

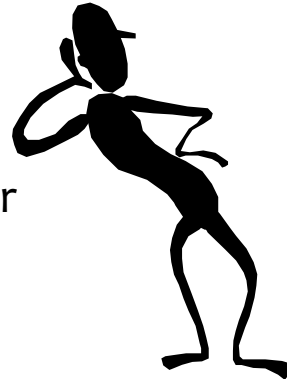
**RTI Conference  
Smalls School Design**  
January 23, 2015

**Welcome**



## Group Norms

Listening: SLANT  
Cell phone reminder  
Conversations  
Breaks

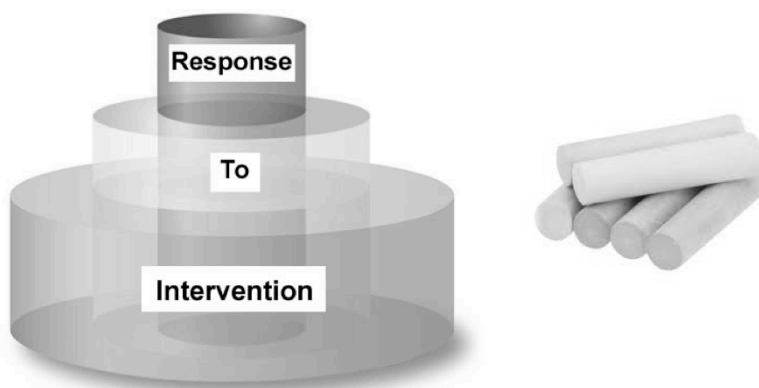


## How will we spend our day?

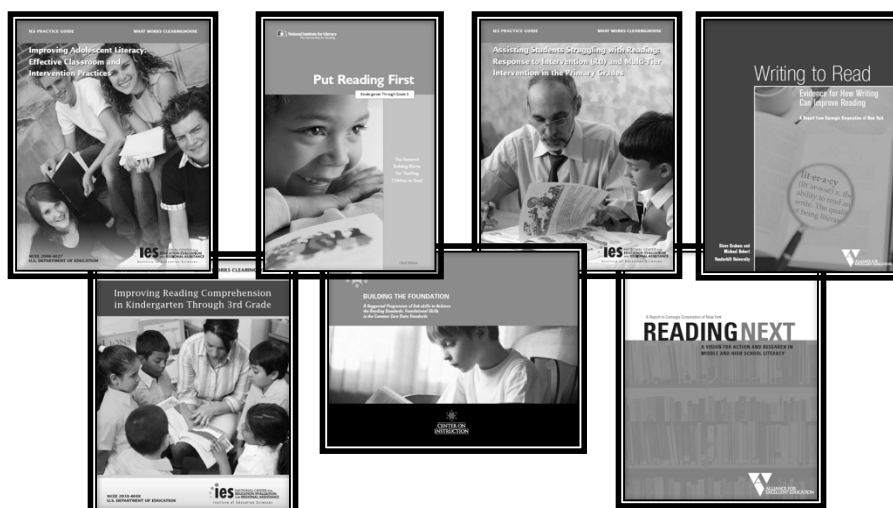
- Morning
  - Foundational Understandings of RTI
  - Standard Protocol vs Problem Solving
  - Comprehensive Assessment System
- Afternoon
  - Strong Core Instruction in Literacy and Math
  - Designing Effective Intervention
  - Collaboration

## Chalk Talk Protocol

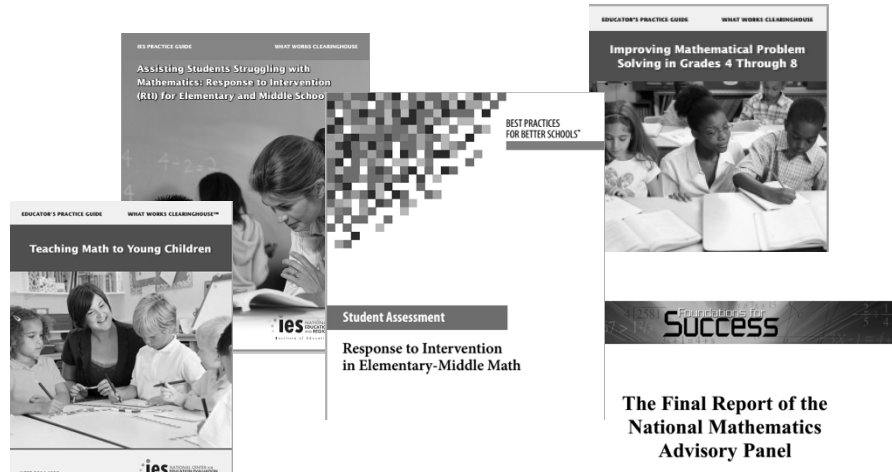
Record everything you know about RTI



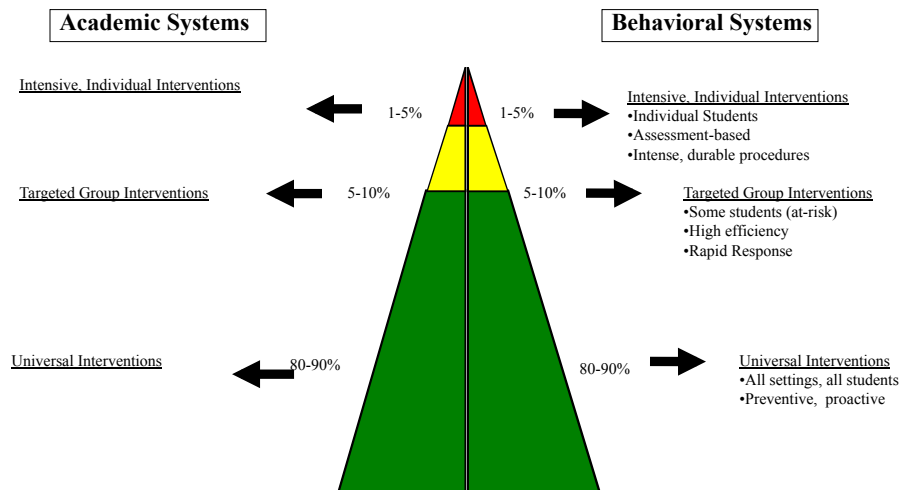
## Where do these ideas come from?



