

# **RTI Overview, Foundations, and Components**

November 4, 2013

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Many materials included in this presentation were developed with the NDTACRTI. Funding for NDTACRTI was provided by the U.S. Department of Education, Office of Special Education Programs.

# Webinar Sequence

1. Big picture about RTI
2. Infrastructure of RTI in the school
3. Readiness and planning for RTI



# Today's Intended Outcomes

Participants will learn:

1. Rationale for RTI
2. RTI components
3. Integration of components in an elementary school application



# What is RTI?

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A Google listing on RTI includes:

- ❖ RTI International Metals
- ❖ RTI International (Research Triangle Park, NC)
- ❖ Remote Technologies Inc.
- ❖ Real Time Innovations, Inc.
- ❖ Restaurant Technologies Incorporated
- ❖ Record Technology, Inc



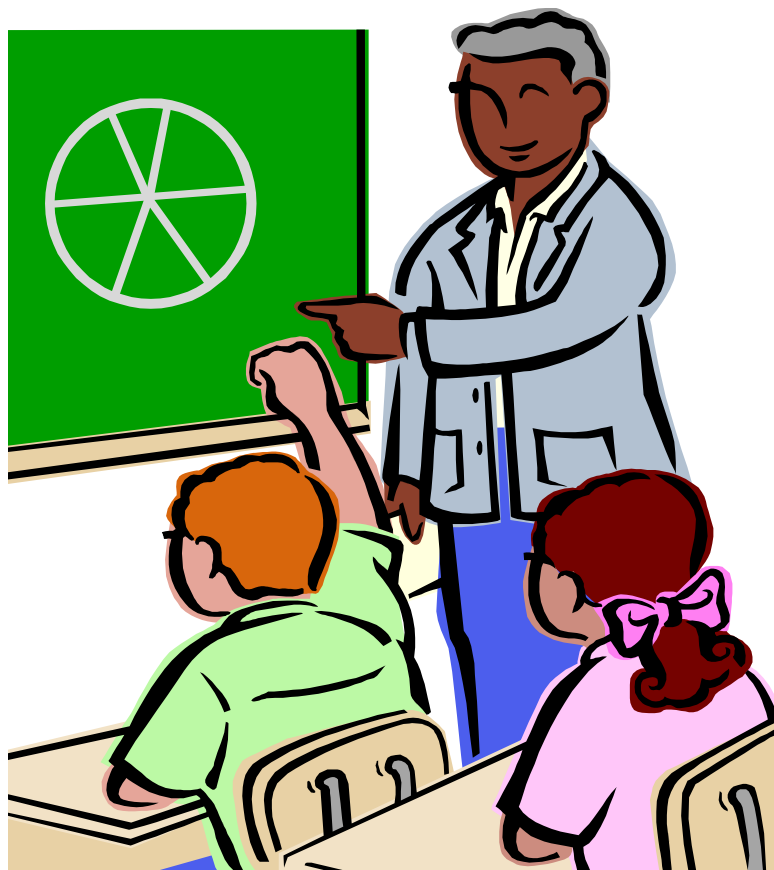
# What is RTI?

= Responsiveness to intervention

Organizational preventative framework for instructional and curricular decisions and practices based on students' responses

## RTI Components

- Screening
- Tiers of instruction
- Progress monitoring
- Decision-making rules



# What do **we** mean by RTI?

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**RTI** integrates assessment and intervention within a multi-level prevention system to maximize student achievement and to reduce behavior problems.

With RTI, schools identify students at-risk for poor learning outcomes, monitor student progress, provide evidence-based interventions and adjust the intensity and nature of those interventions depending on a student's responsiveness, and identify students with learning disabilities or other disabilities.



# Big Picture of RTI

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1. Fundamentally, RTI is about making a clearer match of *our* decisions to improving learners' outcomes.
  - Curricular decisions (e.g., Common Core State Standards)
  - Instructional decisions
  - Behavioral management decisions
2. Learners' limited responsiveness reflects *our* failure to make and implement effective choices.



