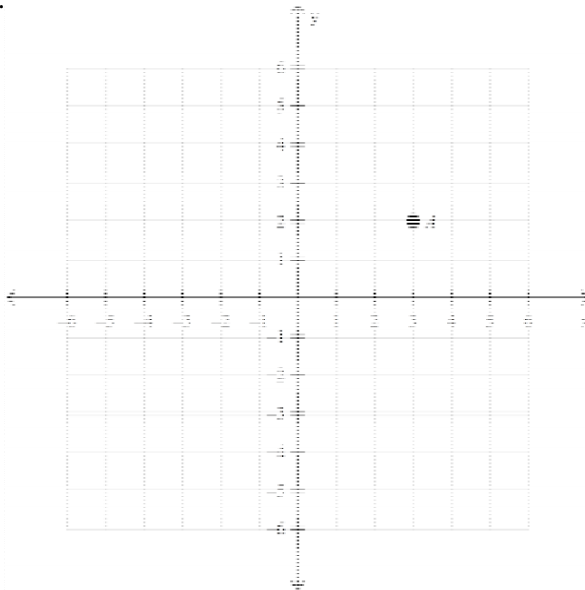
a. 1

b. $1\frac{1}{2}$

c. $\frac{1}{3}$

d. $\frac{1}{2}$

_____ 10. Name the ordered pair for the point in the graph. Then identify the quadrant in which the point lies.



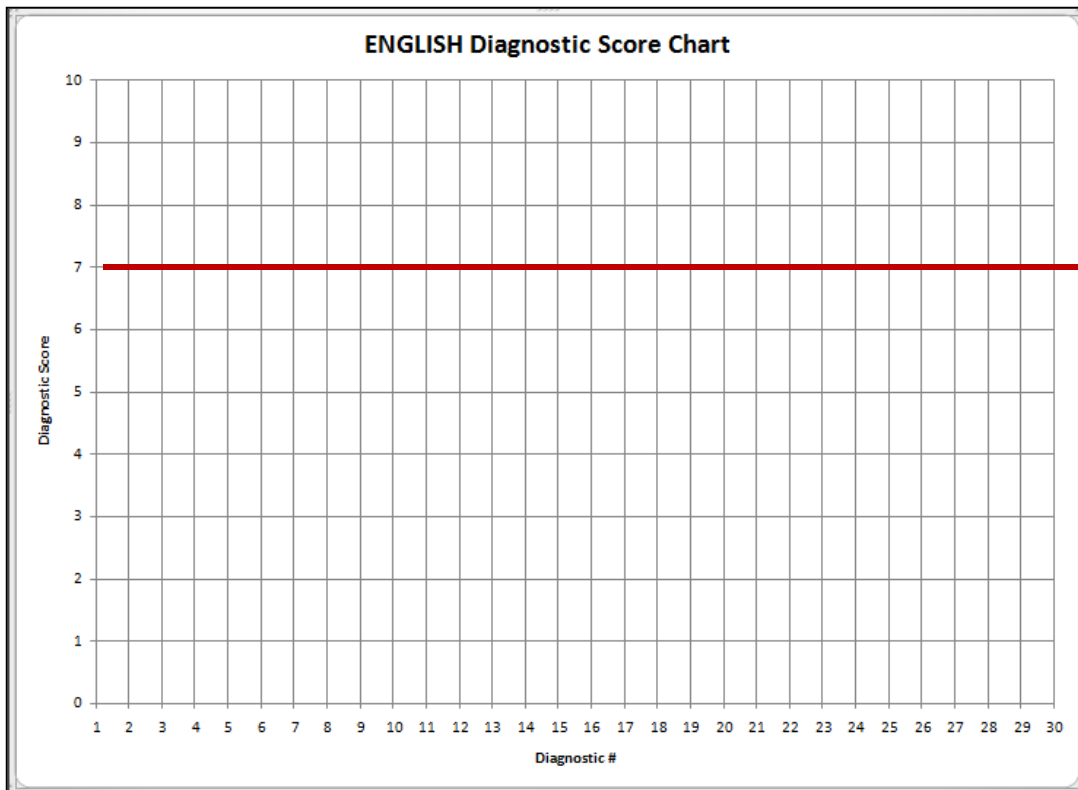
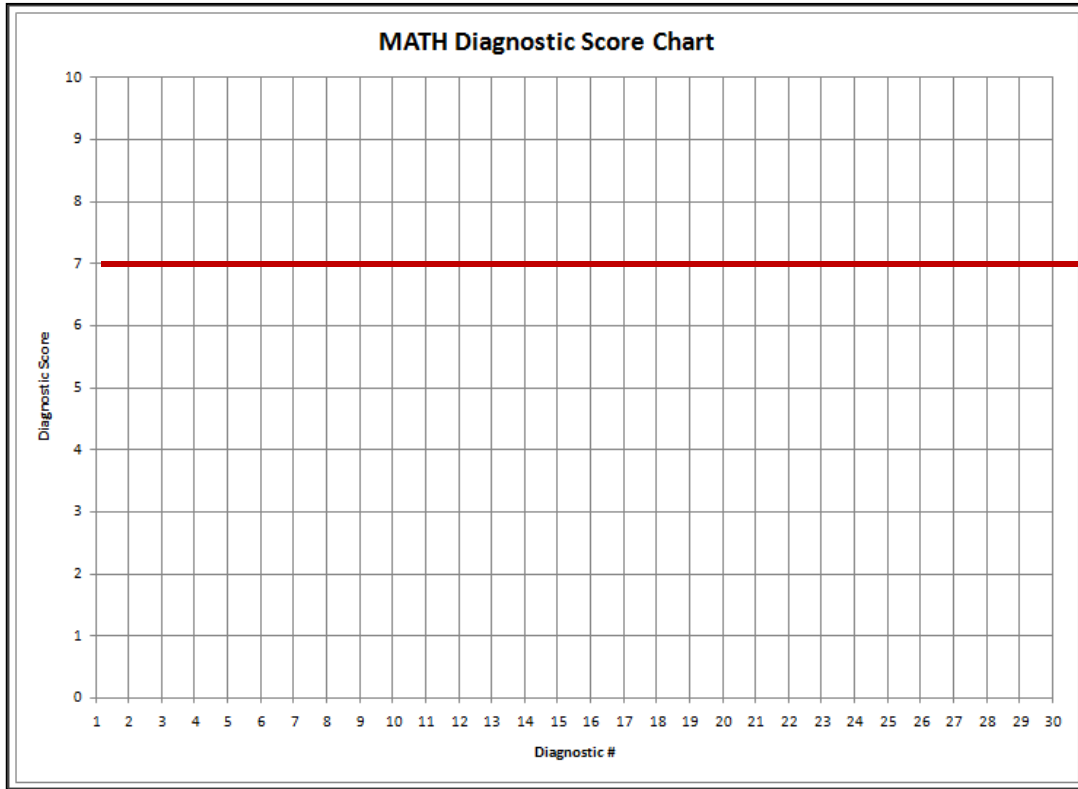
a. $A(3, 2)$; quadrant I

b. $A(2, 3)$; quadrant I

c. $A(3, 2)$; quadrant III

d. $A(-3, -2)$; quadrant I

Diagnostic Score Charts



Graph using a dot or line graph. —●—

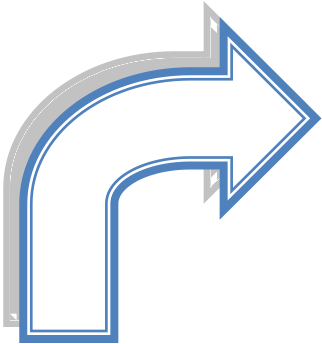
Content Grade Level: _____

Name: _____

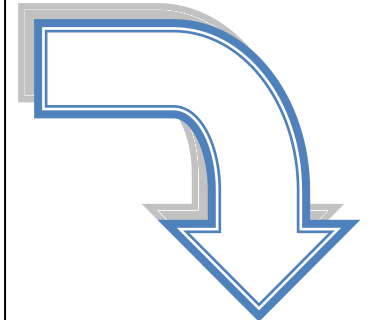
Date: _____

Diagnostic #: _____

Directions (*preferably in grade-alike content specific teams*): Use the diagnostic data to identify the lowest performing content topic. Then come up with specific steps for re-teaching: when you will address it (warm-up, review time), how (mini-lesson), which lesson will be used, etc. Be sure to notice any blatant misconceptions the students have overall.

