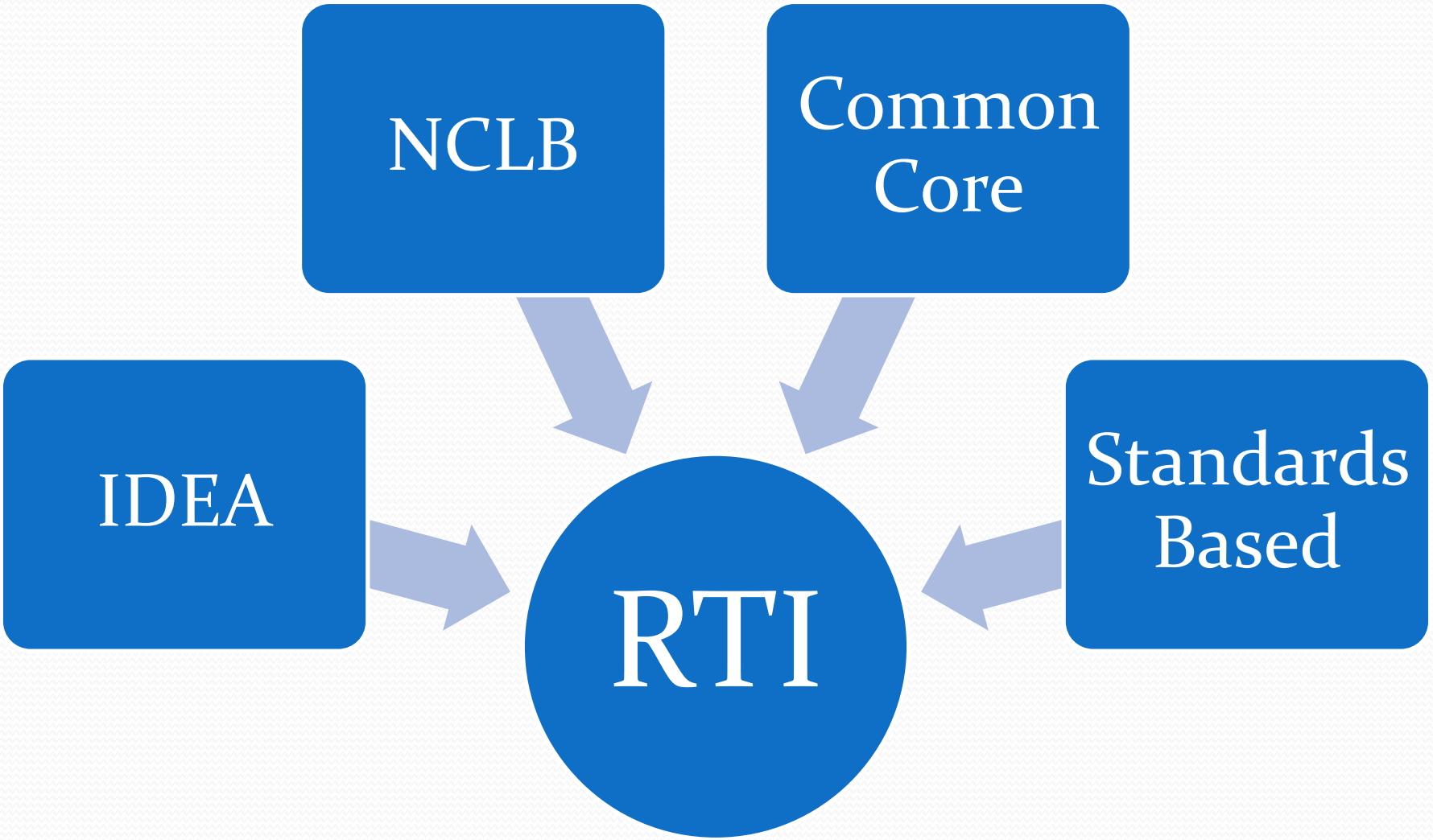
RTI and Formative Assessment

Ray LeBlanc and Vicki Graham

Core Questions

- What is RTI?
- How do formative assessments fit in with the RTI model?
- How can teachers and administrators use technology to get useful data?

Origins of RTI



How does RTI work?