## Where do these ideas come from?



## Designing School-Wide MTSS A Continuum of Support for All



Adapted from Sugai (2007) and  
MU Center for School-wide PBS (2011)



## Structural/Instructional Examples

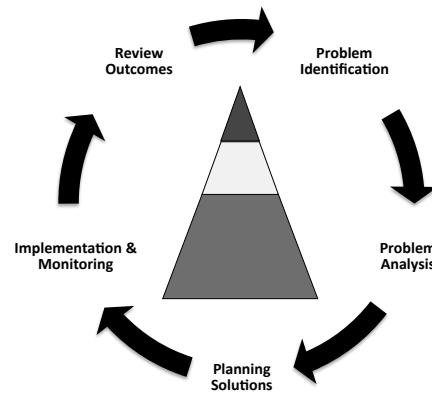
- Structural
  - 90 minute reading block
  - Universal screener
  - Progress monitoring
  - Tiered instruction
  - Collaboration meetings
  - Core Reading program
  - Core Math program
- Instructional
  - Explicit
  - Systematic
  - High Engagement
  - Sequenced with prior skills
  - Gradual Release of Responsibility
  - Immediate Corrective feedback

## Standard Protocol vs Problem Solving

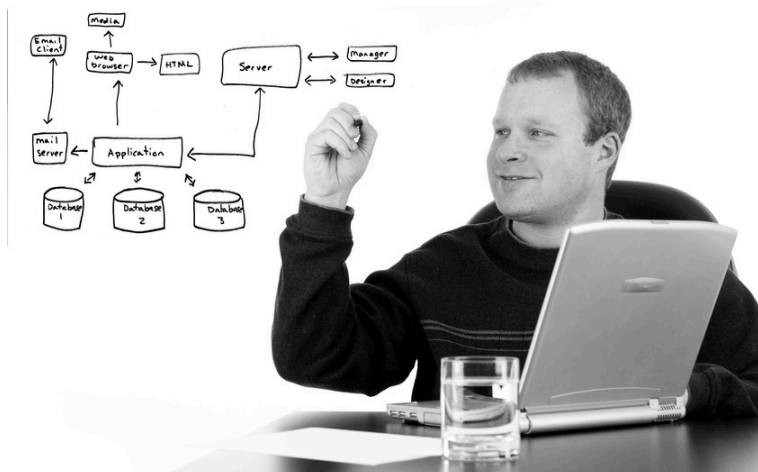
- How do you define them?
- What are the attributes of each of them?
- How do you select which one to use?
- How do you implement them effectively?

Jigsaw  
HO #2

## Problem Solving



## Standard Protocol



HO #3

## Hybrid Approach



### Example of Hybrid Approach

- May, Aug., Jan.:
  - Use of Standard Protocol for placement and intervention decisions
- Oct., Nov., Dec., Feb:
  - Use of Problem Solving to determine if the intervention is working and what potential adjustments might need to be made

## **Reflection on learning so far...**



## **Establishing Non-negotiables**



## **Establishing Non-negotiables**

- What are the important Non-negotiables for academic?
  - Universal Screening for all students
  - Instructional time allocation
  - Instructional materials to be used (ex. core reading program)
  - Agreed upon instructional approaches (use of learning configurations)
  - Agreed upon Scope and Sequence of Instruction
  - Whole and Small group instruction
  - Intervention for struggling students

## **Establishing Non-negotiables**

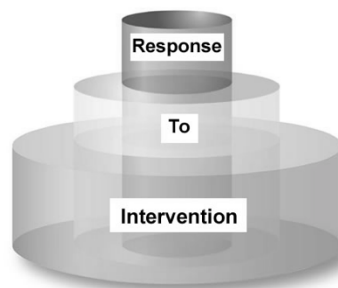
- What are the important Non-negotiables for behavior?
  - Universal Screening for all students
  - Accurate attendance data recorded
    - Tardy
    - Excused vs. Unexcused absences
  - Tier 1 Behavioral Plan in place for all students
    - Office Referral System in Place
    - Accurate discipline data recorded
  - Intervention for struggling students

## Reflection on learning so far...



## Chalk Talk Protocol

- Add to your chalk talk protocol on the outside of you circle.



