### Using Guided Math to Strengthen Response to Intervention Strategies

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## **Objectives for the Day**

- Better understand the 'Response to Intervention' (RTI) model and how it works with Guided Math
- Know how to create and facilitate guided math
- Understand researched-based interventions strategies, center ideas and assessments



## What is RTI?

 Response to Intervention (RTI) can be thought of as an early detection, prevention, and ongoing support system that identifies students and provides them with the support they need before they fall behind and are formally identified for special education services. McDaniel College

## The Benefits of RTI

- RTI is the diagnosis of educational disabilities and allows the school to intervene early to meet the needs of struggling learners.
- School staff collaborate and problem-solve around defining the need, analyzing the need, developing and implementing a plan, setting progress monitoring schedules and evaluating the response to the intervention.
- Everyone including the principal, classroom teacher, special education teacher, reading specialist, psychologist, social worker and others — all feel a shared responsibility for helping each child succeed.

http://sd54.org/rti/

#### The Three Tiers of RTI

#### Academic Systems

#### **Behavioral Systems**



http://sd54.org/rti/

#### **RTI Model: Tier 1**

 Tier 1 consist of general education instruction with the following features:

Scientific, research-based curriculum
Differentiated Instruction
Screen all students, with weekly monitoring of at-risk students who do not respond to general education instruction.

#### **RTI Model: Tier 2**

- Tier 2 consist of general education instruction plus the following intervention.
  - Small-Group Instruction (2-4)
  - 3-4 intervention sessions per week (20-40 minutes per session) in addition to the regular math block
  - Conducted in and out of the general education classroom.
  - 6-8 weeks in duration (repeated, as needed)

### **RTI Model: Tier 3**

 Tier 3 consist of students receiving individualized, intense interventions that target the students' skill deficits.

#### What Resources Do You Use to Provide Response To Intervention?



•Strategies used during the RTI process must be researched-based interventions.

## Scientifically Based Interventions

A.means the application of rigorous, systemic, and objective procedures to obtain reliable and valid knowledge relevant to education activities and program.

#### B. Includes research that:

- 1. Employs systemic observation of the experiment
- Involves thorough data analyses adequate for testing the hypothesis and justifying the conclusion.
- 3. Relies on measurement or observable methods that provide reliable and valid data
- 4. Has been accepted by a peer-reviewed journal or approved by a panel of independent experts through a comparably rigorous, objective and scientific review.

#### What is Guided-Math?

 Guided Math is similar to Guided Reading in that the teacher puts the students into small groups and the students work on specific standards being taught in centers around the room. Students are placed in ability level groups and taught the standards of the curriculum. Cobb County School District

# Question

 What instructional strategy could be use to provide individual or small group support to your students?



# Answer

# Guided Math

## Benefits of Guided Math

#### **Student Benefits**

- Small Groups
- Every student will learn at their own pace.
- Student develops mathematical skills.
- Students are engaged.
- Students learn how to problem solve.
- Students receive instant feedback, results and success.
- Increase Math Vocabulary.
- Use multiple Math strategies .

#### Teacher Benefits

- Teacher teaches for mastery.
- Teacher focuses on specific content or skill.
- Teachers assess students individually.
- Teachers lesson are standard base and rigorous.
- Teachers identify student's weaknesses and strengths.
- Teachers are engaged .

# Guided Math vs. RTI tier 2

#### **Guided Math**

- Small group of 3-5 students
- Students are grouped by abilities and levels.
- Students work on differentiated activities based on their needs.
- Weekly progress monitoring of skills

#### RTI Tier 2

- Small group 3-5 students
- Researched-based instruction based on their deficits.
- Gives students additional time to work on specific skills outside of math block.
- Weekly progress monitoring of skills.

# Developing and implementing the essential components of Guided Math

Universal Diagnostic
Leveled grouping planning template
Small group schedule
Centers
Assessment
Charting progress





"When a teacher tries to teach something to the entire class at the same time, chances are, one third of the kids already know it, one third will get it, and the remaining third won't get it. So two thirds of the children are wasting their time."