# Images of RTI on the School Landscape





# New Yorkers' Perspectives

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- ❖ Hearing practitioners' perspectives in their school's RTI implementation
- ❖ VIDEO



# RTI Initiative



## Genesis

- ❖ Public health prevention applied to education
  - ❖ Prediction
  - ❖ Inoculation, and
  - ❖ Tiered intervention
- ❖ School-wide reform
  - ❖ Meeting AYP; data driven
  - ❖ Shifting staff roles
  - ❖ Accountability
- ❖ Component of disability determination



# Views on RTI applications

## Distinct Uses

1. Prevention (kdg & early 1st grade) (e.g., McMaster et al., O'Connor et al., Torgesen et al., Vaughn et al., Vellutino et al.)
2. Intervention for students with achievement or behavior problems
3. As a component of SLD determination (e.g., Fuchs et al.; Speece et al.)



# Advantages of Response-to-Intervention Approach

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1. The prevention model provides assistance to needy children in timely fashion.
2. Helps ensure that the student's poor academic performance is not due to poor instruction.
3. Assessment data are collected to inform the teacher and improve instruction.
4. Interventions are triggered through comparisons to peers.



# Why a Prevention Approach?

## Answer: The burden of catch-up growth

“Students who are behind do not learn more in the same amount of time as students who are ahead.

Catch-up growth is driven by proportional increases in direct instructional time.

Catch-up growth is so difficult to achieve that it can be the product only of quality instruction in great quantity.”

[p. 62, Fielding, Kerr, & Rosier (2007)]



# Initial status + Growth = Outcome

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- ❖ Correlation of initial achievement and ending achievement is .83 - .90.
- ❖ Students who start ahead, stay ahead; students who start behind, stay behind.
- ❖ Schools don't create the achievement gap; they inherit it.



# Catch-up Growth Example

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Roughly each unit of 13 %ile pts from the 50<sup>th</sup> %ile equals a year of growth:

State standard in percentiles: 50<sup>th</sup> %ile

Student X's G2 status in percentiles: 12<sup>th</sup> %ile

The difference is: 38 %ile points (50 – 12)

Percentile pt. diff. divided by 13: 2.9 yrs.



# Daily Instructional Minutes

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Daily min required for annual Grade 3 growth: 80

Daily min required for annual Grade 4 growth: 80

Additional daily min to make 3 yrs of additional growth:  
240

**Total grade 3 and grade 4 daily minutes: 400**

So, 200 minutes of direct reading instruction in G3 and in G4 is needed to reach the 50<sup>th</sup> %ile by the end of G4.