## Break

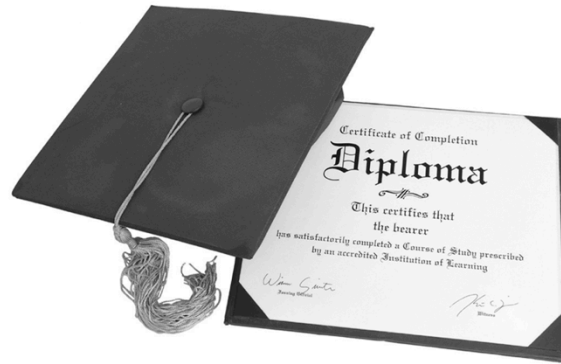


## Assessment System

Outcome  
Diagnostic  
Screening  
Progress Monitoring

Content

**Why is this such a critical piece?**



## Universal Screening

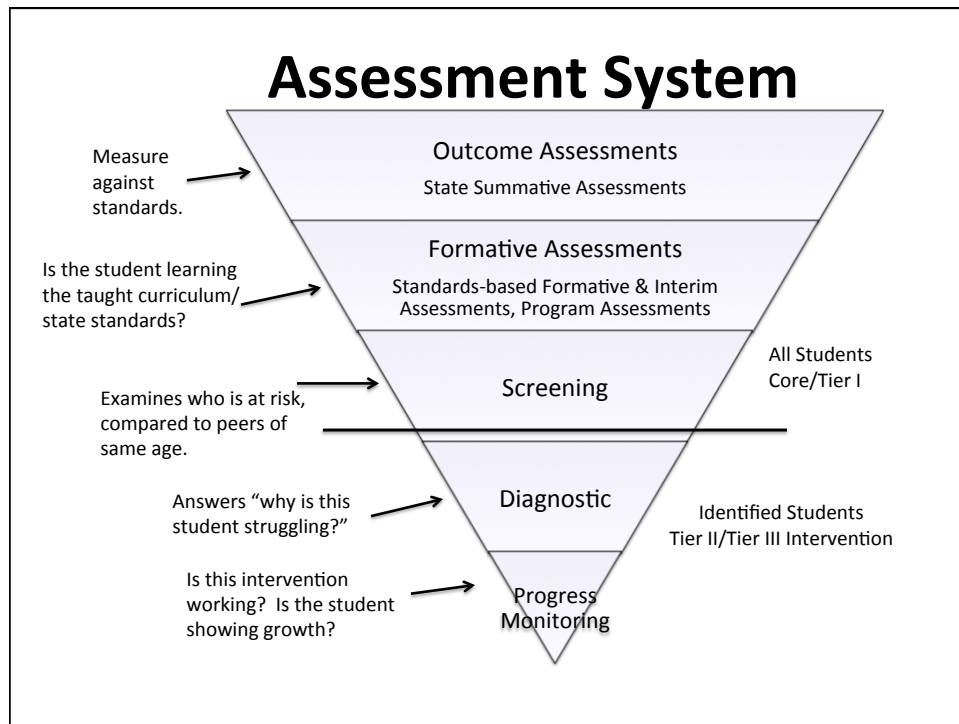
**All students**

**Usually 3 times a year**

**Measure performance compared to students of their own age**

**-Reliable and valid  
-Brief**





## Diagnosing-(looking for vulnerabilities)



## Diagnostic Tools

- Not grade level specific
- Skill specific
- Should be used with struggling students
- Usually takes about 20 minutes per child
- Information used for designing intervention or instructional emphasis in core instruction



## Mathematics

National Center on  
**INTENSIVE INTERVENTION**  
at American Institutes for Research ■



### Mathematics Assessment Supplement

**Student Worksheets, Teacher Instructions, and Answer Keys**

Counting

Basic Facts

Place Value Concepts

Whole Number Computation

Fractions as Numbers

# QUICK PHONICS SCREENER

Student Copy - page 2

Task 6(a)	lick sling sunk wrap ship whiz moth sigh chin knob
Task 6(b)	<p>The ducks chomp on the knot.                      What is that on the right?</p> <p>Wring the wet dish cloth in the sink.</p>
Task 7	<p>foam roast • flea creak • mood scoop • steep bleed</p> <p>raise waist • fold scold • spray gray • shout mount</p> <p>spoil join • joy royal • haul fault • brawl straw</p>

## 2nd Grade QPS Class Summary

Student Name	Task 1			Task 2		Task 3		Task 4		Task 5		Task 6	Task 7	Task 8	Task 9		
	Letter-sounds			VC & CVC		CVCC & CCVC		VCe		Vowel+e		Cons. Digraph	Vowel Pair	Prefix Suffix	2 syl	3 syl	4 syl
	26	21	5	10	20	10	10	10	10	10	10	10	30	30	10	10	10
Claire				9		7		7		4	4	8	3	3			
Jose				10		8		9		5	6	6	10	7			
Tammy				5	10	5	4										
Jamie				8		9		4	5	3	4						
Joseph				4	4	4	3										
Shawn				8		9		8		8		8	12	14			
Tia				5	5	4	4										
Brandon				9		9		7		8		8	17	18			
Matt				8		7		4	5	3	3						
Mary				10		10		9		7		4	9				

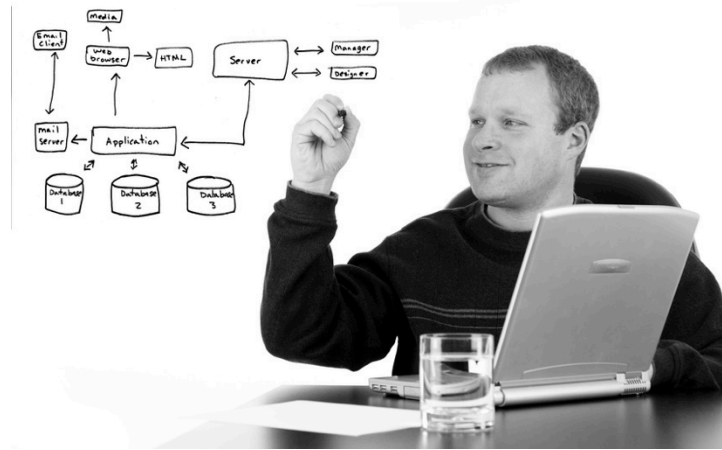
### Schools Often Use Only Six Steps

1. Establish an evidence-based core reading or language arts program appropriate to student and teacher population. Use DATA to determine if the core programs are effective.
2. Screen students and use DATA from screening assessment to identify those who may not be reading as well as expected for a grade level.
3. Group students with similar instructional needs based on the screening DATA.
4. Plan instruction based on DATA acquired during screening.
5. Teach students in small, homogenous groups. Use progress monitoring DATA to adjust instruction.
6. Progress monitor students and use DATA to adjust instruction accordingly.