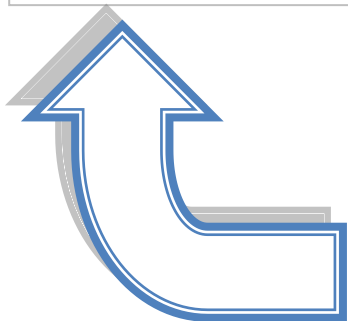


Define the Problem (*What is it we want students to achieve? Which topics did the students struggle with the most?*):

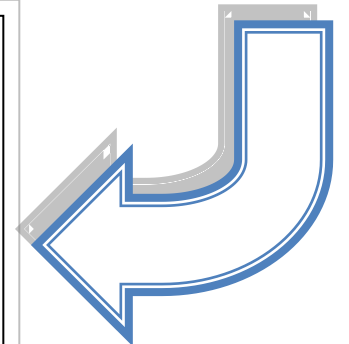


Evaluation (*After the next diagnostic, was there improvement? Evaluate and discuss the effectiveness of the implementation.*):

Problem Analysis (*What is the biggest misconception? What do students already know?*):



Implementation (*What will be done about it? What lesson will you use? When will you re-teach this concept?*):





Name: _____

Period _____ Date _____

Florence 6th Rescue Assignment #4

Due on or Before: Tuesday, November 1, 2011

- Translate the following:
 - five more than a number
 - ten more than a number
 - seven more than a number
 - one more than a number
- The following fractions are between which two integers?
 - $\frac{1}{2}$
 - $\frac{3}{4}$
 - $\frac{5}{6}$
 - $\frac{4}{5}$
- Put the following fractions in order from least to greatest:
 - $\frac{4}{15}, \frac{1}{2}, \frac{9}{10}$
 - $\frac{1}{3}, \frac{5}{9}, \frac{13}{12}$
 - $\frac{2}{3}, \frac{1}{10}, \frac{1}{5}$
 - $\frac{9}{10}, \frac{11}{12}, \frac{6}{7}$
- List the first 5 multiples for each number:
 - 6
 - 20
 - 2
 - 14
- Write the following fractions in simplest form:
 - $\frac{16}{64}$
 - $\frac{36}{81}$
 - $\frac{12}{45}$
 - $\frac{15}{60}$

Name: _____

Period _____ Date _____

6. Evaluate using the correct Order of Operations:

1. $15 - 3 \cdot 2^2$
2. $12 \div 2^2$
3. $20 \div 2^2 - 1$
4. $\frac{2 \cdot 3^2}{3}$

7. Put the following fractions in order from least to greatest:

1. $\frac{11}{20}, \frac{4}{15}, \frac{3}{10}$
2. $\frac{2}{5}, \frac{1}{4}, \frac{8}{9}$
3. $\frac{1}{5}, \frac{1}{10}, \frac{1}{8}$
4. $\frac{9}{10}, \frac{5}{12}, \frac{5}{7}$

8. Write the percent as a fraction in simplest form.

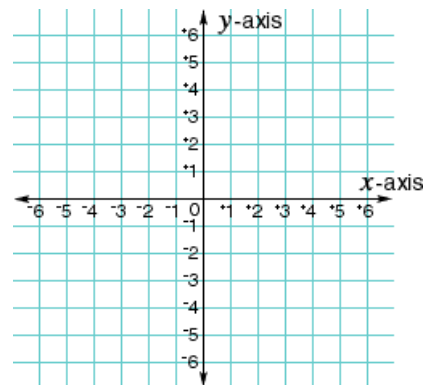
1. 50%
2. 80%
3. 75%
4. 33%

9. Find the difference:

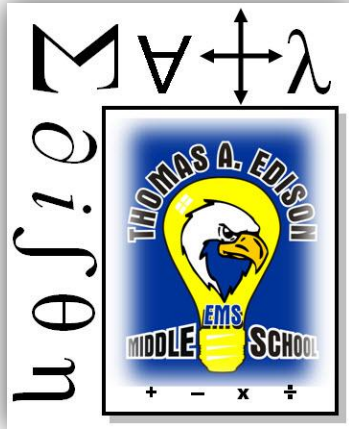
1. $\frac{1}{2} - \frac{3}{8} =$
2. $\frac{6}{7} - \frac{3}{4} =$
3. $\frac{3}{8} - \frac{1}{9} =$
4. $\frac{3}{10} - \frac{1}{4} =$

10. Graph the following points on the coordinate plane.

1. A (-2, -4)
2. B (4, 2)
3. C (-4, 2)
4. D (2, -4)



Diagnostic & Rescue Flow Chart



Provide access to Google Docs by helping teachers create a Google Account

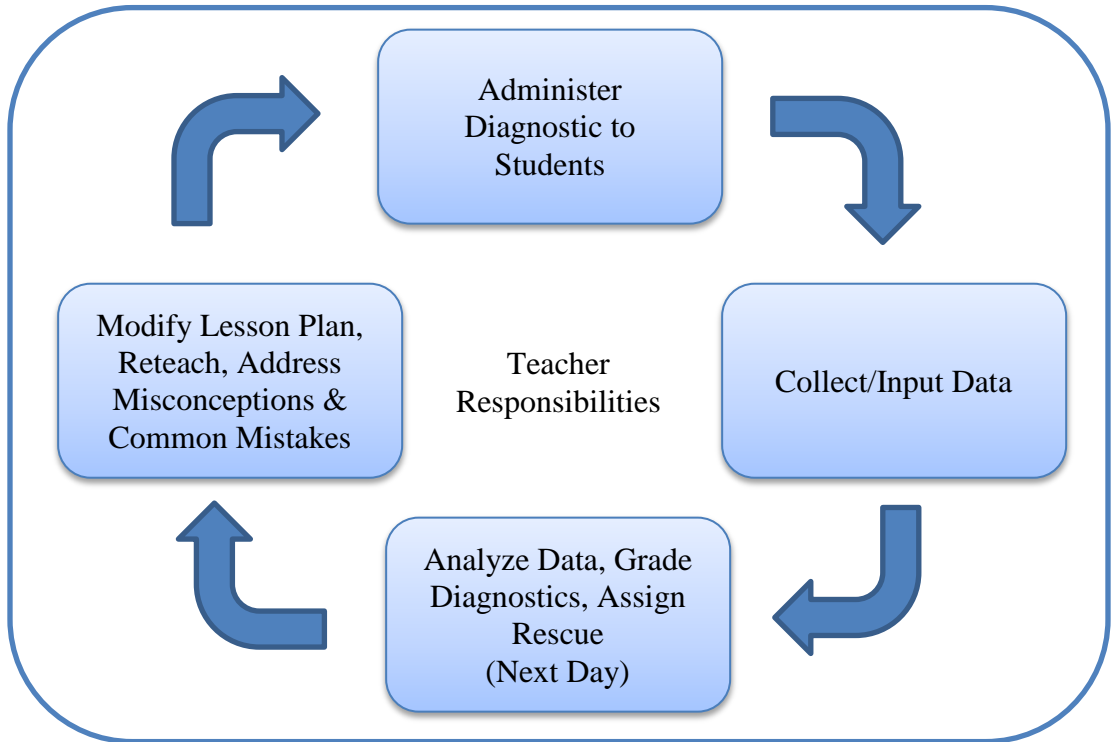


Set up Master Spreadsheet (Annually)



Create Diagnostics & Rescue Assignments (Weekly)

Make Copies & Distribute
Make Diagnostic Tally Google Spreadsheet



If Diagnostic questions reach 70% proficiency, they are replaced with the next topic/skill in the sequence. If not, then the question is modified and repeated on the next Diagnostic to re-test. This informs teachers whether or not re-teaching is working.