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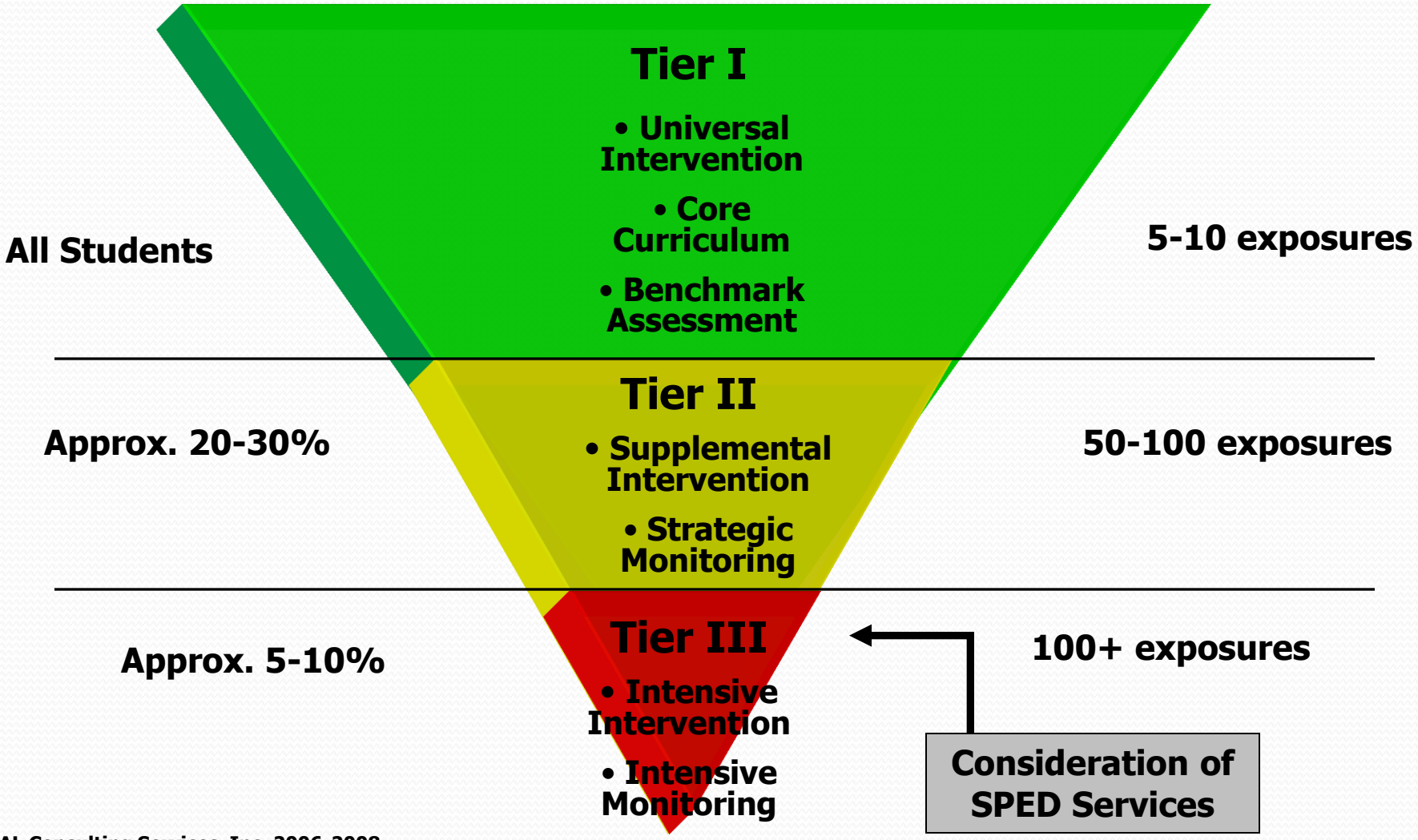
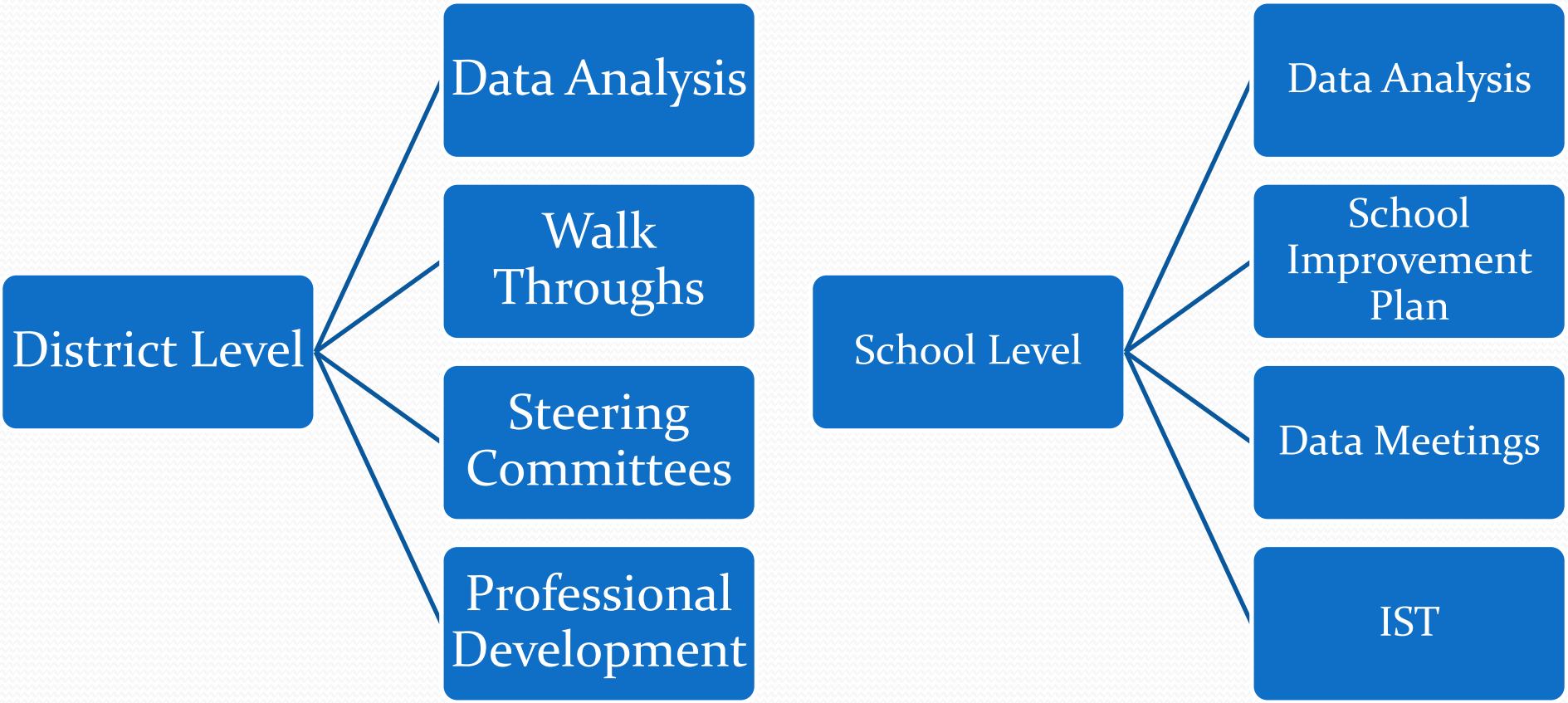
RtI