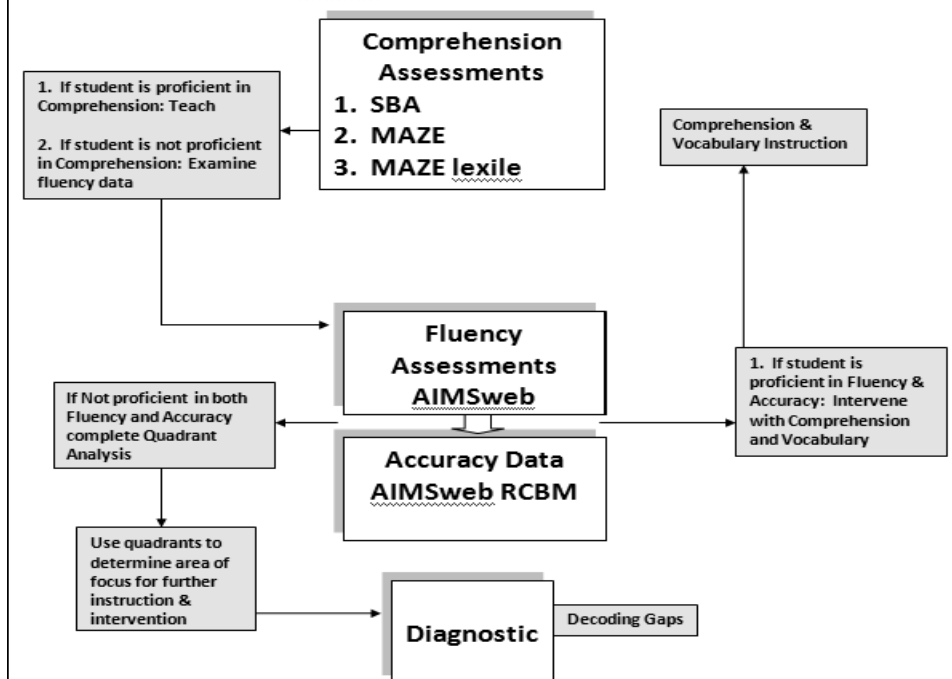
### Seven Steps to Achieve the Best Results

1. Establish an evidence-based core reading or language arts program appropriate to student and teacher population. Use DATA to determine if the core programs are effective.
2. Screen students and use DATA from screening assessment to identify those who may not be reading as well as expected for a grade level.
3. ***Diagnose weaknesses and use diagnostic assessment DATA to pinpoint the specific weaknesses of students identified during screening who are not performing as expected.***
4. Group students with similar instructional needs based on the screening and diagnostic DATA.
5. Plan instruction based on DATA acquired during screening and diagnosis.
6. Teach students in small, homogenous groups. Use progress monitoring DATA to adjust instruction.
7. Progress monitor students and use DATA to adjust instruction accordingly.

## Decision Making Flowchart for reading



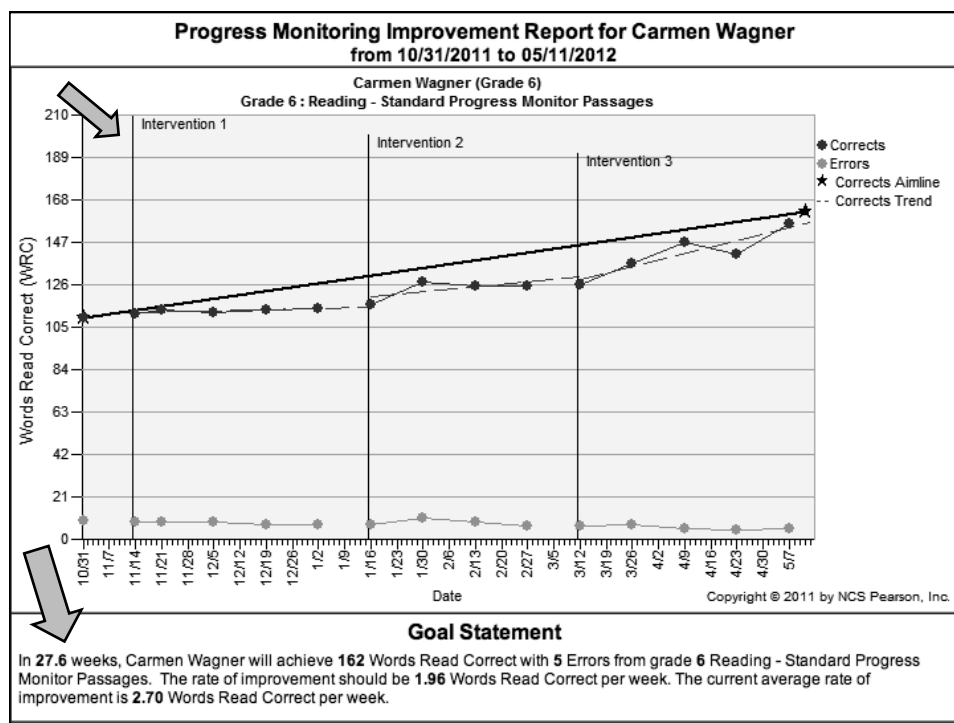
### Decision Making for Literacy 3<sup>rd</sup>- 8<sup>th</sup> Grade Students