Sample Translations

1. a number is at least ninety
2. the speed limit is seventy mph
3. the absolute value of the sum of twice a number and five is eight
4. the absolute value of three times a number, minus four is negative one
5. a solution set of one and negative four
6. the maximum a score can be is twenty
7. a number
8. an even number
9. an odd number
10. an even number greater than one hundred
11. the sum of two consecutive integers
12. the sum of three consecutive integers is eighty-one
13. the perimeter of a rectangle with length l and width w
14. the perimeter of a rectangle with sides x and three less than x
15. the perimeter of a rectangle where the length is one less than twice the width
16. the sum of three consecutive odd integers
17. fifteen nickels and quarters total \$2.75
18. sixteen cows and chickens have forty-two legs
19. the sum of x and four times y is equal to twenty
20. two thirds of a number is negative three fifths
21. the difference of m and thirteen is identical to the square of m
22. the product of a and b is more than three times the sum of a and eight
23. forty-one increased by twice a number is the same as three times the sum of that number and seven
24. the distance between a number and its opposite
25. the sum of a number and half its additive inverse

Sample Translation Key

1. a number is at least ninety $x \geq 90$
2. the speed limit is seventy mph $s \leq 70$
3. the absolute value of the sum of twice a number and five is eight $|2x + 5| = 8$
4. the absolute value of three times a number, minus four is negative one
 $|3x| - 4 = -1$
5. a solution set of one and negative four $\{1, -4\}$
6. the maximum a score can be is twenty $s \leq 20$
7. a number x
8. an even number $2x$
9. an odd number $2x + 1$ or $2x - 1$
10. an even number greater than one hundred $2x + 100$
11. the sum of two consecutive integers $x + (x + 1)$
12. the sum of three consecutive integers is eighty-one
 $x + (x + 1) + (x + 2) = 81$
13. the perimeter of a rectangle with length l and width w $P = 2l + 2w$
14. the perimeter of a rectangle with sides x and three less than x
 $P = 2(x) + 2(x - 3)$
15. the perimeter of a rectangle where the length is one less than twice the width
 $2(w) + 2(2w - 1)$
16. the sum of three consecutive odd integers $(2x - 1) + (2x + 1) + (2x + 3)$
17. fifteen nickels and quarters total \$2.75 $\begin{cases} n + q = 15 \\ 0.05n + 0.25q = 2.75 \end{cases}$
18. sixteen cows and chickens have forty-two legs $\begin{cases} x + y = 16 \\ 2x + 4y = 42 \end{cases}$
19. the sum of x and four times y is equal to twenty $x + 4y = 20$
20. two thirds of a number is negative three fifths $\frac{2}{3}x = -\frac{3}{5}$
21. the difference of m and thirteen is identical to the square of m $m - 13 = m^2$
22. the product of a and b is more than three times the sum of a and eight
 $ab > 3(a + 8)$
23. forty-one increased by twice a number is the same as three times the sum of that number and seven $41 + 2x = 3(x + 7)$
24. the distance between a number and its opposite $|x - (-x)|$
25. the sum of a number and half its additive inverse $x + \frac{1}{2}(-x)$

Sample Story Problems

#1 A 120 ft. piece of wood is cut into three pieces. The second piece is twice as long as the first, and the third piece is three times as long as the first piece. How long is the longest piece?

#2 For many years, the tallest building in Los Angeles was City Hall. As “earthquake-proof” construction improved, however, building heights soared. In 2000, the tallest building was the 1,017-ft. Library Tower. It is 565 ft. taller than City Hall.

- How tall was the tallest building in LA before “earthquake-proof” construction?
- The Library Tower in LA is shorter than the Sears Tower in Chicago by 437 ft. How tall is the Sears Tower?

#3 Greenwich Mean Time (GMT) is the time at the Royal Observatory in Greenwich, England. A location that is $+n$ hours from GMT is n hours ahead of GMT, and a location that is $-n$ hours from GMT is n hours behind GMT. Costa Rica is -6 hours from GMT, and India is $+5.5$ hours from GMT. If it is 7:45am in India, what time is it in Costa Rica?

#4 Jose and his younger cousin Laura decide to share the cost of buying a new phone for their grandmother that costs \$240. If Jose agrees to pay \$60 more than Laura, what is the amount that each will pay?

#5 For what values of a is the opposite of a ...

- greater than a ?
- less than a ?
- equal to a ?

Sample Story Problems **KEY**

#1 A 120 ft. piece of wood is cut into three pieces. The second piece is twice as long as the first, and the third piece is three times as long as the first piece. How long is the longest piece? **60 feet**

#2 For many years, the tallest building in Los Angeles was City Hall. As “earthquake-proof” construction improved, however, building heights soared. In 2000, the tallest building was the 1,017-ft. Library Tower. It is 565 ft. taller than City Hall.

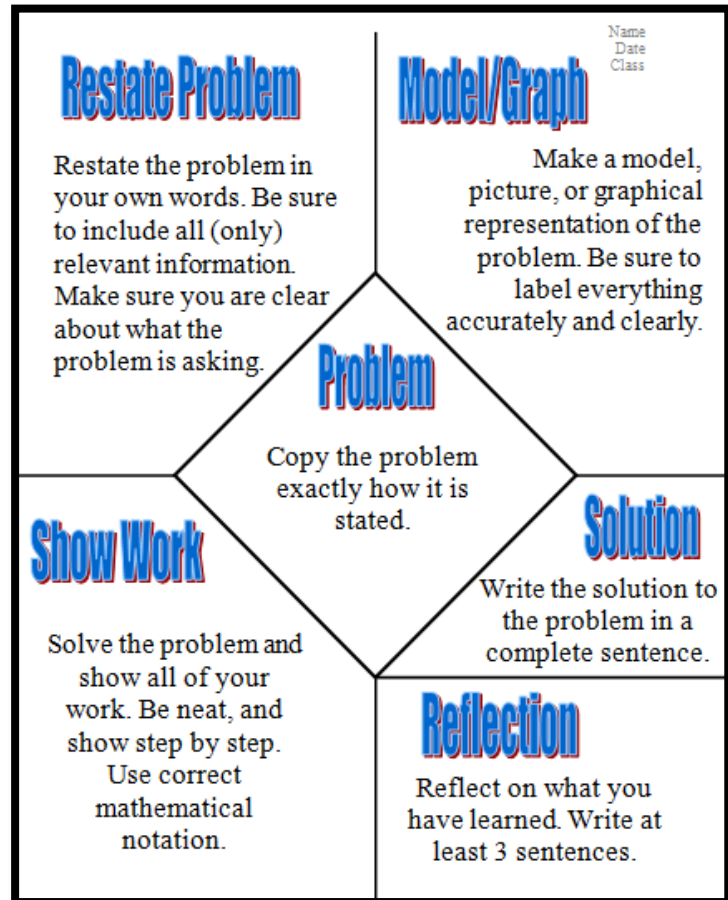
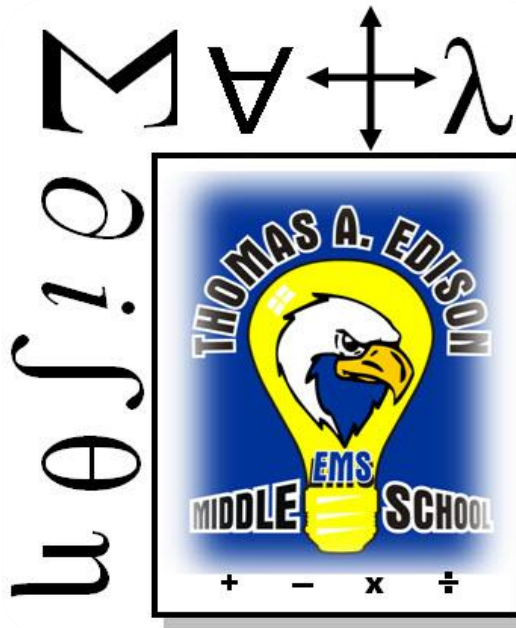
- How tall was the tallest building in LA before “earthquake-proof” construction? **452 ft.**
- The Library Tower in LA is shorter than the Sears Tower in Chicago by 437 ft. How tall is the Sears Tower? **1454 ft.**