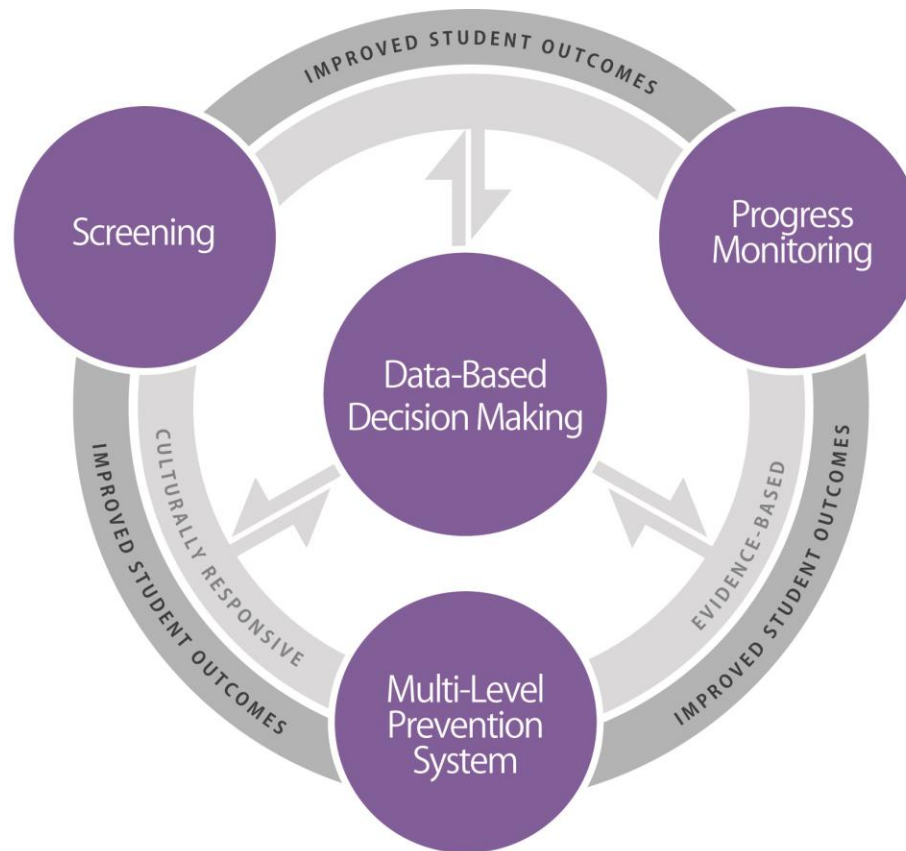


# Remediation is NOT the solution

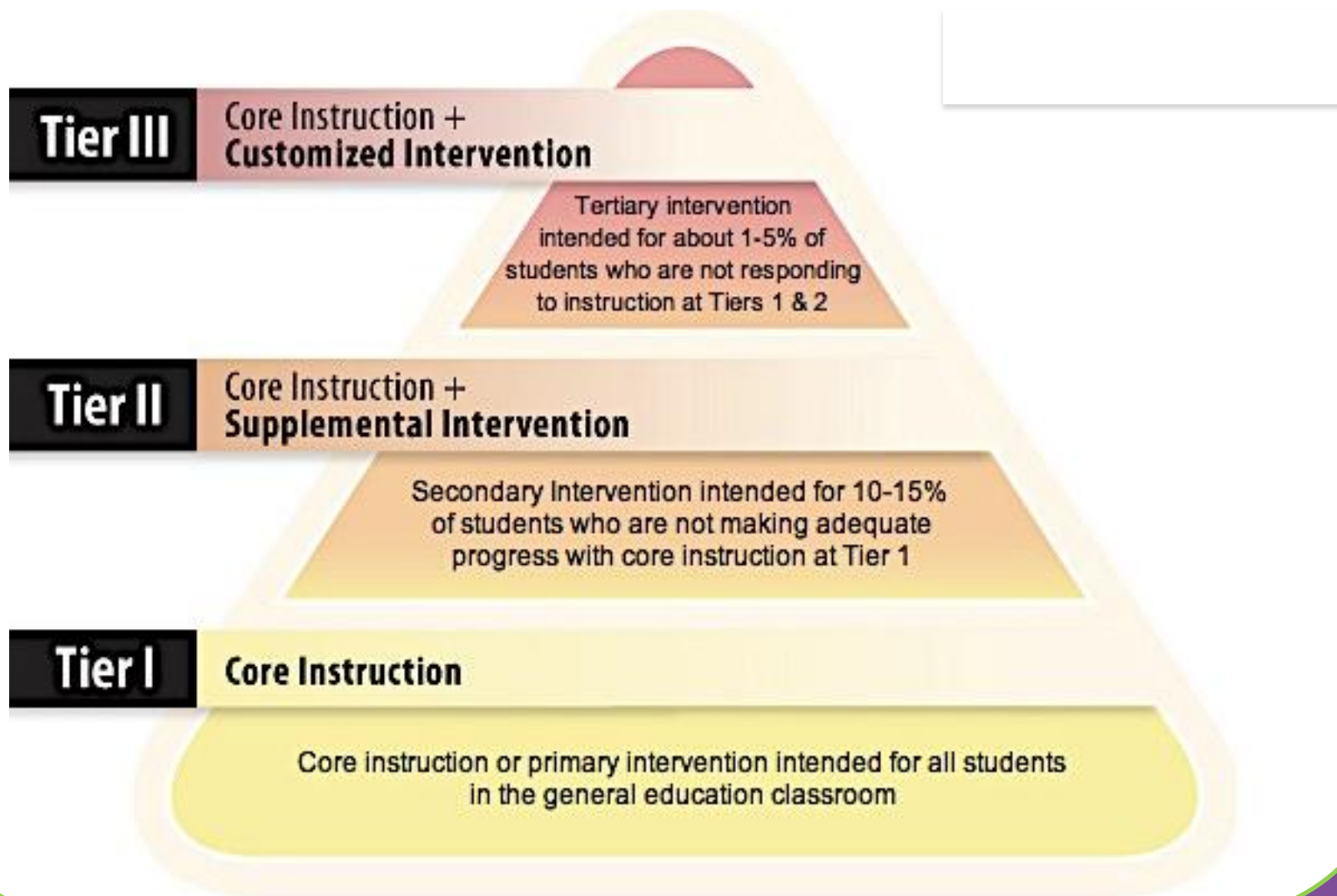
- ❖ “Catching up” places a huge resource burden on everyone in time, money, and expertise.
- ❖ Also creates an emotional burden on the student, parents, and staff.
- ❖ *How successful are we with “catching up” students?*
- ❖ Alternative is a prevention approach.