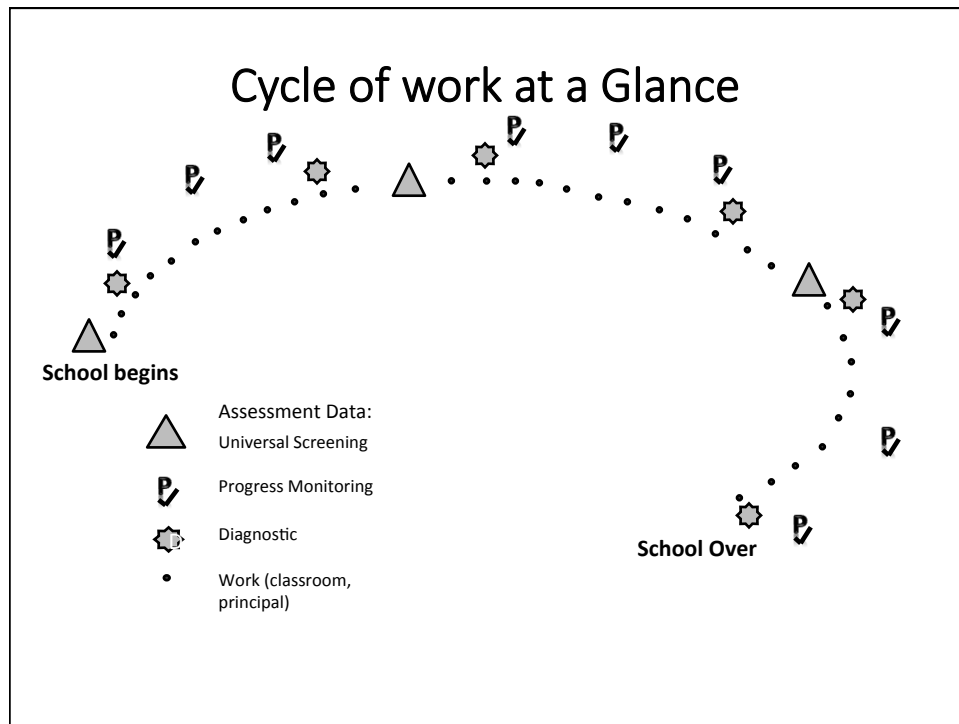


## Progress monitoring



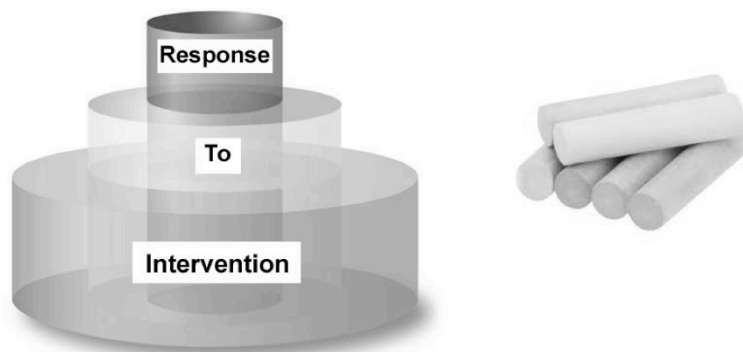
- Is the intervention having a positive impact?
- For struggling students





## Chalk Talk Protocol

- Add to your chalk talk protocol on the outside of your circle.



## Lunch



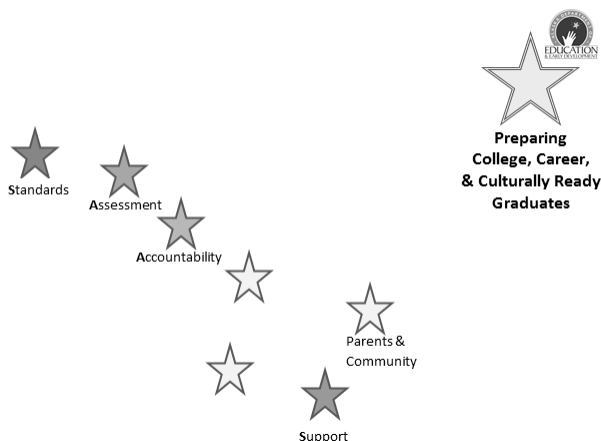
## Effective Core Instruction



$$\begin{array}{l} 2 > -3 \\ 0.999... = 1 \\ \pi \approx 3.14 \\ \sqrt{2} \\ 5(2+2) \\ 101_2 = 5_{10} \\ \infty \\ +, -, \times, \div \\ 5^2 \\ (1-2)+3 \\ 1+2 \cdot 3 \end{array}$$



## Alaska State Standards



## NCRTI Recommends Different Evidence Standards Across the Tiers

### Research-based curricula:

- Recommended for core instruction across subjects.
- Components have been researched and found to be generally effective.
- Curriculum materials have not been rigorously evaluated as a package.

### Evidence-based intervention:

- Recommended for Tier 2 and Tier 3
- Materials evaluated using rigorous research design
- Evidence of positive effects for students who received the intervention

(NCRTI, 2010)

## **Why do we need a core?**

- A core reading or core math program provides a system of instruction for students as they move through grade levels.



**Standards of practice must be  
clear  
because  
successful core instruction is  
the most important thing you  
can do in RTI.**

## Core Instruction in Reading



## Essential Components of Reading

- Phonological Awareness
- Phonics
- Fluency
- Comprehension
- Vocabulary



## Structuring the 90 minute block

- What are the important things to think about?
  - Essential Components of Reading
  - How much time to allocate for each component
  - Whole group and Small group instruction
  - Scope and Sequence

HO #4 & #5

## Examples of 90 minute schedules



## Managing Small Groups

### Skill grouping

- Flexible based on what the child has demonstrated
  - 2<sup>nd</sup> graders are grouped who didn't do well on "oi" sound last week
  - 5<sup>th</sup> grade readers are grouped who are strong at "summarizing," not on "inference"

### Ability grouping

- Students generally read at the same level, but it may be for different reasons
  - A student who struggles due to decoding vowels is grouped with a student who struggles with reading speed.

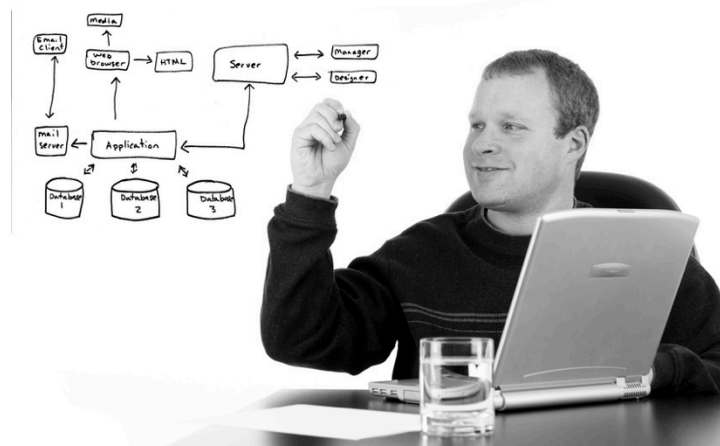
## Small group text is at the students *instructional* level

- Understand *why* students are in a group together
- Use multiple sources of data to determine the level
  - Screening data
  - Unit tests
  - Observations

## Using data to design 90 minute block

- How do we use data to decide how to build the 90 minute block?
- How do I know what needs more or less emphasis?
  - Using Diagnostic data to refine 90 minute block