#3 Greenwich Mean Time (GMT) is the time at the Royal Observatory in Greenwich, England. A location that is $+n$ hours from GMT is n hours ahead of GMT, and a location that is $-n$ hours from GMT is n hours behind GMT. Costa Rica is -6 hours from GMT, and India is $+5.5$ hours from GMT. If it is 7:45am in India, what time is it in Costa Rica? **8:15pm**

#4 Jose and his younger cousin Laura decide to share the cost of buying a new phone for their grandmother that costs \$240. If Jose agrees to pay \$60 more than Laura, what is the amount that each will pay? **Jose: \$150, Laura: \$90**

#5 For what values of a is the opposite of a

- greater than a ? **$a < 0$ or a is negative**
- less than a ? **$a > 0$ or a is positive**
- equal to a ? **$a = 0$**



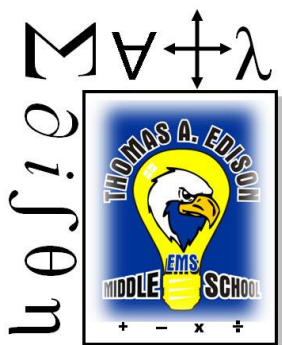
Name: _____
Period: _____

Story Problem Rubric

Score Category	4	3	2	1
Restate Problem	The problem is restated correctly using complete sentences, in the student's own words. All relevant information is included.	The problem is restated correctly using mostly complete sentences, in the student's own words. Most relevant information is included.	The problem is restated (may not be using complete sentences) in the student's own words. Some relevant information is included.	The problem is simply copied. OR The problem is restated, but not correctly. The problem is not restated at all. (0)
Make a Model	A model (picture, table, number line, graph, etc.) is used to correctly demonstrate the problem. The model is properly labeled and easy to understand.	A model (picture, table, number line, graph, etc.) is used to demonstrate the problem (few errors). The model may not be properly labeled, but is easy to understand.	A model (picture, table, number line, graph, etc.) is somewhat used to demonstrate the problem. The model is not properly labeled, nor is it easy to understand.	There is an attempt to make a model to demonstrate the problem, but it is incorrect. The model is not properly labeled. No attempt at a model (0).
Show Work	All work is shown neatly and correctly. Thought process is easy to follow (explained). Proper labels and mathematical notation are used.	Most work is shown neatly and most is correct. Thought process is ok. Some proper labels and mathematical notation are used.	Some work is shown (may not be neat) and some is correct. Thought process is not clear. Proper labels and mathematical notation are not used.	Little or no (0) work is shown. Thought process is not clear and no labels are used. Incorrect use of proper mathematical notation.
Answer	Answer(s) stated in a complete sentence with proper units and labeling. All answers are mathematically correct.	Answer(s) stated in a complete sentence (may not have proper units or labeling). Most answers are mathematically correct.	Answer(s) not stated in complete sentences, but are correct (may not have proper units or labeling). Answers are mostly incorrect.	Answer(s) not stated in complete sentences AND lack proper units or labeling. Answer(s) completely incorrect or absent (0).
Overall Presentation & Reflection	Story problem is neatly written or typed. Easy to read and follow. Reflection has at least 3 sentences	It is written, but not very neatly. Some work is hard to understand. Reflection has only 2 sentences.	It is sloppily written without much care for neatness. Some work is shown but it is sloppy.	Work is not neat at all. Work is too messy to read and/or follow. Reflection is 1 sentence. No reflection (0).

Story Problem # _____ Total Score: _____

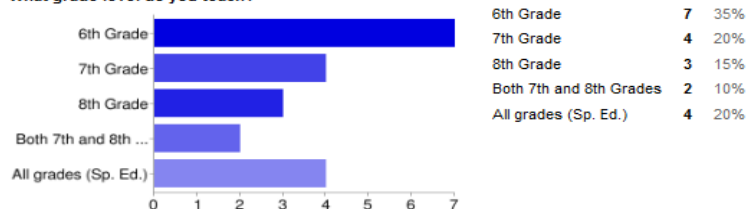
DARTS Teacher Survey Results



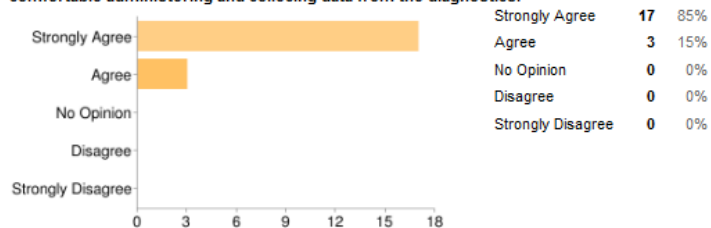
20 [responses](#)

Summary [See complete responses](#)

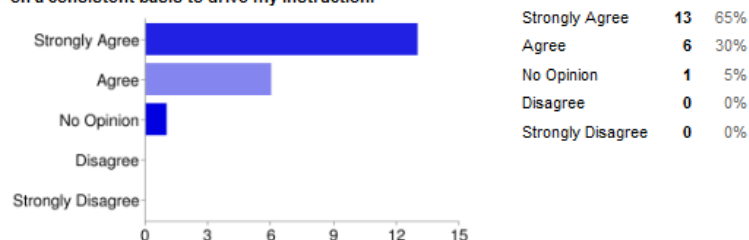
What grade level do you teach?



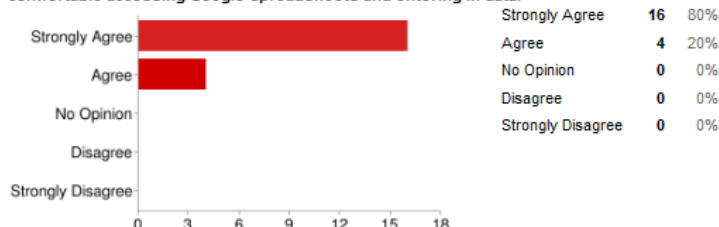
Please state how much you agree or disagree with the following statements. - 1. I am comfortable administering and collecting data from the diagnostics.