~Lillian Katz

#### Scenario

 Frank struggles with 2 digit regrouping computation skills.
 Simple 2 digit problems with no regrouping computation seem to be when Frank scores the highest in mathematics.



# What type of instruction does Frank need? Frank needs quality Tier 1, which consist of:

 Whole group instruction
 Guided-math instruction based on his deficits



#### How to Plan a RTI and Guided Math Classroom



- Northwest Evaluation Association (NWEA)
- Scantron
- Mclass
- State Assessment
- Skills and Unit Assessment

Pre-Universal Diagnostic

#### Organized Skills Group

- Group students according to preassessment results.
- Pick a specific skill to work with students on.

#### Post-Assessment

- Skills Assessment
- Unit Assessment

Weekly Post-Assessment

#### Universal Diagnostic

- State Assessment
- NWEA
- Unit Assessment
- Scantron
- Skills Assessment



## NWEA Data

Class Breakdown by RIT Report

District: NM Term Rostered: Fal Term Tested: Fal School: Th Instructor: Ko Class: TF	/EA Sample District 2 I 2010 I 2010 ree Sisters Elementary School tifani, Jenisha 060054 Kotifani Homeroom 1(A)	Modify Options			
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Cubicat			Overall Score 12		
Subject	<191	191-200	201-210	211-220	221+
<u>Mathematics</u>		D. E. Shalifoe (191) D .N. Dugaw (195) N. I. Devany (197) A. E. Scruggs (197) T. E. Wolf (200)	Z. N. Haukebo-Bol (210) M. M. Vosburg (210)	J. S. Kucia (215) D. W. Alhamzawi (216) R. Valkier (217)	K. S. Dimalanta (224)
Reading	D. N. Dugaw (181) N. I. Devany (188)	A. E. Scruggs (197) Z. N. Haukebo-Bol (198) D. E. Shalifoe (198)	T. E. Wolf (201) M. M. Vosburg (205) J. S. Kucia (207)	R. Valkier (211) D. W. Alhamzawi (213) K. S. Dimalanta (220)	
Language Usage	N. I. Devany (182)	A. E. Scruggs (197) D. E. Shalifoe (200)	Z. N. Haukebo-Bol (201) J. S. Kucia (201) D. N. Dugaw (203) T. E. Wolf (206)	M. M. Vosburg (212) R. Valkier (214) K. S. Dimalanta (215) D. W. Alhamzawi (220)	
<u>Science -</u> <u>General Science</u>		A. E. Scruggs (198)	J. S. Kucia (201) D. W. Alhamzawi (202) M. M. Vosburg (202) T. E. Wolf (204) D. N. Dugaw (206) N. I. Devany (207)	D. E. Shalifoe (214) K. S. Dimalanta (215) R. Valkier (216)	Z. N. Haukebo-Bol (22
Science - Concepts and Processes	A. E. Scruggs (188)	M. M. Vosburg (195) D. W. Alhamzawi (200)	N. I. Devany (202) D. E. Shalifoe (204) J. S. Kucia (205) Z. N. Haukebo-Bol (207)	R. Valkier (211) K. S. Dimalanta (213) D. N. Dugaw (213) T. E. Wolf (216)	

Web-Based Reports Portfolio | NWEA<sup>™</sup>

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#### Preassessments



#### www.pearsonsuccessnet.com

#### **Planning Sheets for Organizing Groups**



#### Targeted Instruction Planning Template

186 2 2	Group 1
1.	
2.	
3.	
4.	
5.	
6.	
7.	

	Foçus Skill	Core Activities	Remediation/Enrichment Activities	Outcomes
Week 1:		1.19		
Week 2:				
Week 3:				
Week 4:				

State of the local division of the local div	Group 2	THE R. LEWIS CO., LANSING MICH.
1.		
2.		
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4.		
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6.		
7.		