## Decision Making Flowchart for reading



Four Groups Based on ORF Accuracy				Green = Benchmark	
				Yellow = Strategic	
				Red = Intensive	
Accuracy 97% or higher					
Accuracy above 97%	ORF				
WCPM	WCPM	Accuracy			
<b>Strong Rate &amp; High Accuracy</b>					
1	Jordan	140	95%		
	Caitlin	172	99%		
	Lamar	169	99%		
	Nigel	152	99%		
	Kammie	146	99%		
Accuracy above 97%	ORF				
WCPM	WCPM	Accuracy			
<b>Low Rate &amp; High Accuracy</b>					
2	Devon	96	99%		
	Timothy	92	99%		
	Monay	91	99%		
	Jasmine	75	99%		
	Darius	73	99%		
Accuracy Below 97%					
Accuracy below 97%	ORF				
WCPM	WCPM	Accuracy			
<b>Strong Rate &amp; Low Accuracy</b>					
3	Thomas	106	94%		
Accuracy below 97%	ORF				
WCPM below BM	WCPM	Accuracy			
<b>Low Rate &amp; Low Accuracy</b>					
4	Edward	91	94%		
	Dejay	91	95%		
	Chris	84	92%		
	Shalonda	70	91%		
	Junior	57	91%		
	Taylor	37	86%		
	Archie	34	89%		
	Harry	10	53%		
				<b>Check with Fist to Five</b>	

Small Group Instruction				Green = Benchmark	
Accuracy 97% or higher				Yellow = Strategic	
				Red = Intensive	
Accuracy below 97% WCPM = BM +					
WCPM	WCPM	Accuracy			
Janay	128	93%			
Tyvon	119	95%			
Thomas	106	94%			
Accuracy below 97% WCPM below BM					
WCPM	WCPM	Accuracy			
Edward	91	94%			
Dejay	91	95%			
Chris	84	92%			
Mark	78	95%			
Shalonda	70	91%			
Accuracy above 97% WCPM = BM +					
WCPM	WCPM	Accuracy			
Colin	104	99%			
Linsey	96	97%			
Devon	96	99%			
Timothy	92	99%			
Monay	91	99%			
Jasmine	75	99%			
Darius	73	99%			

## **Reflection on learning so far...**

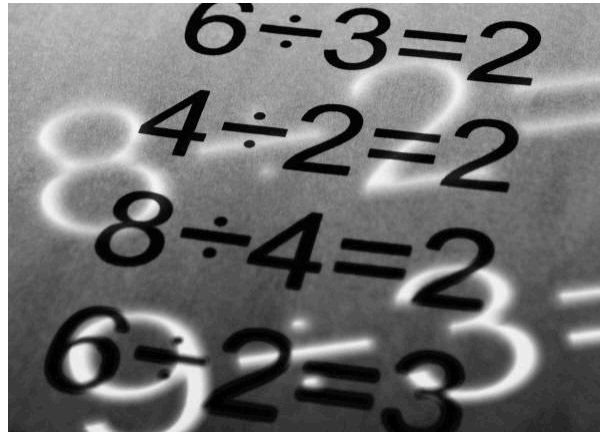


## **Break**





## Core Math Instruction



## General Shifts in Mathematics

**Focus:** focus strongly where the standards focus

**Coherence:** think across grades, and link to major topics in each grade

**Rigor:** in major topics, pursue with equal intensity

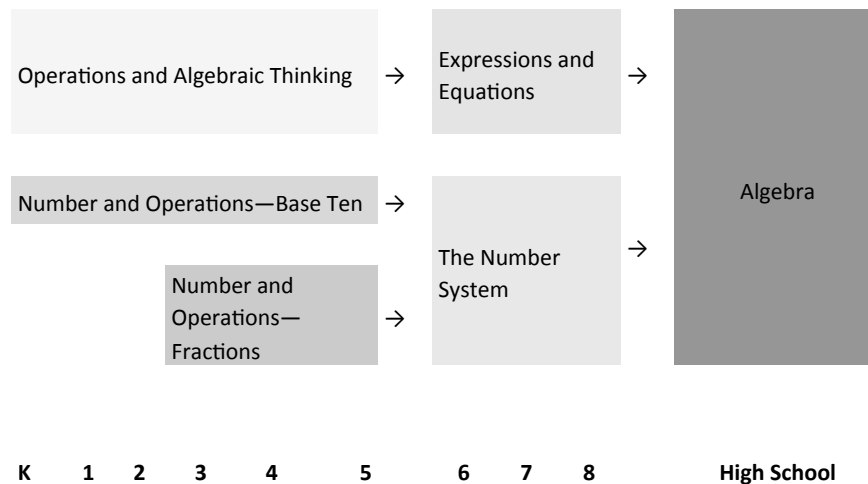
- conceptual understanding,
- procedural skill and fluency, and
- applications

Handout :  
Math  
Overview

## Traditional U.S. Approach



## Focusing Attention Within Number and Operations



## Grouping of Mathematical Practices

### Reasoning and Explaining

2. Reason abstractly and quantitatively
3. Construct viable arguments and critique the reasoning of others

### Modeling and Using Tools

4. Model with mathematics
5. Use appropriate tools strategically

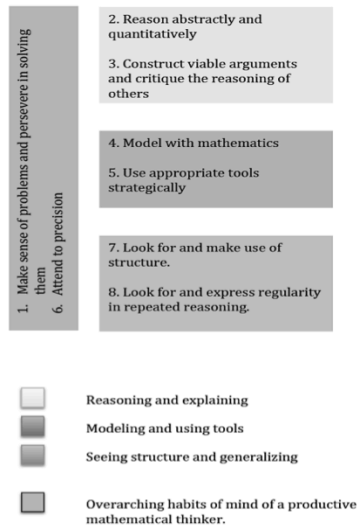
### Seeing Structure and Generalizing

7. Look for and make use of structure
8. Look for and express regularity in repeated reasoning

### Overarching Habits of Mind of a Productive Mathematical Thinker

1. Make sense of problems and persevere in solving them
6. Attend to precision

Adapted from (McCallum, 2011)

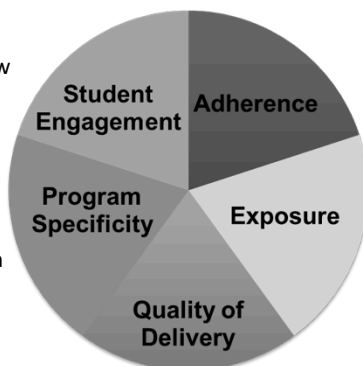


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## Five Elements of Fidelity for core instruction