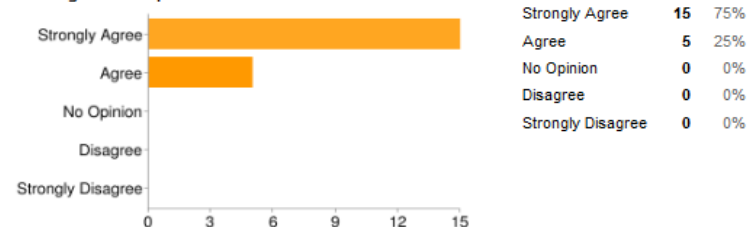
Please state how much you agree or disagree with the following statements. - 6. I use data on a consistent basis to drive my instruction.



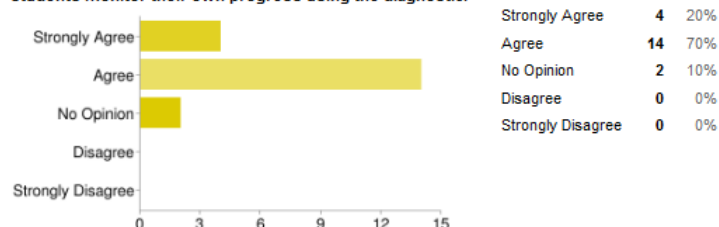
Please state how much you agree or disagree with the following statements. - 2. I am comfortable accessing Google Spreadsheets and entering in data.



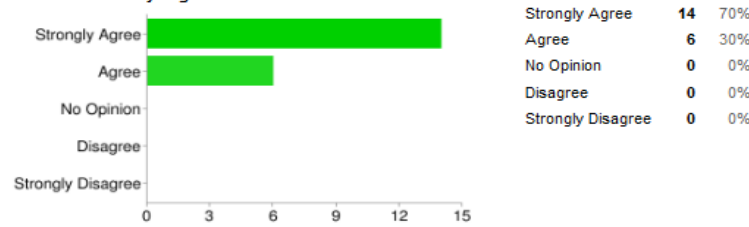
Please state how much you agree or disagree with the following statements. - 7. Data from the diagnostic helps me know what I need to re-teach.



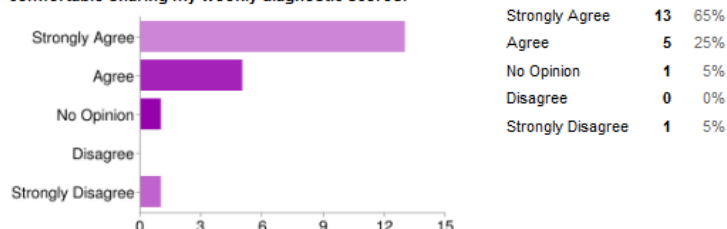
Please state how much you agree or disagree with the following statements. - 3. My students monitor their own progress using the diagnostic.



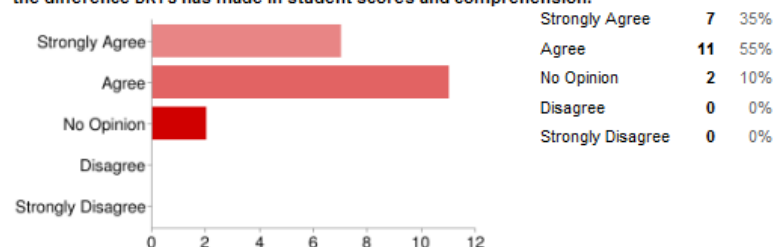
Please state how much you agree or disagree with the following statements. - 4. I am comfortable analyzing data.



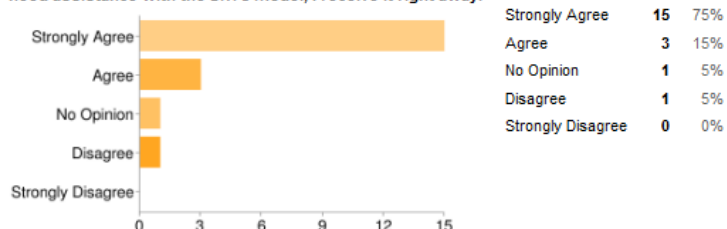
Please state how much you agree or disagree with the following statements. - 5. I am comfortable sharing my weekly diagnostic scores.



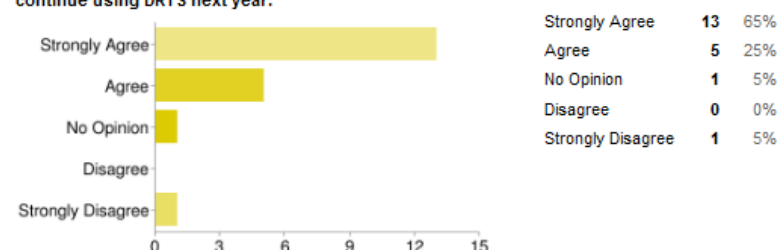
Please state how much you agree or disagree with the following statements. - 14. I can see the difference DRTS has made in student scores and comprehension.



Please state how much you agree or disagree with the following statements. - 13. When I need assistance with the DRTS model, I receive it right away.



Please state how much you agree or disagree with the following statements. - 15. I want to continue using DRTS next year.



Teacher: _____


Observer: _____

Course: _____ Period: _____

Date: _____

DARTS Implementation Observed

Diagnostic	Data	Rescue Assignment	Translations	Story Problem
<input type="checkbox"/> CST-like environment <input type="checkbox"/> Students show work <input type="checkbox"/> All students using pencil <input type="checkbox"/> Teacher monitors test <input type="checkbox"/> Data collected accurately <input type="checkbox"/> Answers not given until Wed. Data Collection Method: _____ _____	<input type="checkbox"/> Data is shared with the students (projected) <input type="checkbox"/> Students analyze class data <input type="checkbox"/> Diagnostic scores charted in student planner	<input type="checkbox"/> Only assigned problems missed on diagnostic <input type="checkbox"/> Reviewed some problems <input type="checkbox"/> Gave credit/collected for previous week	<input type="checkbox"/> Correct translation #'s <input type="checkbox"/> Students share answers with class <input type="checkbox"/> Answers corrected <input type="checkbox"/> Multiple representations shown <input type="checkbox"/> Mathematical discussion <input type="checkbox"/> Correct vocabulary used <input type="checkbox"/> Correct vocabulary enforced <input type="checkbox"/> Teachable moments used	<input type="checkbox"/> Used Graphic Organizer <input type="checkbox"/> Students shared answers with class <input type="checkbox"/> Reviewed different possible answers <input type="checkbox"/> Teachable moments used <input type="checkbox"/> All parts of graphic organizer used <input type="checkbox"/> Assessed with rubric
Notes:	Notes:	Notes:	Notes:	Notes:




DARTS

Mathematics Model

Heather Karuza, Administrator of Curriculum & Instruction
Thomas Alva Edison Middle School – LAUSD, ESC South

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Edison Middle School Demographics

Subgroup	Percentage	Proficient in Math 2009	Met AYP Growth Target
Whole School	100%	11.8%	NO
Socioeconomically Disadvantaged	99%	11.9%	NO
Hispanic/Latino	97%	12.1%	NO
African American	3%	2.3%	N/A
ELL's	40%	9.3%	NO
Students with Disabilities	11%	2.1%	NO

1,871 Students in 08-09
3 Tracks

Source: CDE

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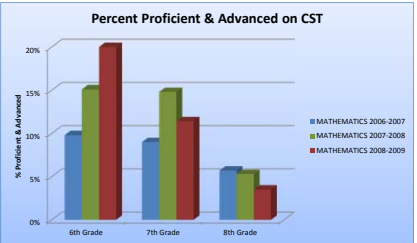


Edison Middle School Mathematics

The Need:

7th and 8th Grade Math Scores were the only levels to decline in 08-09

8th Grade Math has been on a negative trend for the past three years.