The Three-Tier Intervention Model



RTI as a Dual System of Intervention



Ancillary Personnel

Who delivers RTI?

- Classroom Teacher
- Math Coach
- Curriculum Specialist
- Title One
- Paraprofessionals
- Technology Specialist
- MSN

Examples of formative assessment

- Observation
- Conversation
- Journal Writing
- Self Assessment
- Differentiated Group Work
- Homework
- Teacher Generated
- Benchmark (CBMs)

Curriculum Based Measurement

AIMSWEB		
Test of Early Numeracy K-1	Computation Benchmark 1-8	Algebra Screening 7-8

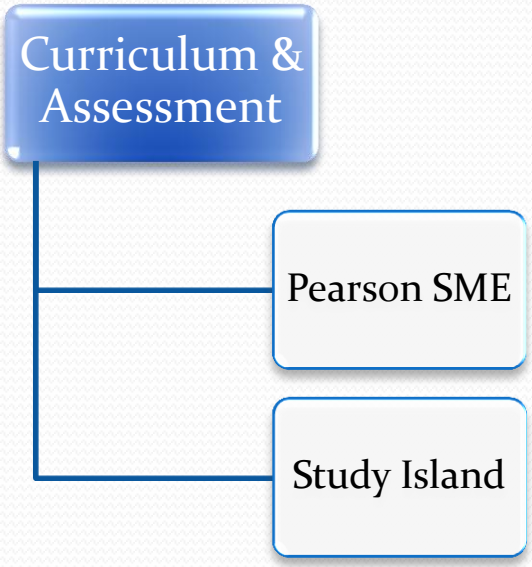
Grade	Test	At Risk	Some Risk	Low Risk	Rate of Improvement
2	Fall Computation	0 - 6	7 - 14	15+	
2	Win Computation	0 - 11	12 - 29	30+	0.27
2	Spr Computation	0 - 12	13 - 31	32+	
3	Fall Computation	0 - 10	11 - 21	22+	
3	Win Computation	0 - 13	14 - 31	32+	0.5
3	Spr Computation	0 - 16	17 - 37	38+	
4	Fall Computation	0 - 17	18 - 45	46+	
4	Win Computation	0 - 24	25 - 60	61+	0.6
4	Spr Computation	0 - 28	29 - 70	71+	
5	Fall Computation	0 - 17	18 - 39	40+	
5	Win Computation	0 - 20	21 - 49	50+	0.8
5	Spr Computation	0 - 26	27 - 60	61+	
6	Fall Computation	0 - 17	18 - 38	39+	
6	Win Computation	0 - 21	22 - 49	50+	0.8
6	Spr Computation	0 - 21	22 - 50	51+	
7	Fall Computation	0 - 14	15 - 39	40+	
7	Win Computation	0 - 15	16 - 48	49+	0.16
7	Spr Computation	0 - 17	18 - 46	47+	
8	Fall Computation	0 - 16	17 - 42	43+	
8	Win Computation	0 - 17	18 - 51	52+	0.16
8	Spr Computation	0 - 19	20 - 50	51+	