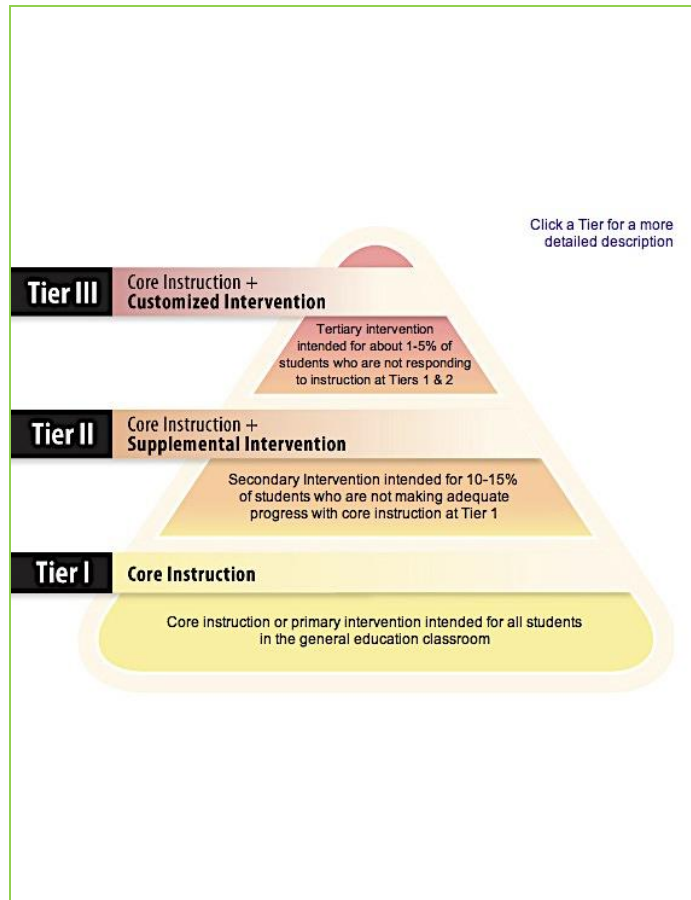
# Essential Components of RTI



# New York's Three Tier Framework



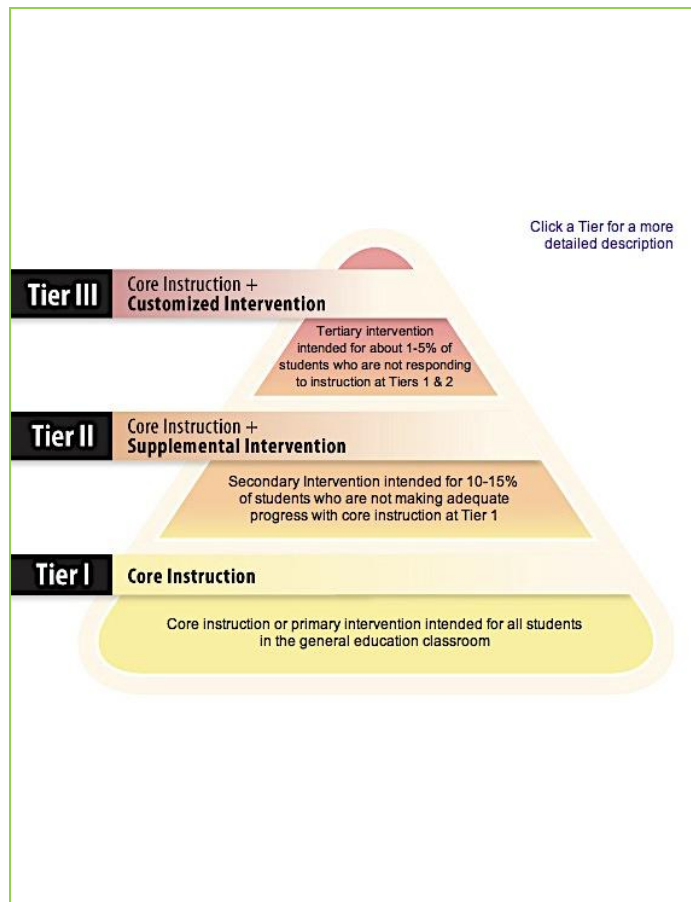
# Tier 1 Prevention



- ❖ **Interventionist:** general education teacher
- ❖ **Setting:** general education classroom
- ❖ **Grouping:** variable and flexible grouping formats
- ❖ **Curriculum:** scientific, research-based instruction aligned to state learning standards in core academic areas
- ❖ **Duration:** year-long
- ❖ **Length of Instructional Sessions:** involves a minimum of 90 minutes of uninterrupted, ELA instruction per day
- ❖ **Assessment:** all students are screened at least 3 times per year (fall, winter, spring)
- ❖ **Progress Monitoring:** students initially identified as at-risk on screening measures are progress monitored on a weekly basis for 5-6 weeks



