

Response to Intervention
SUMMER INSTITUTE

*Focus on Assessment
within a RtI Framework*

N Y S



T A C

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Century House, Latham NY

Using Data:
**Establishing Cut Points within
Universal Screening**

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AGENDA



- *What is universal screening?*
- *What are the primary purposes of screening in an RtI model?*
- *What are key characteristics of effective universal screening measures?*
- *What are some commonly used screening tools?*
- *How is at-risk status defined?*
- *When does Tier 2 begin?*
- *How do WE begin?*

RtI is the practice of providing **high-quality instruction/intervention** matched to **student needs** and monitoring progress on a frequent basis by examining **learning rate over time** and **level of performance** to inform **educational decisions**.

((NASDSE, 2005)



Tier III

Core Instruction +
Intensive, Customized Intervention

1:1 or 1:2 intervention
Progress Monitoring

Tier II

Core Instruction +
Intensive, Supplemental Intervention

Small group instruction (1:3–1:5)
20–30 minutes/group, 3–4x per week
Progress monitoring

Tier I

Core Instruction

Scientific, research-based core instruction
Universal screening recommended 3x per year
Should ideally meet the needs of about 80% of students




Critical Features of RtI



- **High quality, research-based instruction & intervention**
- **Interventions with increasing intensity**
- **Measurement**
 - ✓ **Universal screening for all students – 3 time per year**
 - ✓ **Systematic and frequent progress monitoring to determine by examining:**
 - **Level of performance**
 - **Rate of performance**
- **Data-based decision making**
- **Multi-tiered Model**

Universal Screening Defined



-  involves brief assessments that are valid, reliable and evidence-based
-  focuses on a specific skills (e.g., oral fluency, phoneme segmentation) that are predictive of future outcomes
-  in an RtI model - conducted with all students a minimum of 3x per year

Screening: Purposes



- **Accurately predict those students who may need further assessment and supplemental Tier 2 intervention**
- **Provide feedback about class performance to help school leadership identify when a teacher might require support**
- **If implemented on a regular basis across grade levels, identify students who slip through the screening at one level but are then identified at later points in their school years.**
- **Provides preliminary information about the “health” status of your core curriculum**

Characteristics of Effective Universal Screening Measures



1. Classification Accuracy

- Accurately classifies as student as at-risk or not at-risk (sensitivity, specificity)

2. Efficiency

- Easy to administer, score and interpret
- Quick
- No costly
- Does not require

3. Consequential Validity

- Poses no undue harm
- Interventions provided in a timely manner to those identified as at-risk

Common Screening Tools



AIMS Web

DIBELS

STAR

Texas Primary Reading Inventory

Screening Tool Review

TOOLS	AREA	Classification Accuracy	Generalizability	Reliability	Validity	Disaggregated Reliability, Validity, and Classification Data for Diverse Populations	Efficiency			
							Administration Format	Administration & Scoring Time	Scoring Key	Norms/ Benchmarks
AIMSweb	Reading Curriculum Based Measurement (R-CBM)	●	Moderate High	●	●	—	Individual	2 Minutes	Yes	Yes
Dynamic Indicators of Basic Early Literacy Skills (DIBELS)	Letter Naming Fluency	○	Moderate Low	●	●	—	Individual	2 Minutes	Yes	Yes
	Nonsense Word Fluency	●	Moderate Low	●	●	○	Individual	2 Minutes	Yes	Yes
	Oral Reading Fluency	●	Moderate High	●	●	●	Individual	2 Minutes	Yes	Yes
	Phoneme Segmentation Fluency	○	Moderate Low	●	○	●	Individual	2 Minutes	Yes	Yes
Scholastic	Phonics Inventory - Screener Version	●	Moderate High	●	●	—	Individual Group	10 Minutes	Computer Scored	No
STAR	Early Literacy	●	Broad	●	●	●	Individual Group	10 Minutes	Computer Scored	Yes
	Reading	●	Moderate High	●	●	●	Individual Group	10 Minutes	Computer Scored	Yes
STEEP	Oral Reading Fluency	●	Moderate High	●	●	—	Individual	1 Minute	Yes	Yes

Chart Legend: ● Convincing Evidence | ● Partially Convincing Evidence | ○ Unconvincing Evidence | — No Evidence Submitted