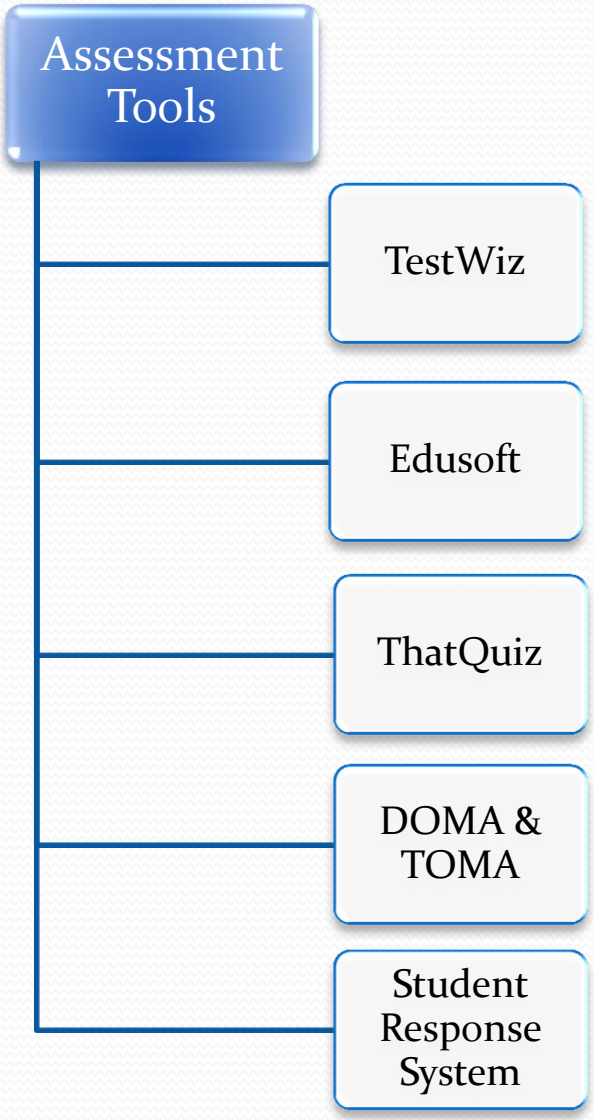
Technology & Formative Assessments

How can technology aid in gathering useful data for teachers and administrators?

- Time
- Ease of use
- Flexibility of curriculum planning
- Proactive interventions vs. reactive
- Easily assess student learning and teacher instruction

Using Technology to Gather Data





Pearson SuccessMaker Enterprise

www.pearsonschool.com

- Interactive, highly visual and engaging curriculum
- Aligned to the Common Core Standards K-8
- Begins with Initial Placement
- Learners work at their own pace
- Full audio support and online manipulatives
- Guided interactive practice and assessment

SME Course Report

Math Concepts and Skills

Summary

	Performance						Achievement		
	Exercises Attempted	Exercises Correct	Percentage Correct	CRI	Skills Completed	Skills Mastered	Percentage of Skills Mastered	Gain Since IPM	Current Course Level
Cumulative	1232	959	78%	83%	152	151	**99%**	**0.95**	**1.95**
Last Session	30	20	67%						

	Support						Usage			
	Tutorial Used	Help Used	Audio Repeat Used	Report Card Used	Glossary Used	Time Outs	Time Spent	Time Spent Since IPM	Total Sessions	Last Session Date
Cumulative	8	0		8	0	2	10:05	10:05	30	
Last Session	0	0	0	1	0	0	0:21			01/29/10

Cumulative Performace by Strand

	Computation Strands			
	Skills Completed	Skills Mastered	Percentage of Skills Mastered	Strand Level
Addition	22	22	100%	1.90
Decimals	0	0	0%	--
Division	0	0	0%	--
Equations	1	1	100%	1.90
Fractions	9	9	100%	2.00
Multiplication	0	0	0%	--
Speed Games	0	0	0%	--
Subtraction	14	14	100%	1.95
Total	46	46	100%	

	Application Strands			
	Skills Completed	Skills Mastered	Percentage of Skills Mastered	Strand Level
Applications	0	0	0%	--
Geometry	24	24	100%	1.96
Measurement	23	22	95%	1.89
Number Concepts	33	33	100%	1.82
Probability & Statistics	11	11	100%	2.10
Problem Solving	4	4	100%	2.10
Science Applications	0	0	0%	--
Word Problems	11	11	100%	1.88
Total	106	105	99%	

Study Island

www.studyisland.com

- Web-based instruction, practice, assessment & reporting
- Easy to use (in the lab, classroom, library or home)
- Affordable
- Aligned to Common Core State Standards