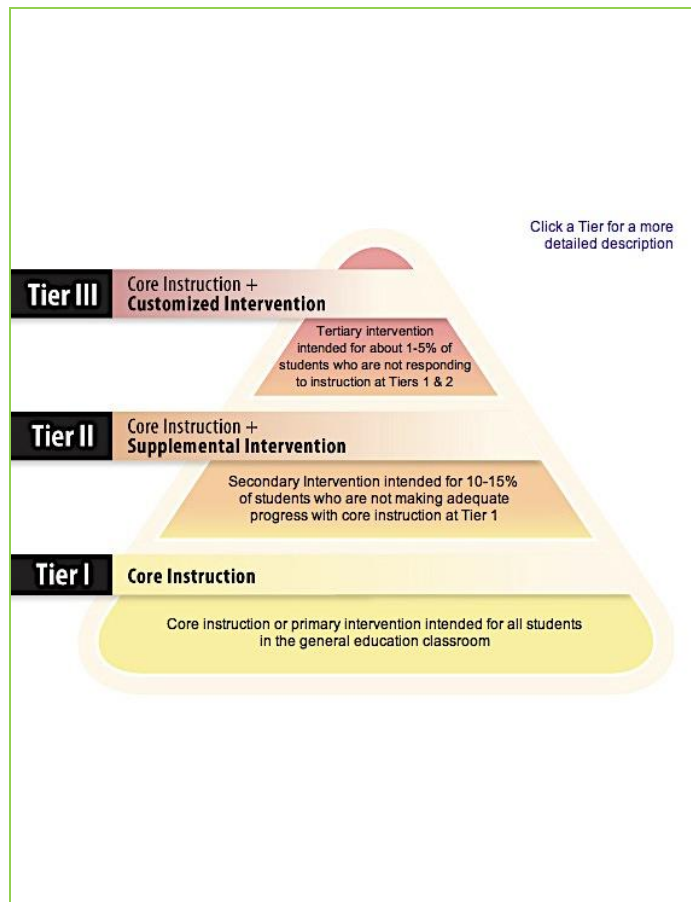
# Tier 2 Prevention



- ❖ **Interventionist:** trained, skilled and knowledgeable school personnel
- ❖ **Setting:** variable, can occur in and/or outside of general education classroom
- ❖ **Grouping:** small, homogeneous grouping (1:3 – 1:5)
- ❖ **Curriculum:** scientifically research-based instruction designed to remediate skill deficits of targeted students
- ❖ **Duration:** varies – based on rate of progress and performance of students; 10 to 30 weeks minimum
- ❖ **Length of Intervention Sessions:** 20 – 30 minutes, 3 to 4 times per week
- ❖ **Assessment:** may include formal and informal measures to inform instruction
- ❖ **Progress Monitoring:** twice monthly to examine rate and level of performance