National Center on Response to Intervention
<http://www.rti4success.org>

Reading Skills Assessed Using CBM



Grade	CBM Measure
Kindergarten	Letter Sound Fluency Initial Sound Fluency Phoneme Segmentation Fluency
Grade 1	Word Identification Fluency Nonsense Word Fluency + Passage Reading Fluency
Grade 2	Passage Reading Fluency
Grade 3	Passage Reading Fluency
Grade 4	Maze Fluency Passage Reading Fluency
Grade 5	Maze Fluency Passage Reading Fluency
Grade 6	Maze Fluency Passage Reading Fluency

Types of Performance Measured



Accuracy



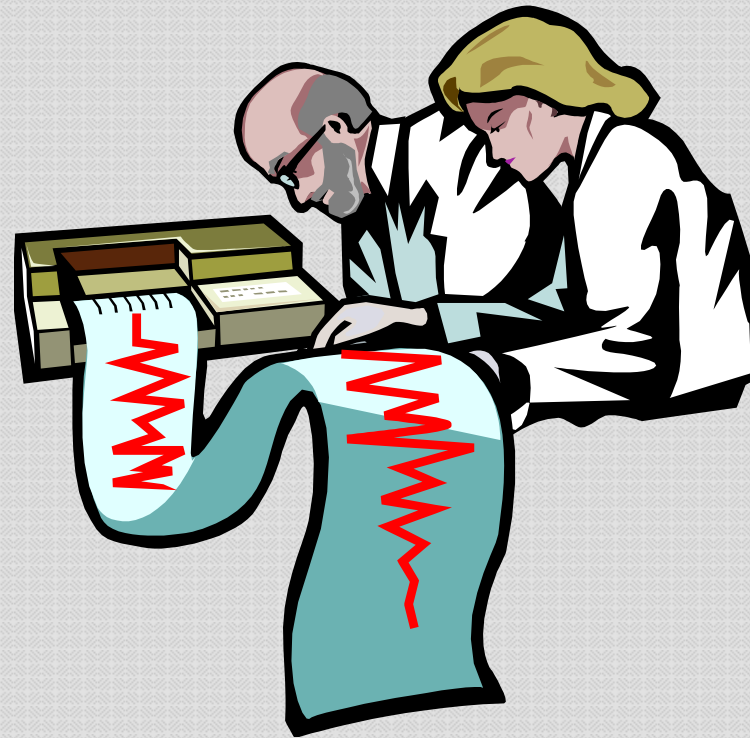
**percentage
of correct
responses on
tasks**

Fluency



**# of correct
responses/
minute**

Using Screening Data



Determining Who's At-Risk



Determine what criterion will be used to determine at-risk status

■ **Norm-Based Approaches**

- Percentile Rank Cut Scores
- Discrepancy Ratios

■ **Standards-Based/Benchmark Approaches**

- AIMSweb Standards
- Oregon DIBELS Standards

Norm Based vs. Standards Based



Norm-Based	Standards Based/Benchmarking
<ul style="list-style-type: none"> • Representative sample 	<ul style="list-style-type: none"> • All students
<ul style="list-style-type: none"> • Used for determining current levels 	<ul style="list-style-type: none"> • Used for determining current levels and growth over time at all three tiers
<p><i>(This row is crossed out with a diagonal line)</i></p>	<ul style="list-style-type: none"> • Universal screening for adequate progress at all levels & for determination of potential at-risk
<ul style="list-style-type: none"> • Pro: Provides local, state, or national context 	<ul style="list-style-type: none"> • Pro: Can be closely tied to high stakes outcomes
<ul style="list-style-type: none"> • Con: Students who meet norm-standard still may be at risk for failure on high-stakes tests 	<ul style="list-style-type: none"> • Con: Standards not currently available for all benchmark measures

Determining Who's At-Risk: Interpreting the Data and Reports



■ Norm-referenced Target Scores

- Students at or below a certain percentile on local or national norms are determined to be “at risk”
 - >50%ile = on target
 - 15-49%ile = some risk
 - 0-14%ile = high risk

- Can be problematic if a lot of students are having difficulty or if local norm group is very small