SI Course Report

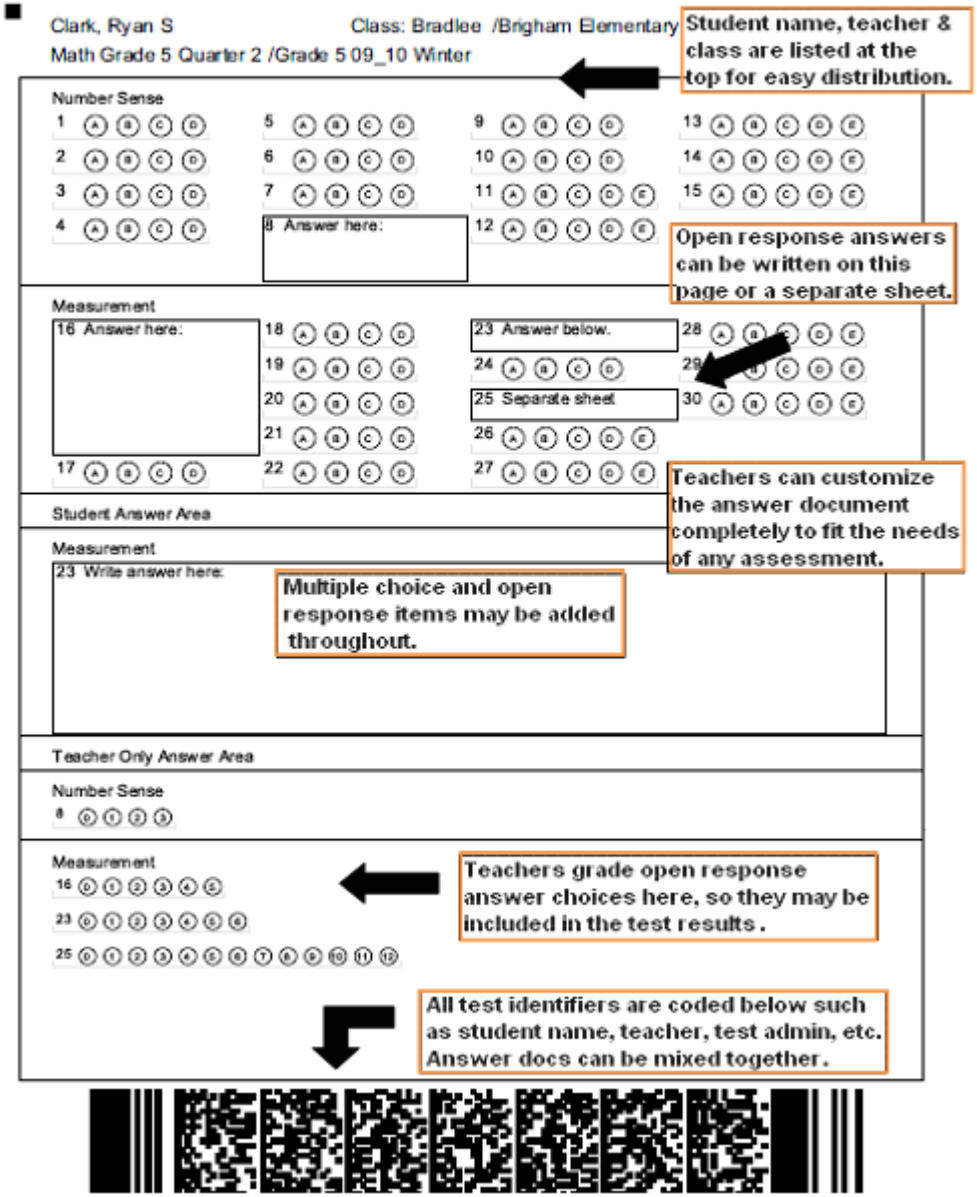
	CUMULATIVE AVERAGE FOR ALL LISTED TOPICS		Pretest - Math		Exponents 6.N.1		Expanded Notation 6.N.3		Number Lines 6.N.4, 6.N.10		Fractions, Decimals & Percents 6.N.5		Factorization 6.N.8	
Student	Items	Score	Items	Score	Items	Score	Items	Score	Items	Score	Items	Score	Items	Score
DUCK, DONALD	144	69.40%	10	70.00%	30	80.00%	25	84.00%	30	73.30%	10	40.00%	9	66.70%
DUCK, DAISY	402	53.70%	20	30.00%	66	77.30%	11	90.90%	42	40.50%	13	84.60%	56	37.50%
MOUSE, MICKEY	187	51.90%	10	40.00%	20	80.00%	23	52.20%	10	40.00%	19	52.60%	16	43.80%
MOUSE, MINNIE	189	77.80%	10	80.00%	10	90.00%	20	80.00%	10	90.00%	10	100.00%	10	100.00%
Total:	34942	69.70%	1421	57.70%	3950	76.30%	2113	71.80%	2135	67.30%	1270	76.90%	1637	75.20%

Testwiz

www.testwiz.com

- Formative Assessment Item Bank aligned to the new Common Core State Standards (CCSS)
- Disaggregate data down to the student, learning standard, sub-group, or performance level
- Process local assessments electronically for data analysis
- Bubble and scan
- Coming soon: online paperless testing

Sample Student Answer Document
TestWiz



Create Reports - Microsoft Internet Explorer provided by Brockton Public Schools

https://www.testwiz.net/tw1/ReportBuilderStep2.aspx?m=c&f=school&r=20&c=2&any=false&sta=92367&report=Su

File Edit View Favorites Tools Help

VICTORIA GRAHAM - Outloo... | Create Reports

Page Tools

You are here:>Home >Select a Test >**Create Reports**

Home **Select a Test** **Printable Reports** **Utilities** **Logout** **Help**

Create Reports

Select another Test

Test: Unit 05 Math - Grade 04 - Landmarks

Test Date: Oct 15, 2009

Reporting Group: ○ Student ○ Class ◉ School ○ District ○ Multi-District

Report Type: 3.4 School - Class Summaries

Teacher Type/Location: 09-10 Math

My Customizations: None Selected

Preview Report | Set as Defaults | Clear Parameters | Manage Customizations

To view or print a report, choose a Reporting Group. Then choose a Report Type.