**Student Engagement:** How engaged and involved are the students in the learning?

**Program specificity:** How well is the core instruction defined?



**Adherence:** How well do we stick to the plan, curriculum, or strategies

**Exposure/Duration:** How often does a student receive core instruction? How long does an instruction last?

**Quality of Delivery:** How well is the instruction delivered? Do you use good teaching practices?

(Dane & Schneider, 1998; Gresham et al., 1993; O'Donnell, 2008)

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National Center on Intensive Intervention

## Designing an Effective Intervention System

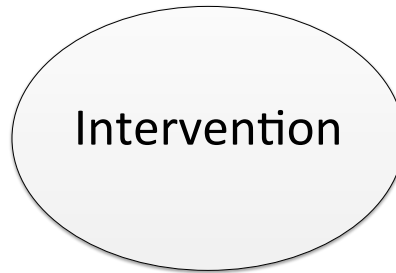


### **4** Considerations

- Supporting cognitive processes of students
- Intensifying instructional delivery
- Increasing learning time
- Reducing instructional group size.

## Intensifying Instructional Delivery

Provides for  
student  
response and  
teacher  
feedback



Is direct

Is systematic

Includes strategy  
instruction

Is explicit

## Tier 2 Instruction

- Evidence-based
- Aligns with and supports core instruction
- Implementation fidelity based on developer guidelines
- Delivered by well-trained staff in optimal group sizes
- Decisions are based on valid and reliable data and criteria are implemented accurately
- Supplements core instruction

## Tier 2 at the Secondary Level

For middle and high school students, homogeneous instruction can be provided to groups as large as 10 to 16 students for 30 to 50 minutes per day or one class period, at least three to four days per week. When using specific programs, it is necessary to follow program guidelines if group sizes are specified.

McCook, 2006

## Tier 3

- **FOCUS:** Students who have not responded to Tier 1 or Tier 2
- **INSTRUCTION:** Intensive, supplemental instruction delivered to small groups or individually
- **SETTING:** General education classroom or other general education location within the school
- **ASSESSMENTS:** Progress monitoring, diagnostic

## Tier 3 Instruction

- Evidence-based
- More intense than Tier 2
- Implementation fidelity
- Delivered by well-trained staff in optimal group sizes
- Decisions are based on valid and reliable data, and criteria are implemented accurately.

## Middle School Research

- Study designed to see which approach yielded the best results:
  - Teacher designed intervention based on data
  - Programmatic approach

Response to Intervention for Middle School Students With Reading Difficulties: Effects of a Primary and Secondary Intervention (Vaughn et al.)

## Tier 3 at the Secondary Level

Intensive support for adolescent readers is provided in small, homogenous groups of five or less students for 50 to 60 minutes per day. Again, when using specific programs, it is necessary to follow program guidelines if group sizes are specified.

Denton, et al., 2007

## Before Implementing Tier 3

- ✓ The student's Tier 2 instruction is an appropriate match for his or her needs.
- ✓ The instruction has been delivered for a sufficient amount of time to determine response.
- ✓ The instruction has been delivered as planned—for example, if the intervention is supposed to take place for 30 minutes three times per week, did that *actually* happen?



## The Tiers – Supplemental and Intensive

### What are the differences?

More time needed for intervention.

More intensive and explicit instruction.

More customization of instruction.

Smaller group size.

Increased opportunities to respond.

Immediate corrective feedback.

More frequent progress monitoring and decision making.

## **INTENSIVE INTERVENTIONS FOR STUDENTS STRUGGLING IN READING AND MATHEMATICS**

### ***A Practice Guide***

Research-based guidance that reflects "best practices" for intensifying instruction in reading and mathematics for students with significant learning difficulties in K-12, including students with disabilities.



Tier 1	
1. Screen all students to identify those at risk for potential mathematics difficulties and provide interventions to students identified as at risk.	<b>Moderate</b>
Tiers 2 and 3	
2. Instructional materials for students receiving interventions should focus intensely on in-depth treatment of whole numbers in kindergarten through grade 5 and on rational numbers in grades 4 through 8. These materials should be selected by committee.	<b>Low</b>
3. Instruction during the intervention should be explicit and systematic. This includes providing models of proficient problem solving, verbalization of thought processes, guided practice, corrective feedback, and frequent cumulative review.	<b>Strong</b>
4. Interventions should include instruction on solving word problems that is based on common underlying structures.	<b>Strong</b>
5. Intervention materials should include opportunities for students to work with visual representations of mathematical ideas and interventionists should be proficient in the use of visual representations of mathematical ideas.	<b>Moderate</b>
6. Interventions at all grade levels should devote about 10 minutes in each session to building fluent retrieval of basic arithmetic facts.	<b>Moderate</b>
7. Monitor the progress of students receiving supplemental instruction and other students who are at risk.	<b>Low</b>
8. Include motivational strategies in tier 2 and tier 3 interventions.	<b>Low</b>

## Academic Interventions Tools Chart

<http://www.intensiveintervention.org/chart/instructional-intervention-tools>

National Center on  
**INTENSIVE INTERVENTION**  
at American Institutes for Research ■

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### Academic Intervention

This tools chart presents information about studies that have been conducted about academic intervention programs. The first tab, *Study Quality*, includes ratings from our TRC members on the technical rigor of the study design. The second tab, *Effect Size*, includes information about the results of the studies. The third tab, *Intensity*, provides information related to the implementation of the program as an intensive intervention. The fourth tab, *Additional Research*, provides information about other studies and reviews that have been conducted on the intervention. Additional information is provided below the chart.