Sample: Norm-Reference Table - ORF

Hasbrouck and Tindal's Oral Reading Fluency Norms for Grades 1-8									
PERCENTILE	FALL	WINTER	SPRING	AWI	PERCENTILE	FALL	WINTER	SPRING	AWI
	WCPM	WCPM	WCPM			WCPM	WCPM	WCPM	
GRADE 1					GRADE 5				
90	—	81	111	1.9	90	166	182	194	0.9
75	—	47	82	2.2	75	139	156	168	0.9
50	—	23	53	1.9	50	110	127	139	0.9
25	—	12	28	1.0	25	85	99	109	0.8
10	—	6	15	0.6	10	61	74	83	0.7
GRADE 2					GRADE 6				
90	106	125	142	1.1	90	177	195	204	0.8
75	79	100	117	1.2	75	153	167	177	0.8
50	51	72	89	1.2	50	127	140	150	0.7
25	25	42	61	1.1	25	98	111	122	0.8
10	11	18	31	0.6	10	68	82	93	0.8
GRADE 3					GRADE 7				
90	128	146	162	1.1	90	180	192	202	0.7
75	99	120	137	1.2	75	156	165	177	0.7
50	71	92	107	1.1	50	128	136	150	0.7
25	44	62	78	1.1	25	102	109	123	0.7
10	21	36	48	0.8	10	79	88	98	0.6
GRADE 4					GRADE 8				
90	145	166	180	1.1	90	185	199	199	0.4
75	119	139	152	1.0	75	161	173	177	0.5
50	94	112	123	0.9	50	133	146	151	0.6
25	68	87	98	0.9	25	106	115	127	0.6
10	45	61	72	0.8	10	77	84	97	0.6

WCPM: Words Correct Per Minute

AWI: Average Weekly Improvement

Determining Who's At-Risk: Interpreting the Data and Reports



- **Criterion-Referenced “Benchmark” or Target Scores**
 - Target scores are set based on how well they predict success on another measure
 - Success on the next screening or success on a high stakes test
- 1.) Established, Low Risk or “Benchmark”:
 - ✦ 80% of the students would achieve subsequent goals
- 2) Emerging, Some Risk or “Strategic”:
 - ✦ 50/50 odds so no clear prediction
- 3) Deficit, High Risk or “Intensive”:
 - ✦ 20% or fewer of the students would meet subsequent goals