To customize a report, click on any of the Report Parameters to change their values.

Click on the Preview Report button to see the report.

Help Documents

Steps for Customized Reports

Sample Reports

More about this

Report Parameters

Student	*All*	Letter	*None Specified*
Teacher	1 Teacher Ferrari-04Ma-1	Statistics	Mean
School	*All*	Obj Cutoff	Less than 75%
District	*All*	Multi-Test	*None Specified*
Spc.Code Filter	*None Specified*	Spc.Code Display	*None Specified*
Subtests	*All*	Display Score	Raw Score
Scores	*All*	History	*None Specified*
Cutoff	*None Specified*	Cross-Tab	*None Specified*
Rank Order	*None Specified*	Gap Score	*None Specified*

Done | Internet | 100%

start | Create Reports - Micr... | 10:46 AM

TestWiz Individual Historical Report

Unit 01 Math - Grade 4 Factors Arrays

10/1/2009

	RS	MaxPts	PC
Math Total	14	20	70
Multiple Choice	9	10	90
Short Answer	0	2	0
Open Response	5	8	62

Gr 4 Green Trans Math 1

10/1/2009

	RS	MaxPts	PC
Answers			

Unit 2 Math Grade 4 Decribing the Shape of Data

3/1/2010

	RS	MaxPts	PC
Math Total	12	20	60
Multiple Choice	6	10	60
Short Answer	2	2	100
Open Response	4	8	50
MCAS Prep	3	5	60

Unit 05 Math - Grade 04 - Landmarks

10/15/2009

	RS	MaxPts	PC
Math Total	15	16	94
Multiple Choice	9	10	90
Short Answer	2	2	100
Open Response	4	4	100

Davis Grade 4 Trans Math Unit 3

2/1/2010

	RS	MaxPts	PC
TRANS MATH UNIT 3	13	16	81

Math Benchmark - Fall - Grade 04

9/15/2009

	RS	MaxPts	PC
Total Math	27	48	56
Number Sense	12	16	75
Patterns, Relat.&Algebra	3	6	50
Geometry	3	8	38
Measurement	4	12	33
Data, Stat.& Prob.	5	6	83

Gr 4 Green Trans Math 2

10/15/2009

	RS	MaxPts	PC
Answers	8	16	50

Unit 03 Math Grade 4 Multiple Towers

11/15/2009

	RS	MaxPts	PC
Math Total	18	20	90
Multiple Choice	8	10	80
Short Answer	2	2	100
Open Response	8	8	100

Unit 07 Math Grade 4 Moving Between Boxes and Solids

1/15/2010

	RS	MaxPts	PC
Math Total	10	16	63
Multiple Choice	5	10	50
Short Answer	2	2	100
Open Response	3	4	75
MCAS prep	4	5	80

Unit 04 Math Grade 4 Size, Shape

12/15/2009

	RS	MaxPts	PC
Math Total	11	16	69
Multiple Choice	9	10	90
Short Answer	1	2	50
Open response	1	4	25
MCAS Prep	0	2	0