Grade	MATHEMATICS 2006-2007	MATHEMATICS 2007-2008	MATHEMATICS 2008-2009
6th Grade	~10%	~15%	~18%
7th Grade	~10%	~15%	~12%
8th Grade	~6%	~6%	~4%

Vision: To have 8th Graders prepared for Algebra using early intervention

Source: CDE & MyData

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Diagnostic

- Goal: 70% or higher
- Multiple choice answers target common student errors
- Dynamic



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Diagnostic Data

- Data gathered instantly (4 corners / GradeCam)
- Easy to use
- Internet based – easy to access

TEACHER'S		Diagnostic #2: 9/26/10		Only enter data in the TEACH area!										Period 3	
Question #	Content Area	Standard #	Period 1/2					% Students Correct	Period 3					% Students Correct	
			Number of students who answered...						Number of students who answered...						
			a	b	c	d	Total	a	b	c	d	Total			
1	Evaluate	7AF1.2	1	2	3	0	21	76.19%	1	1	0	0	21	71.43%	
2	Distributive Property	7AF1.3	1	1	1	0	21	38.10%	1	1	1	0	21	80.95%	
3	Solve 1-Step Eqn (mag)	7AF4.1	0	10	3	0	21	47.62%	0	10	3	2	21	76.19%	
4	Solve 2-Step Eqn	7AF4.1	0	1	1	0	21	80.95%	0	2	1	0	21	80.48%	
5	Add Fractions (unlike)	7NS2.2	1	1	0	0	21	71.43%	1	1	0	0	21	90.48%	
6	Opposite	7NS2.2	1	1	1	0	21	33.33%	7	4	1	0	21	42.86%	
7	Reciprocal	7NS2.2	1	1	1	0	21	33.33%	6	10	0	0	21	57.14%	
8	Add Integers	7NS1.2	1	1	0	0	21	61.90%	1	0	0	0	21	85.71%	
9	Subtract Integers	7NS1.2	3	1	1	0	21	76.19%	4	0	0	0	21	80.95%	
10	Translation	7AF1.2	3	1	1	0	21	71.43%	1	1	1	0	21	80.48%	
Overall Percent Correct			58.00%					76.67%							
Total Students		87													



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Diagnostic Data

- Teachers and students get instant feedback
- Find common errors
- Instruction can be targeted for each class

Question #	Content Area	Standard	Period 1/2: Percent of students who answered...					% Students Correct	Period 3: Percent of students who answered...					% Students Correct
			a	b	c	d	Best Distract		a	b	c	d	Best Distract	
1	Evaluate	7AF1.2	21%	14%	0%	0%	76.19%	21%	4%	24%	0%	71.43%		
2	Distributive Property	7AF1.3	14%	8%	20%	4%	38.10%	14%	14%	20%	0%	80.95%		
3	Solve 1-Step Eqn (mag)	7AF4.1	38%	4%	14%	0%	47.62%	0%	30%	14%	10%	76.19%		
4	Solve 2-Step Eqn	7AF4.1	0%	19%	11%	0%	80.95%	0%	10%	10%	0%	80.48%		
5	Add Fractions (unlike)	7NS2.2	19%	24%	0%	0%	71.43%	19%	24%	0%	0%	80.48%		
6	Opposite	7NS2.2	23%	10%	5%	0%	33.33%	33%	10%	5%	0%	42.86%		
7	Reciprocal	7NS2.2	33%	10%	33%	0%	33.33%	29%	21%	14%	0%	57.14%		
8	Add Integers	7NS1.2	19%	0%	29%	0%	61.90%	19%	0%	0%	14%	85.71%		
9	Subtract Integers	7NS1.2	14%	0%	1%	0%	76.19%	17%	0%	0%	0%	80.95%		
10	Translation	7AF1.2	14%	5%	1%	0%	71.43%	5%	5%	10%	0%	80.48%		
Overall Percent Correct			58.00%					76.67%						



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Diagnostic Data

- Classes are graphed for instant comparison
- Competition → Effort & Motivation

Category	Avg % Correct
Period 172	~55
Period 3	~65
Period 86	~65
Period 78	~68
Teacher Average	~65

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Diagnostic Data

- Collected in real time using Google Spreadsheets
- Shows best distractor
- Whole grade analysis down to individual classes

Item # (10/20/10)	Content Area	Standard	Total # of students who answered...				% Correct	TEACHER 1 # of students who answered...				TEACHER 2 # of students who answered...				TEACHER 3 # of students who answered...				TEACHER 4 # of students who answered...				TEACHER 5 # of students who answered...			
			Item Distractor																								
			A	B	C	D		A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D				
1	Evaluate	7AF1.2	12	11	7	7	49.3%	10	11	7	7	12	12	7	7	10	10	7	7	12	12	7					
2	Distributive Property	7AF1.3	20	15	20	20	74.6%	17	15	17	17	15	17	15	17	17	15	17	15	17	15	17					
3	Order of Operations	7AF1.4	15	12	12	10	66.7%	11	10	10	10	12	10	10	12	10	10	12	10	10	12	10					
4	Slope of a Line	7AF4.1	10	10	10	10	74.6%	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10					
5	Add Fractions (similar)	7NS2.2	10	10	10	10	79.4%	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10					
6	Opposite	7NG1.2	10	10	10	10	62.9%	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10					
7	Reciprocal	7NG1.3	10	10	10	10	62.9%	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10					
8	Add Integers	7NS1.2	10	10	10	10	68.5%	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10					
9	Subtract Integers	7NS1.2	10	10	10	10	73.1%	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10					
10	Transposition	7AF1.2	10	10	10	10	63.4%	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10					
Total # of Questions			215				68.20%	64				42				61				21				27			

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Diagnostic Data

- Instant information
- Analyzed that day and next
- Used to make next week's

Item # (10/20/10)	Content Area	Standard & Item #	Total # of students who answered...				% Correct	TEACHER 1 # of students who answered...				TEACHER 2 # of students who answered...				TEACHER 3 # of students who answered...				TEACHER 4 # of students who answered...				TEACHER 5 # of students who answered...			
			Item Distractor																								
			A	B	C	D		A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D				
1	Evaluate	7AF1.2	12	11	7	7	49.3%	10	11	7	7	12	12	7	7	10	10	7	7	12	12	7					
2	Distributive Property	7AF1.3	20	15	20	20	74.6%	17	15	17	17	15	17	15	17	17	15	17	15	17	15	17					
3	Order of Operations	7AF1.4	15	12	12	10	66.7%	11	10	10	10	12	10	10	12	10	10	12	10	10	12	10					
4	Slope of a Line	7AF4.1	10	10	10	10	74.6%	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10					
5	Add Fractions (similar)	7NS2.2	10	10	10	10	79.4%	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10					
6	Opposite	7NG1.2	10	10	10	10	62.9%	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10					
7	Reciprocal	7NG1.3	10	10	10	10	62.9%	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10					
8	Add Integers	7NS1.2	10	10	10	10	68.5%	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10					
9	Subtract Integers	7NS1.2	10	10	10	10	73.1%	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10					
10	Transposition	7AF1.2	10	10	10	10	63.4%	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10					
Overall Percent Correct			68.20%				70%	58%				71%				40%				70%							

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Diagnostic Data

- Teacher results are graphed for quick monitoring & comparison
- Classes compete
- Teachers can collaborate with each other to share best practices

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Diagnostic Data

- Students chart their progress
- Celebrate successes
- Parent involvement

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Rescue Assignment


- Targeted Intervention for all students
- Correspond to diagnostic questions
- Based on diagnostic questions they missed
- Motivation
- Information for students – “Now I know what I don’t know!”

(Handout)

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Data Driven Instruction: Discussion

- How is this useful for teachers?
- How is this useful for students?
- What elements make it so effective?
- How does this model address gaps, interdependent collaboration, and open doors for students?