DIBELS Benchmark Goals

Kindergarten

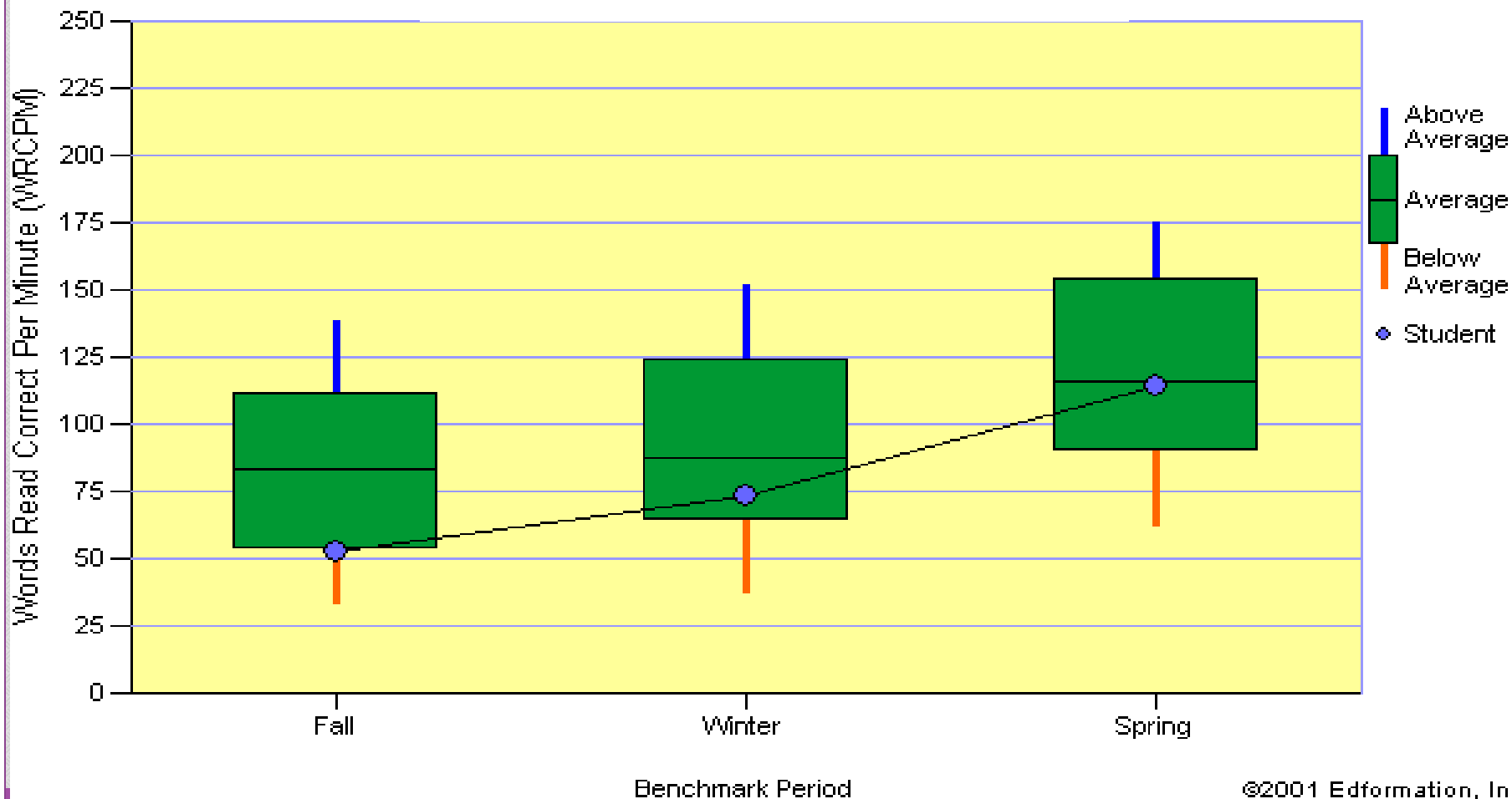
Variable	Beginning of Year		Middle of Year		End of Year	
	Performance	Status	Performance	Status	Performance	Status
DIBELS Initial Sound Fluency	ISF < 4	At Risk	ISF < 10	Deficit		
	4 <= ISF < 8	Some Risk	10 <= ISF < 25	Emerging		
	ISF >= 8	Low Risk	ISF >= 25	Established		
DIBELS Letter Naming Fluency	LNF < 2	At Risk	LNF < 15	At Risk	LNF < 29	At Risk
	2 <= LNF < 8	Some Risk	15 <= LNF < 27	Some Risk	29 <= LNF < 40	Some Risk
	LNF >= 8	Low Risk	LNF >= 27	Low Risk	LNF >= 40	Low Risk
DIBELS Phoneme Segmentation Fluency			PSF < 7	At Risk	PSF < 10	Deficit
			7 <= PSF < 18	Some Risk	10 <= PSF < 35	Emerging
			PSF >= 18	Low Risk	PSF >= 35	Established
DIBELS Nonsense Word Fluency			NWF < 5	At Risk	NWF < 15	At Risk
			5 <= NWF < 13	Some Risk	15 <= NWF < 25	Some Risk
			NWF >= 13	Low Risk	NWF >= 25	Low Risk