	Focus Skill	Core Activities	Remediation/Enrichment Activities	Outraines
Week 1:				
Week 2:				
Week 3:				
Week 4:				

# Small group schedule



## Math Workshop Rotation

Rotation Schedule	Centers/ Games	Independent Practice	Guided Small Group
Rotation #1	Group B	Group C	Group A
Rotation #2	Group C	Group A	Group B
Rotation #3	Group A	Group B	Group C

## **RTI Guided Math workshop**

Schedule 30 minute sessions- 2 sessions a day

Monday	Tuesday	Wednesday	Thursday	Friday
9:30-10:00	9:30-10:00 Blue Group	9:30-10:00	9:30-10:00	9:30-10:00
Green Group		Green Group	Blue Group	Pre-Assessment
10:00-10:30	10:00-10:30	10:00-10:30	10:00-10:30	10:00-10:30
Orange Group	Yellow Group	Orange Group	Yellow Group	Post-Assessment

# What are the other students doing while you are teaching small group?







ROUP 1- M &F Kamece O Miatata O Yeriyah O Armoney O Joshua O AnthonyO Robert

Group 2- Tuesday

Tiranesha Rasheed Kayla Kayla Ronnie Dequantis Charles



Group 3- Wednesday Myesha O Dequan O Shawn Teria Keirra Marquis Marshawnda

Group 4- Thursday Towana O Tyler O Nitasha Christina Cassandra Dennis

#### Math Center Ideas for Teachers

- Computers
- Patty paper projects and ideas
- Skills and drills
- Journal/Problem
   Solving Center

- Matching games
- Building 3-D shapes
- Math word problem strategies
- Addition Top-it
- Name that Number
- Math Games
- File Folders

















#### What are Assessment?

 Assessment is the process of gathering and discussing information from multiple and diverse sources in order to develop a deep understanding of what students know, understand, and can do with their knowledge as a result of their educational experiences; the process culminates when assessment results are used to improve subsequent learning.

## Type of Assessments

#### Ongoing assessment throughout the lessons such as:

- Teacher created assessments
- Observations
- Curriculum based assessments
- Questioning
- Individual Pupil Responses
- Thumbs up
- Entrance/Exit Slip

# How do you monitor your student's development?

# **Progress monitor**

# What is Progress Monitoring?

Progress Monitoring is conducted frequently and is designed to:

- Estimate rates of student improvement.
- Identify students who are not demonstrating adequate progress.
- Compare the effectiveness of different forms of instruction and design more effective, individualized instructional programs for problem learners.

#### The Benefits of Progress Monitoring?

- Students progress should be monitored on a weekly basis to see keep and track of how the student is responding to the intervention.
- General education teachers will use curriculum-based measurement probe in the deficits areas.
- If progress is being made in Tier II, the intervention could be continued for additional weeks.
- If an intervention shows little or no growth, then another Tier II intervention can be initiated.

#### **Class Progress Monitoring Data**

Cordinina	Contenn	THE	Generation	is containin	The cont	TABLE .
CORTA	2-dig		2 digit si	review 2 digit additiona	Computation	
	it addition		ubtraction	nd subtraction	Assessment	
Allen, David		80	9	5 - 7	75	80
Alonso, Allen		92	8	8 8	35	88
Armour, Jaykwon		45	5	0 4	40	45
Burns, Jason		70	8	0 7	75	85
Cartledge, Sharon	1	95	6	5 8	35	85
Childress, Larry		82	. 8	8 8	32	85
Crump, Taylor		65	8	0	75	70
Dorsey, Larry	A State of the sta	90	7	5 8	30	75
Evans, Tina		80	7	0 7	75	70
Ford, Kerry		70	6	5 7	75	70
Gardner, Ivori		85	8	0 7	70	70
Glenn, Jerry	AND TRACE OF THE	50	6	0 5	55	50
Green, Jimmy		100	9	5 9	90	95
Hannon, London		92	8	8 8	35	80
armon, Daniel		70	6	5 7	75	75
Viller, Cynthia		75	9	5 8	so	85
Noel, April		82	7	5 7	5	80
Djei, Anna		90	7	0 8	30	85
Pollion, Cindy		100	9	5 8	30	75
Randle, Natalie		75	7	0 7	5	70
Ratlliff, Raniya		45	6	0 6	60	55
Renfro, Kiana		75	6	5 7	0	75
Reynolds, Delano		90	8	0 7	5	80
iabbs, Darryl		90	7.	5 7	5	80
ucker, Howard		55	6	5 6	0	60
Walker, Frank		45	6	0 5	0	55
Vallace, Mark		90	7	5 8	0	80
Vatts, Adam	States and states	70	6	5 7	5	70
Villiams, Joyce		85	6	0 7	5	70
Villis, Kamaria		80	7	5 8	0	99
	Week 1		Week 2	Week3	Asses	sment