Translations


- 10 per week
- Translate English into mathematics (symbols)
- Helps with vocabulary and word problems
- Builds conceptual understanding

Algebra Translations, Set 2
KEY

1. the reciprocal of a number $\frac{1}{x}$	25. nine less than the quotient of negative 3 and three as it relates to $9 - 12$
2. double a number $2x$	26. an ordered pair (x, y)
3. the opposite of a number $-x$	27. the point three, negative four $(3, -4)$
4. the opposite reciprocal of a number $-\frac{1}{x}$	28. the origin $(0, 0)$
5. half a number $\frac{1}{2}x$	29. any point on the x-axis $(x, 0)$
6. two less than a number $x - 2$	30. any point on the y-axis $(0, y)$
7. two is less than the number $2 < x$	31. perimeter of a rectangle with width W and length L , $P = 2W + 2L$
8. is greater than five $x > 5$	32. the mid-point of three corners $\frac{x+y+z}{3}$
9. is greater than five $x > 5$	33. a cuboid, or a rectangular prism $V = lwh$
10. all numbers greater than or equal to zero $x \geq 0$	34. area of a circle to 25 pieces of pie, $A = \pi(10)^2$
11. the number of days in three years 3×365	35. the square of a number called (x^2)
12. the number of minutes in twenty-four hours 24×60	36. 40% amount of a dollar given 2 pennies $0.40 \times 1.00 = 0.40$
13. the number of hours in two hundred seventy minutes $\frac{270}{60}$	37. three times what is ten thirty in the morning $10 \cdot 3 = 30$; $30 - 12:00 = 1:30$ or $1:40$ PM
14. the number of seconds in a day $24 \times 60 \times 60$	38. distance between out and negative two $3 - (-2) = 5$

(Handout)

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Story Problems

- Word Problems
- At least 1 per week

Same Graphic Organizer

Algebra Story Problems, Set #5

#1 You are planning to build a walkway that surrounds a rectangular garden that is 10ft by 9ft. The width of the walkway around the garden is unknown, but it will be the same on every side.

- a) What is the perimeter of the walkway along the outer edge?
- b) What is the combined area of the garden and the walkway?
- c) Find the combined area when the width of the walkway is 4 ft.


#2 What is the volume of a cube with side length $(x + y)$?

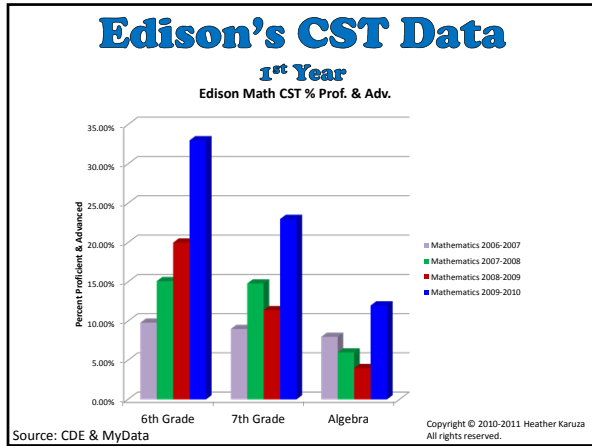
#3 The length of a rectangular rug is twice its width. The rug is centered in a rectangular room. Each edge is 3 feet from the nearest wall. What is the area of the room?

#4 You trimmed a large square picture so that you could fit it into a frame. You trimmed 3 inches from the length and 2 inches from the width. The area of the resulting picture is 56 square inches. What was the perimeter of the original large square picture?

(Handout)

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Edison's CST Data

1st Year

- Edison's Math Department had a net gain of 33% Proficient & Advanced.
- Edison's Math Department had a net LOSS of 34% Below Basic & Far Below Basic.
- English: net gain of 1%
- English: net gain of 2%
- Science: net gain of 4%
- Science: net loss of 1%
- History: net gain of 0%
- History: net gain of 5%

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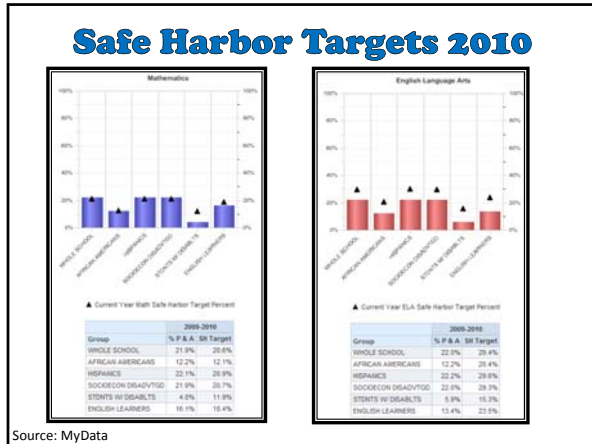
1,763
Students
in 09-10
3 Tracks

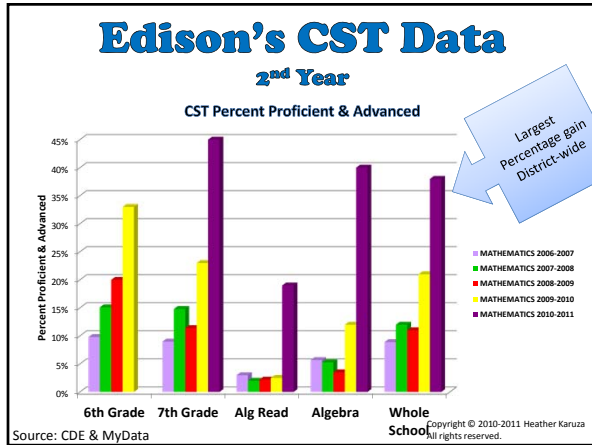
Edison Middle School

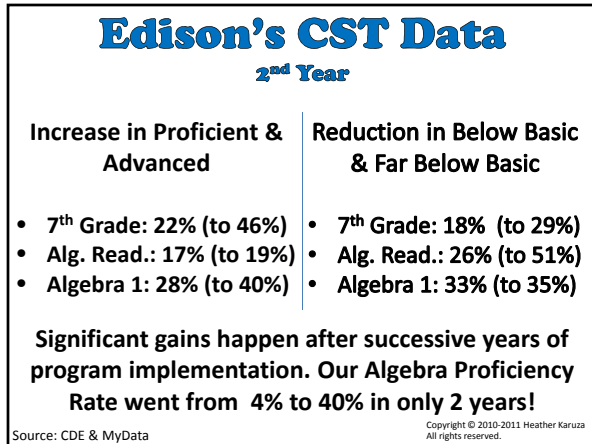
Demographics

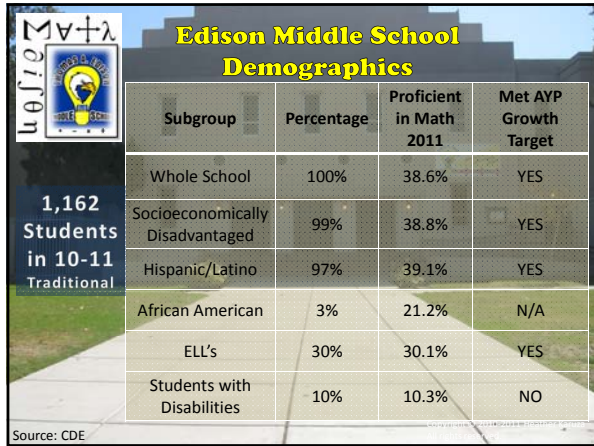
Subgroup	Percentage	Proficient in Math 2010	Met AYP Growth Target
Whole School	100%	21.9%	YES
Socioeconomically Disadvantaged	98%	21.9%	YES
Hispanic/Latino	97%	21.1%	YES
African American	3%	12.2%	N/A
ELL's	33%	16.1%	NO
Students with Disabilities	11%	4%	NO