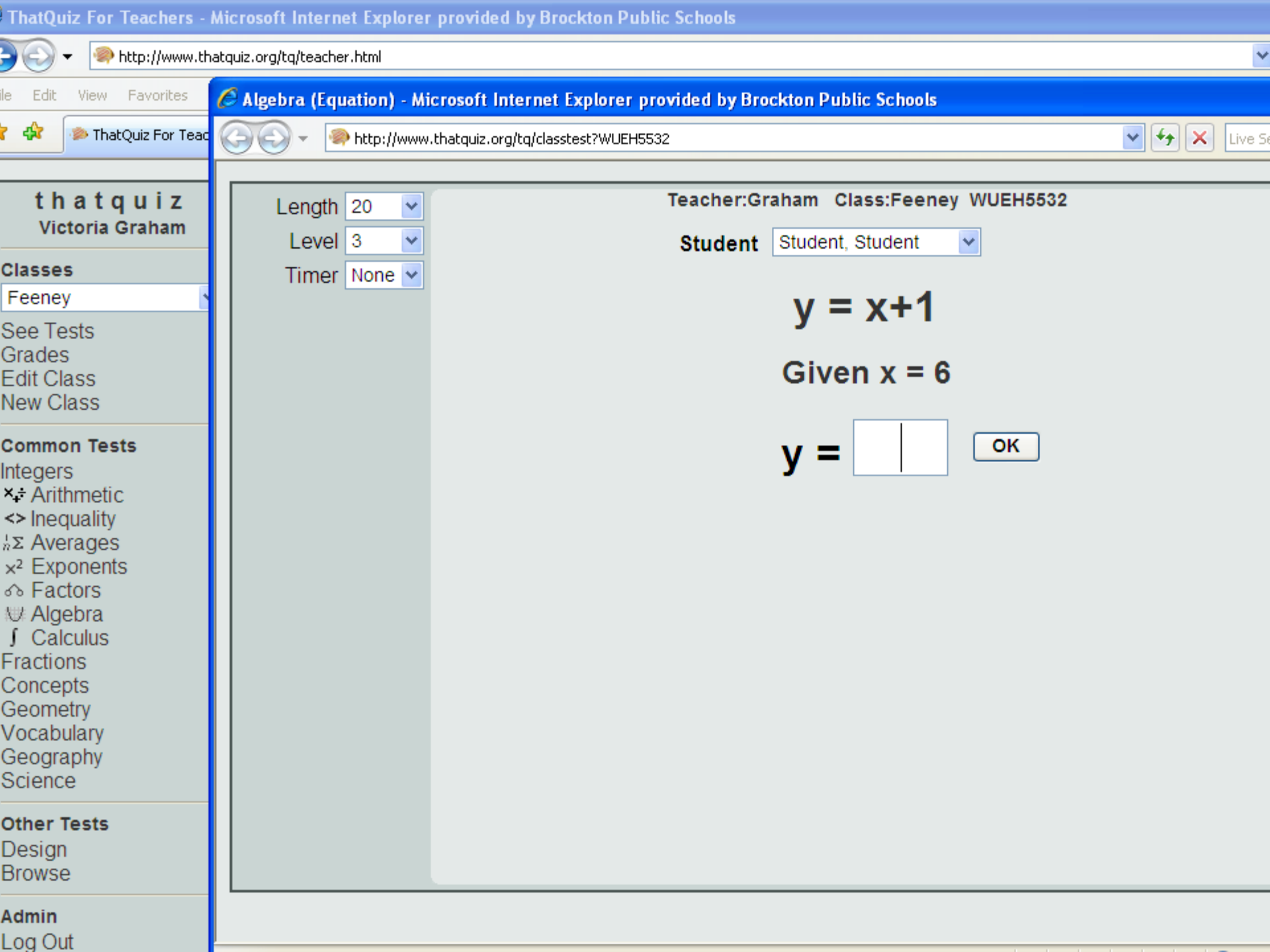
Edusoft

www.edusoft.com

- Review longitudinal results (cross sectional and cohort matched)
- Specify performance and demographic criteria to create intervention groups
- Compare among multiple tests in the Benchmark Exams module
- Bubble and scan

ThatQuiz.org

- ThatQuiz is a free testing service for teachers to use with their classes
- All grades are immediately reported to the students
- Teachers receive complete record keeping of test results, including all grades and wrong answers.
- Free website for educational use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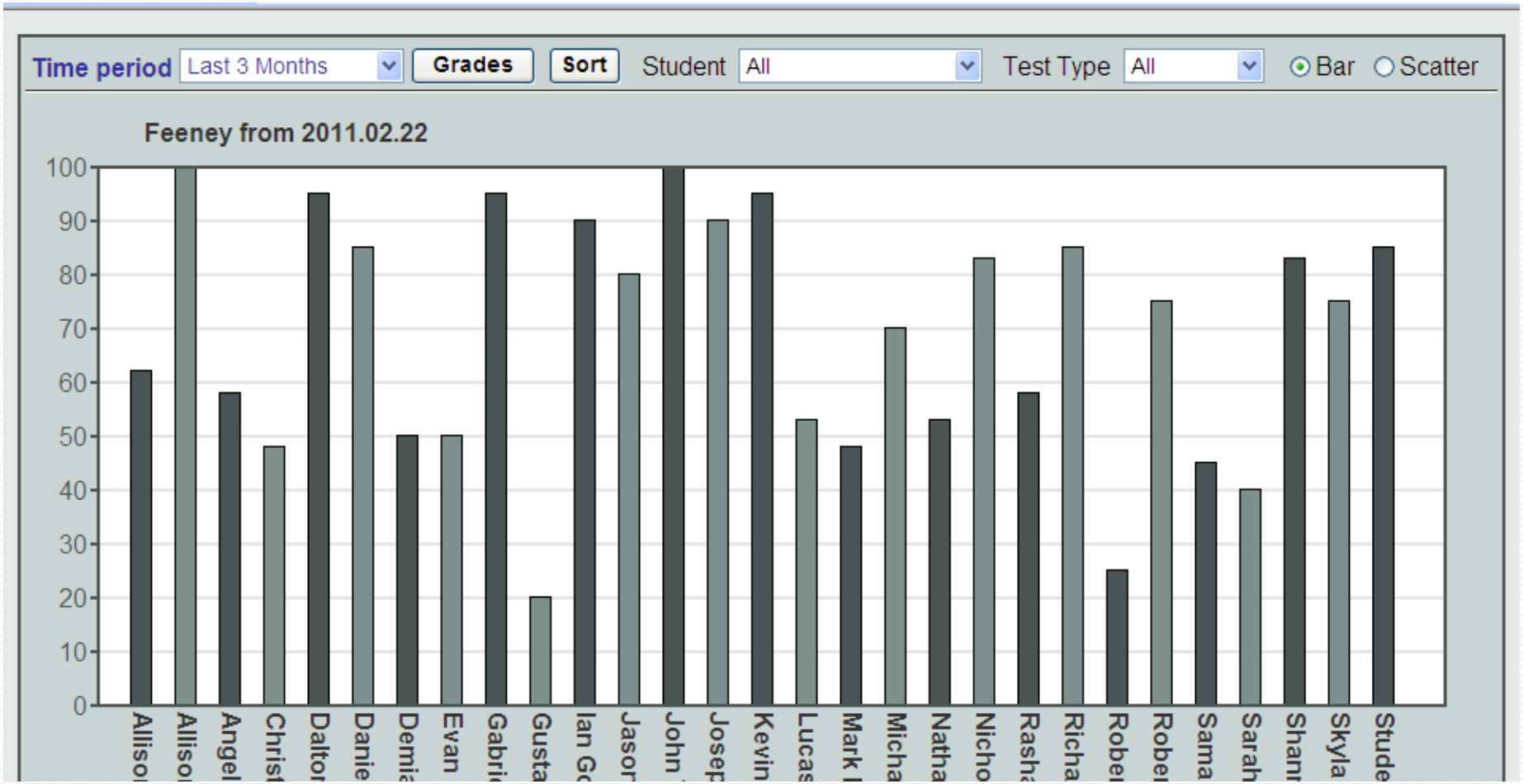
View
Favorites
ThatQuiz For Teac
Algebra (Equation) - Microsoft Internet Explorer provided by Brockton Public Schools
http://www.thatquiz.org/tq/classtest?WUEH5532
thatquiz
Victoria Graham
Classes
Feeney
See Tests
Grades
Edit Class
New Class
Common Tests
Integers
Arithmetic
Inequality
Averages
Exponents
Factors
Algebra
Calculus
Fractions
Concepts
Geometry
Vocabulary
Geography
Science
Other Tests
Design
Browse
Admin
Log Out
Length 20
Level 3
Timer None
Teacher:Graham Class:Feeney WUEH5532
Student Student, Student
y = x+1
Given x = 6
y =
OK