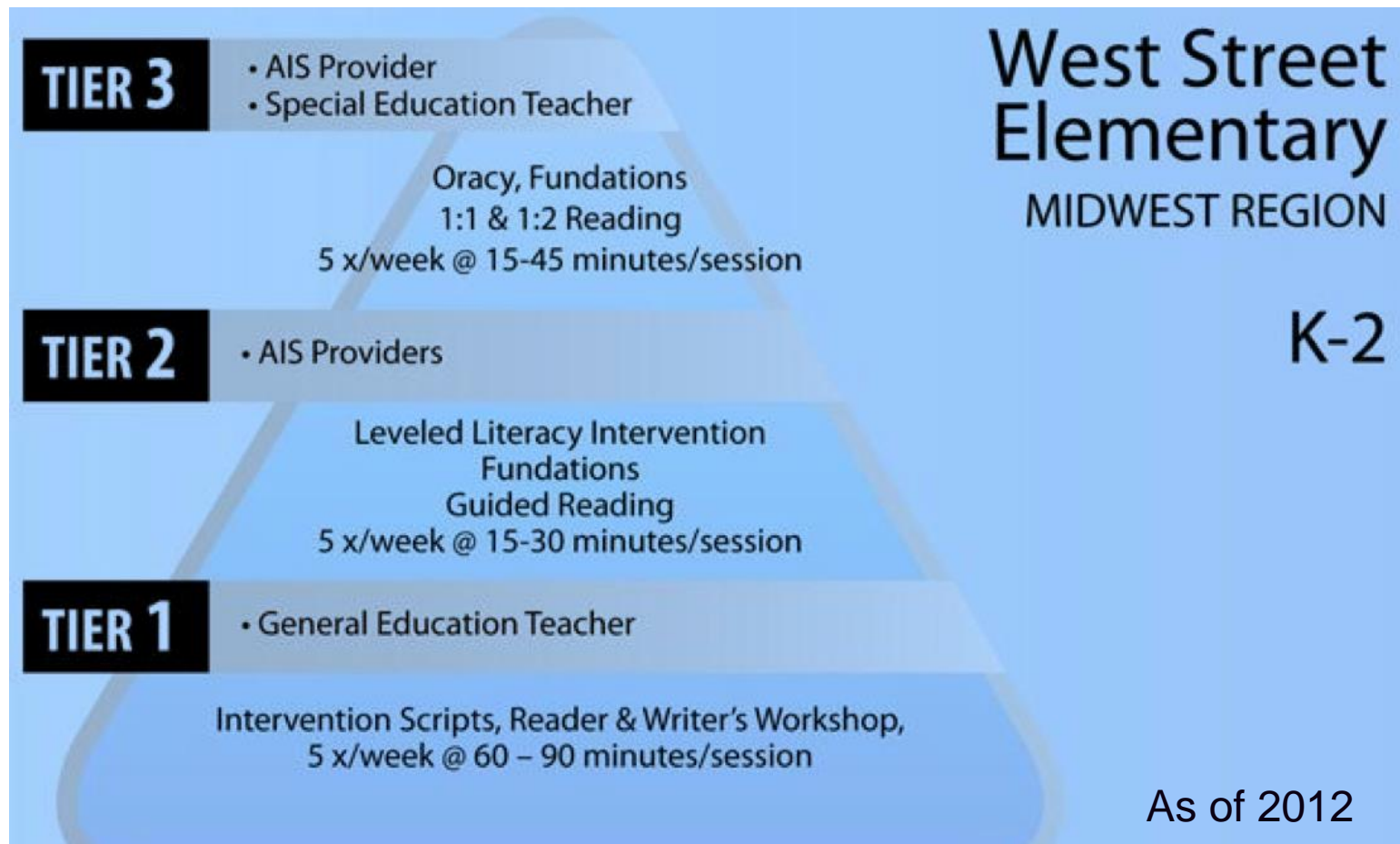
# Tier 3 Prevention



- ❖ **Interventionist:** highly trained, skilled and knowledgeable school personnel
- ❖ **Setting:** most often takes place outside of the general education classroom
- ❖ **Grouping:** small, homogeneous grouping (1:1 – 1:2)
- ❖ **Curriculum:** customized, intensive, systematic and research-based instruction that targets academic areas of greatest need
- ❖ **Duration:** varies- a minimum of 10-30 weeks
- ❖ **Length of Intervention Sessions:** 30 – 60 minutes, five times per week
- ❖ **Assessment:** may include formal and informal measures to inform instruction
- ❖ **Progress Monitoring:** minimum once per week



# Preventative Levels in School





# Areas of RTI good news

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What do you know?