# Frank's Individual Progress Monitoring



## Frank is still struggling?

#### Now What?



# Developing and implementing the essential components of Tier-2 RTI

Diagnostic test
 Analyzed Data





#### What are Frank's Goals?

Franks shows a weakness in 2 digit computation with regrouping. He needs to score a 70% or higher on weekly skills assessments

> Tips-The goals for Frank need to be measureable.

# **Diagnostic Test**

Name

#### **Computation with** Whole Numbers

Mark the best answer.

- **41.** What is the sum?
   **42.** 

   Image: Constrained and the sum?
   Image: Constrained and the sum?

   Image: Image: Constrained and the sum?
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- 43. Which number sentence shows 7 tens minus 3 tens?
  - (A) 70 10 = 60(B) 73 - 30 = 43
  - (C) 73 − 33 = 40
  - (D) 70 − 30 = 40



**42.** Use the chart to solve.

74 + 22 = \_

(A) 76

(B) 86

(C) 96

(D) 99

71 72 73 74 75 76 77 78 79 80

 81
 82
 83
 84
 85
 86
 87
 88
 89
 90

 91
 92
 93
 94
 95
 96
 97
 98
 99
 100

Math Diagnosis and Intervention System Grade 2 Diagnostic Test, Form A

# Diagnostic Test cont.

Math Diagnosis and Intervention System Intervention Lesson C21

Name

#### Subtracting with Regrouping (continued)

Subtract. Use snap cubes if you like.



98 Intervention Lesson C21

## **Tier 2 Small Group Instruction**

Additional time outside of the regular
 Math Block

3 to 4 days a week

20-30 minutes per day

Intervention should be at least 6 weeks

 Done during Intervention block, pull out, or independent practice

# Analyzed Data for the RTI Grouping

	Researched-based Intervention 2 digit addition		Researched-based Intervention 2 digit subtractio		Researched- based Intervention 2 digit addition		Researched- based Intervention 2 digit subtractio		Researched-based Intervention 2 digit addition		Researched- based Intervention 2 digit subtractio	Final Score	
Armour, Jaykwon		65	n	60		70	D	80		85	75		75
Glenn, Jarviel		60		65		70		75		80	75		70
Ratlliff, Rachel		60		70		75		80		80	85		80
Tucker, Hashim		70		65		75		80	•	70	80		80
Walker, Frank		65		60		70		70		80	85		75
	We	ek 1	We	ek 2	Wee	ek3	weel	k4	Wee	ek 5	Week 6	Asses	ssment

#### Sample Researched Based Interventions

- Number Search
- Cover-Copy Compare
- More or less
- Money Match
- Math work Problems Strategies
- Difficulty with word problems
- Collaborative problem solving
- Addition Top-it
- Name that Number
- Two-Fisted Pennies Games

# Scenarios

## What happens if Frank succeeds?

- He will continue working on the skill during center time.
- Focus on another RTI strategy

What happens if Franks does not succeed?

 Try a different a strategy and if the students still doesn't succeed, then try Tier 3.



#### References

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- www.superteacherworksheeets.com
- http://www.pasd.webnet.edu/school/ mathWASL
- http://www.softschools.com
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   <u>ms.html</u>
- <u>http://illuminations.nctm.org/Activity</u>
   <u>Detail.aspx?ID=202</u>
- www.pearsonsuccessnet.com

#### **Questions and Answers**

# Thank You so much for choosing our session! Ms. Thomas & Mrs. Jones-Gaines