Grade Report

Grades : 23
Average : 58

Frequently missed

Frequency	Problem
11	Area triangle base 30 height 7 = 105
10	Area triangle base 24 height 15 = 180
9	Area triangle base 18 height 13 = 117
9	Area triangle base 47 height 24 = 564
8	Area triangle base 44 height 9 = 198
7	Area triangle base 40 height 9 = 180
7	Area triangle base 30 height 16 = 240
7	Area rectangle 13 36 = 468
6	Area triangle base 10 height 37 = 185
6	Area rectangle 43 21 = 903
6	Area rectangle 25 16 = 400
6	Area triangle base 5 height 2 = 5
6	Area rectangle 14 38 = 532
5	Area triangle base 16 height 8 = 64
5	Area rectangle 32 4 = 128
5	Area rectangle 14 49 = 686
5	Area rectangle 14 48 = 672
4	Area rectangle 42 5 = 210
4	Area rectangle 27 6 = 162
3	Area rectangle 7 21 = 147


Time period
Last 3 Months
Grades
Sort
Student
All
Test Type
All
Bar
Scatter
Feeney from 2011.02.22
100
90
80
70
60
50
40
30
20
10
0
Allison
Allison
Angel
Christ
Dalton
Danie
Demia
Evan
Gabrie
Gusta
Ian Go
Jason
John
Josep
Kevin
Lucas
Mark
Micha
Natha
Nicho
Rasha
Richa
Robert
Robert
Sama
Sarah
Shann
Skyla
Stude

DOMA

Diagnostic Online Math Assessment

www.curriculumassociates.com

- Web based
- Directs differentiated instruction
- Assesses math ability
- Creates data break down of scores
- Prescribes specific math interventions
- Aligns with math standards

TOMA-2

Test of Mathematical Abilities, 2nd edition

www.pearsonassessments.com/toma.asxpx

- Grades 3-12
- Progress monitoring and evaluation of student success in math
- Analyze math ability using 5 subtests

Hand-held Student Response Systems

- Qwizdom (qwizdom.com)
- Promethean
- Allow a teacher to carry out whole group assessments, polls and surveys quickly and easily
- In many school classrooms these devices may also be used in combination with an Interactive Whiteboard.

What do you do with the data?

- Informal data meetings
  - Grade level articulation meetings
  - Vertical & horizontal
  - Ancillary personnel (Technology Specialist)
- Formal data meetings
- District Analysis
- Professional Learning Communities

Caveats of RTI

- Time
- Money
- Culture
- Teacher Buy In
- Personnel
- Implementation
- Fidelity to the Program

Resources

- **www.doe.mass.edu**
- **www.aimsweb.com**
- **idealconsultingservices.com/RTI.html**
- **interventioncentral.org**
- **studentprogress.org**

Questions?

Thank you!