1. Screening of primary school age youngsters provides valuable curricular and instructional information.
- ❖ Instructional approaches can prevent a high percentage of students' presenting academic and behavioral difficulties.





# Screening for Reading Risk

Grade	CBM Probe	Cut-off
Kindergarten	Letter Sound Fluency	< 10 letters/minute
Grade 1	Word Identification Fluency	< 15 words on list/minute
Grade 2	Passage Reading Fluency	< 15 words in text/minute
Grade 3	Passage Reading Fluency	< 50 words in text/minute
Grade 4	Maze Fluency	< 10 Maze replacements/ 2.5 minutes
Grade 5	Maze Fluency	< 15 Maze replacements/ 2.5 minutes
Grade 6	Maze Fluency	< 20 Maze replacements/ 2.5 minutes

Note: These figures may change pending additional RTI research.

# What else do we know?

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2. Progress monitoring is a demonstrated effective, research based practice
  - ❖ Teachers using students' progress monitoring results can make efficient decisions regarding changes in curricular and instructional practices





# MONTHLY ASSESSMENT

## Grade 5—Monthly Math Assessments 2009-2010

### **September:** Decimal Place Value (to the thousandths)

- Rounding/Comparing/Ordering decimals
- Relationship between fractions and decimals

### **October:** Multiplication/Division ( $3D \times 2D/4D \div 2D$ )

- Multiplication and Division of Whole Numbers
- Equivalent expressions in equations (including variables)
- Real-life situations where area and perimeter are used

### **November:** Measurement/ Concepts of Fractions and Decimals

- Equivalent fractions and equivalent fractions/decimals
- Determine the appropriate unit of measurement (linear, weight, mass)

### **December:** Fractions/ Statistics

- Add/Subtract Fractions with like/unlike denominators
- Mean, Median, Mode of data sets

### **January:** Probability/Concept of a variable

- Tree diagrams; represent probability of a single event with fractions/decimals
- Write word problems to match open sentences
- Concept of a variable in an expression or open sentence

### **February:** Graphs/Decimals, Circles

- Multiplication and division of decimals
- Graphs: stem/leaf, bar, line, picture
- Identify and describe parts of a circle

### **March:** Geometry

- Identification of shapes/geometric solids
- Measure and classify angles and triangles
- Area of right triangles
- Reflections, rotations, translations

### **April:** Problem Solving/Measurement

- Length, mass, weight, liquid volume, temperature
- Elapsed time
- Solve whole number problems

### **May:** Patterns

- Repeating, Growing, Numeric

## Grade 5 – December Monthly Problem Solving Assessment Form A

Name \_\_\_\_\_ Date \_\_\_\_\_

Directions: Circle the correct answer. Show your work. NPS-Ocean View Elem. 09-10

5 15x

1. A radio station manager kept track of the number of times a popular song was requested each day:

Number of Requests	
Sunday	15
Monday	35
Tuesday	38
Wednesday	44
Thursday	38
Friday	39
Saturday	40

What is the median number of times the song was requested?

- A 29  
B 38  
C 38.5  
D 44

5 15x

2. What is the mode of this data?

3, 1, 3, 1, 1, 2, 3, 3, 1, 3, 1, 3

- F 1  
G 2  
H 3  
J 4

5 15x

3. The chart below shows the ages of the employees at Pizza Chef.

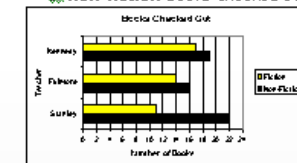
Ages of Employees				
18	23	31	34	17
21	20	23	27	35

How can you find the mean (average) of the ages?