Grade Level - Any - Subject - Any - Apply

Study Quality Effect Size Intensity Additional Research

Title▲	Study	Participants ①	Design ①	Fidelity of Implementation ①	Measures Targeted ①	Measures Broader ①
Academy of MATH	Torlaković (2011)	●	●	●	●	●
Academy of READING	Fiedorowicz & Trites (1987)	●	●	●	●	●
Academy of READING	Torlaković (2011)	●	●	●	●	●
Early Vocabulary	Wolke, Bloomfield, & Sanders	●	●	●	●	●

University of Missouri
School Psychology at Mizzou IU ECU Special Education at Mizzou



## Evidence Based Intervention Network

**Navigation and More**  
Home  
Overview of the EBI Network  
History of the EBI Network  
Other Resources  
Project Contributors

**Evidence Based Intervention Section**  
How to Select an EBI!  
EBI Network Manual  
Interventions  
Reading Interventions

### Math Interventions

The EBI Network math team (Dr. Erica Lembke at the University of Missouri, Dr. Sarah Powell at the University of Texas, Dr. Pamela Seethaler at Vanderbilt University and Elizabeth Hughes at Duquesne University) has developed a framework to present math interventions that incorporates both a focus on content area (e.g. Counting & Cardinality or Operations & Algebraic Thinking) and the type of problem the child is having (acquisition, proficiency or generalization). As with other interventions on the site each intervention will have a brief for field use. For more information about our plans, see our current guiding document.

- [Mathematics EBI Network Guiding Document](#)

To select the appropriate intervention consider what you think the most likely reason is for

[http://ebi.missouri.edu/?page\\_id=223](http://ebi.missouri.edu/?page_id=223)

## Behavior interventions

- Behavioral common reasons for problems
  - **It is a small group or classwide problem.**
  - **The student needs help learning the appropriate behavior.**
  - **The student is able to avoid (e.g. academic or social task) something when they engage in the behavior.**
  - **The student is able to gain something (e.g. attention) when they engage in the problem behavior.**
  - **The student needs help doing the behavior in a new setting, time or manner.** For example, the student can do the behavior in one class, but not in another class or the lunchroom.

## Behavior considerations

With those two basic questions it is possible to find evidence based interventions developed for that specific problem. After you select an intervention to try out there are some key next steps.

1. Select a time to do the intervention. Logically this should be when the child displayed the problem behavior.
2. Implement the intervention in that time period.
3. Continue to collect data for the intervention time period.
4. Compare the data collected in the intervention phase to previously collected outcomes to see if the child responds to the intervention techniques. The best manner to do this is to graph out the data.

## Designing and Delivering Intensive Interventions: *A Teacher's Toolkit*

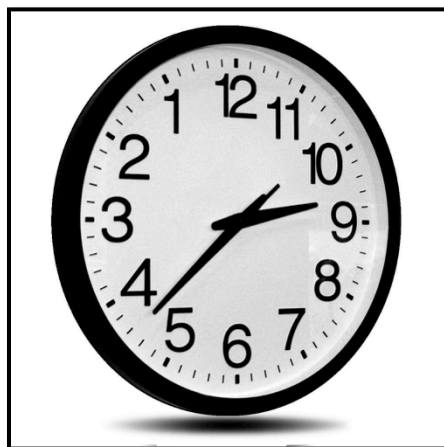


This toolkit provides activities and resources to assist practitioners in designing and delivering intensive interventions in reading and mathematics for K–12 students with significant learning difficulties and disabilities.

The tools provide both important information (summarized from *Intensive Interventions for Students Struggling in Reading and Mathematics*) and broad guidance to help practitioners learn about, plan for, implement, reflect on, and refine their delivery of intensive interventions.

## What to do if student is not responding?

Increase  
Learning  
Time



## Change Dosage or Time

- Minutes per day
- Minutes per session
- Sessions per week
- Total number of sessions

National Center on Intensive Intervention (April, 2014)

## Why should I change intervention time?

When well designed, increased time accelerates learning by:

- Allowing for more instruction.
- Providing more practice with feedback.
- Increasing students' engaged learning time.

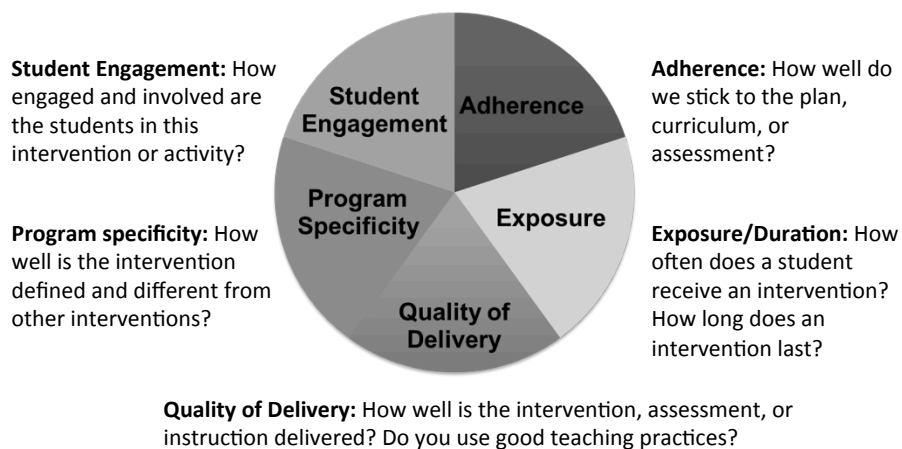
National Center on Intensive Intervention (April, 2014)

## Suggested length and frequency of intensive intervention?

Consider:

- How far the student is below grade level
- The length and frequency of the previous interventions
- The complexity of the learning tasks
- Student stamina and attention span

## Five Elements of Fidelity



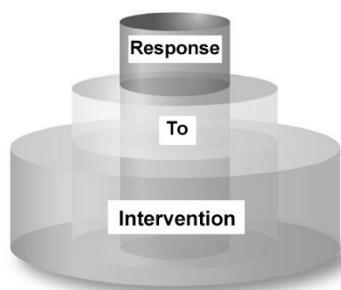
(Dane & Schneider, 1998; Gresham et al., 1993; O'Donnell, 2008)

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National Center on Intensive Intervention

## Chalk Talk Protocol

- Add your final pieces to your chalk talk protocol
- Celebrate what you have learned!



**Thank you for being here and  
have a wonderful conference...**