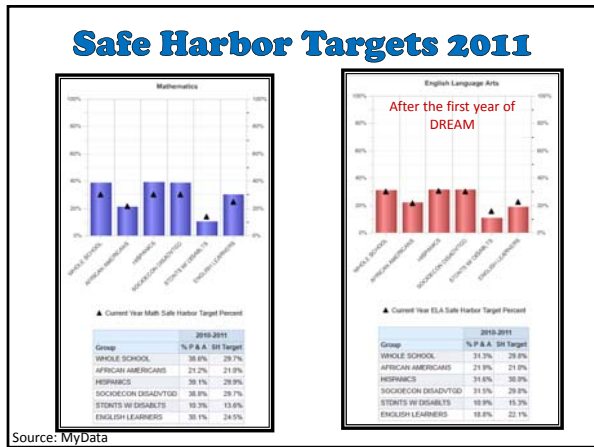
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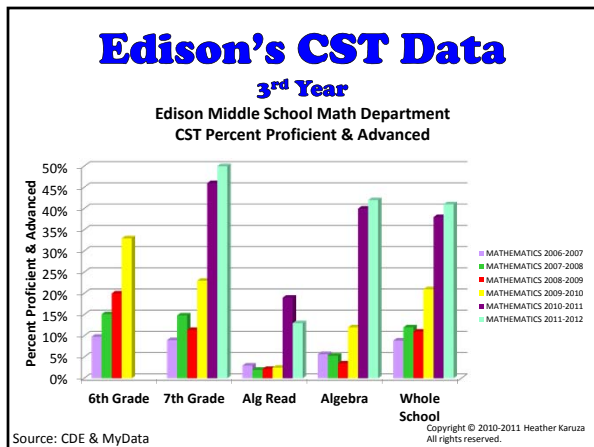






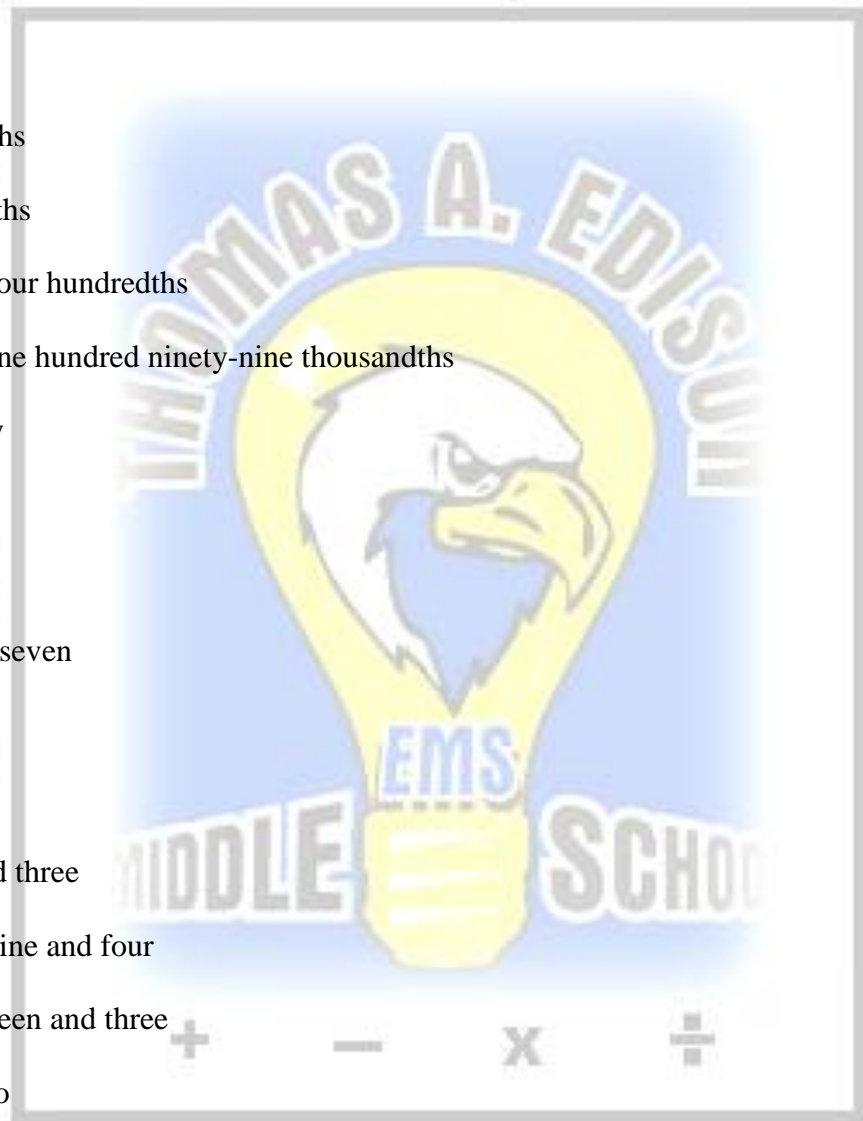






5th Grade Translations Sample

1. one hundred twenty
2. two thousand, three hundred fifteen
3. five thousand, twenty-three
4. one million, four hundred five thousand, six hundred forty-two
5. three tenths
6. nine hundredths
7. fifty-one hundredths
8. seven and two tenths
9. one hundred and four hundredths
10. ninety-nine and nine hundred ninety-nine thousandths
11. eighteen plus forty
12. twelve minus six
13. six times eight
14. eleven divided by seven
15. one-half
16. two-thirds
17. the sum of one and three
18. the difference of nine and four
19. the quotient of fifteen and three
20. one divided by two



5th Grade Translations Sample - KEY

1. one hundred twenty 120
2. two thousand, three hundred fifteen $2,315$
3. five thousand, twenty-three $5,023$
4. one million, four hundred five thousand, six hundred forty-two $1,405,642$
5. three tenths 0.3
6. nine hundredths 0.09
7. fifty-one hundredths 0.51
8. seven and two tenths 7.2
9. one hundred and four hundredths 100.04
10. ninety-nine and nine hundred ninety-nine thousandths 99.999
11. eighteen plus forty $18 + 40$
12. twelve minus six $12 - 6$
13. six times eight 6×8
14. eleven divided by seven $11 \div 7$
15. one-half $\frac{1}{2}$
16. two-thirds $\frac{2}{3}$
17. the sum of one and three $1 + 3$
18. the difference of nine and four $9 - 4$
19. the quotient of fifteen and three $15 \div 3$
20. one divided by two $1 \div 2$

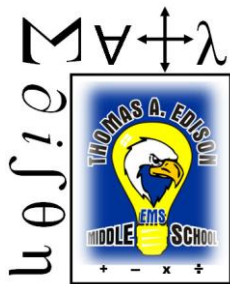
5 X 5 BLOCK

Monday

X					

SCORE: ____/25

C/B: _____



Wednesday

X					

SCORE: ____/25

C/B: _____

Thursday

X					

SCORE: ____/25

C/B: _____

Friday

X					

SCORE: ____/25

C/B: _____



Name: _____

Write problem 20 times as indicated below.

Example

1. $2 \times 3 = 6$
2. two times three equals six
3. $3 \times 2 = 6$
4. three times two equals six
5. Multiplication is commutative.

Draw a picture representation of your problem in this box.

Example:   represents 2×3 or 2 groups of 3

1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

Write problem 20 times as indicated below.

Example

1. $2 \times 3 = 6$
2. two times three equals six
3. $3 \times 2 = 6$
4. three times two equals six
5. multiplication is commutative

Name: _____

1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.