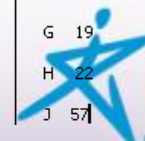
- A Divide 249 by 5  
B Subtract 17 from 35  
C Find the middle age when the ages are put in order from least to greatest.  
D Divide 249 by 10

5 15x

4. What is the mean (average) number of non-fiction books checked out?



- F 14  
G 19  
H 22  
J 57



**RTI ACTION NETWORK**

Helping All Students Succeed

# What else?

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3. The menu of research-based, effective interventions is growing
    - ❖ Multiple resources are available to guide selection:
      - What Works Clearinghouse
      - Florida Center on Reading Research
      - Best Evidence Encyclopedia
- (You don't have to rely on a publisher's report.)



# Defining Scientifically Based Research

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In the Elementary and Secondary Education Act (34 CFR 300.35) means research that involves the:

- a) Application of rigorous, systematic, and objective procedures to obtain reliable and valid knowledge
- b) Empirical methods of observation and experiment
- c) Appropriate data analysis
- d) Measures that yield reliable data
- e) Causal relationships based in experimental or other appropriate designs



# Not *all* students respond to standardized, evidence-based interventions

- ❖ Analysis of student response data from controlled studies suggests that approximately **3-5%** of students do not respond to standard, evidence-based intervention programs (Fuchs et al., 2012; Wanzek & Vaughn, 2009; Conduct Prevention Problems Research Group, 2002).
- ❖ Despite interventions being *generally* effective for students demonstrating difficulty
- ❖ Categorization of 'risk' may be too broadly defined in these studies to generalize to students with the most intensive needs
- ❖ Implications for students with disabilities and others with intensive intervention needs



# Evidence-Based Approach to Intensive Intervention: Data-Based Individualization (DBI)

DBI is a *systematic method* for using data to determine *when and how* to provide more intensive intervention:

- ❖ Philosophically similar to tenets of tiered intervention systems
- ❖ Origins in data-based program modification/experimental teaching developed at the University of Minnesota (Deno & Mirkin, 1977) and expanded by others (Fuchs, Deno, & Mirkin, 1984; Fuchs, Fuchs, & Hamlett, 1989b; Capizzi & Fuchs, 2005).
- ❖ DBI is a process, not a single program or strategy.
- ❖ Ongoing process comprising intervention and assessment adjusted over time



How do you suppose parents felt about their children's participation as their school implemented RTI? \_\_\_\_\_

In our national study of 60+ elementary schools, we spent considerable time hearing from parents in 21 of those schools.

The anecdotal comments were very affirming:

- ✓ More aware
- ✓ Better communication
- ✓ Better progress

NRCLD.org





# Parents as Partners



## ***RESPONSE TO INTERVENTION***

### **A Parent's Guide to Response to Intervention**

The University of the State of New York  
The State Education Department  
[www.nysed.gov](http://www.nysed.gov)



<http://www.nysrti.org/page/for-parents/>



# Parent Resources

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Free Download as a  
pdf at our website:  
[RTI4Success.org](http://RTI4Success.org)

Listed under RTI  
Resources:  
Briefs

The ABCs of RTI in Middle  
School: A Guide for  
Parents

The ABCs of RTI in  
Elementary School: A  
Guide for Families

Parent Frequently Asked  
Questions about  
Response to Intervention



# Additional Resources

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- National Center on Response to Intervention
  - [www.RTI4Success.org](http://www.RTI4Success.org)
- A Toolkit for Title I Parental Involvement - National Center for Family and Community Connections with Schools
  - [/www.sedl.org/connections/toolkit/](http://www.sedl.org/connections/toolkit/)
- National Network of Partnership Schools (NNPS)
  - [www.csos.jhu.edu/p2000/](http://www.csos.jhu.edu/p2000/)
- A Parent's Guide to Response to Intervention
  - [www.LD.org](http://www.LD.org)
- National Center on Intensive Intervention
  - [www.intensiveintervention.org](http://www.intensiveintervention.org)



# Thank You

## On the web @ [RTI4Success.org](http://RTI4Success.org)

Next topics:

- ~~1. Big picture about RTI~~
2. Infrastructure of RTI in the school
3. Readiness and planning for RTI

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