DIBELS Benchmark Goals

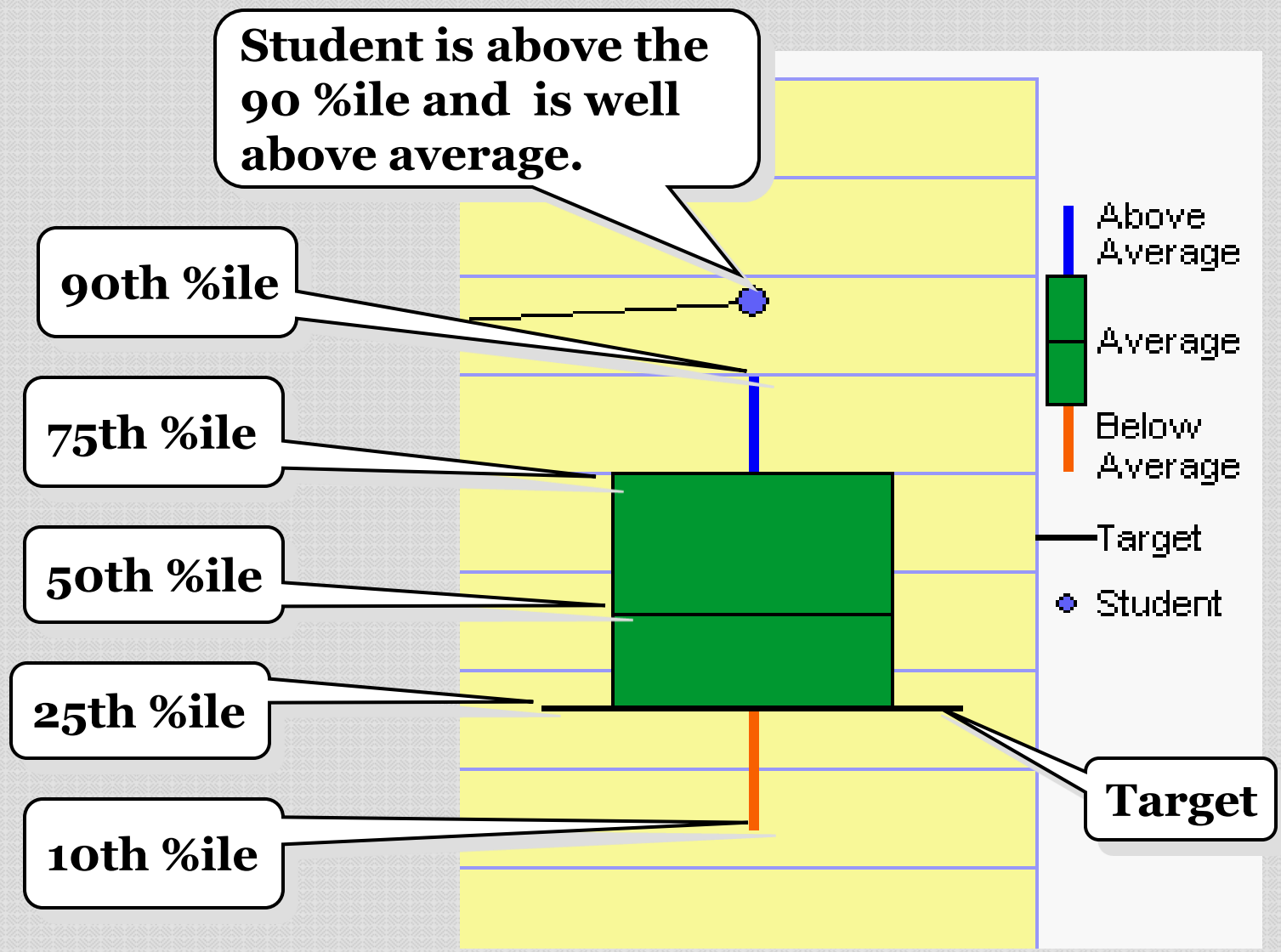
First Grade

Variable	Beginning of Year		Middle of Year		End of Year	
	Performance	Status	Performance	Status	Performance	Status
DIBELS Letter Naming Fluency	LNF < 25	At Risk				
	25 ≤ LNF < 37	Some Risk				
	LNF ≥ 37	Low Risk				
DIBELS Phoneme Segmentation Fluency	PSF < 10	Deficit	PSF < 10	Deficit	PSF < 10	Deficit
	10 ≤ PSF < 35	Emerging	10 ≤ PSF < 35	Emerging	10 ≤ PSF < 35	Emerging
	PSF ≥ 35	Established	PSF ≥ 35	Established	PSF ≥ 35	Established
DIBELS Nonsense Word Fluency	NWF < 13	At Risk	NWF < 30	Deficit	NWF < 30	Deficit
	13 ≤ NWF < 24	Some Risk	30 ≤ NWF < 50	Emerging	30 ≤ NWF < 50	Emerging
	NWF ≥ 24	Low Risk	NWF ≥ 50	Established	NWF ≥ 50	Established
DIBELS Oral Reading Fluency			ORF < 8	At Risk	ORF < 20	At Risk
			8 ≤ ORF < 20	Some Risk	20 ≤ ORF < 40	Some Risk
			ORF ≥ 20	Low Risk	ORF ≥ 40	Low Risk

Example of Benchmark Data



Box and Whisker Charts



Targets Tied to High Stakes Test

Grade	Measure	Target
1	Nonsense Word Fluency	January = 52 letter sounds correct/min
1	CBM Grade Level Oral Reading Fluency (ORF)	Spring = 52 words correct/min
2	CBM ORF	Spring = 90 words correct/min
3	CBM ORF	Spring = 109 words correct/min
4	CBM ORF	Spring = 127 words correct/min
5	CBM ORF	Spring = 141 words correct/min
6	CBM ORF	Spring = 166 words correct/min

Based on St. Croix River Education District 08-09 Targets linked to success on Minnesota Comprehensive Assessment – II

sampling of students

all students included

Student	Teacher	Fall WRC	Winter WRC	Winter Percentile Rank	Classification	Rate of Progress	Average Rate of Progress
S, A	Smith	209	208	1.00	Well Above Average	-0.1	1.3
K, D	Jones	159	170	0.93	Well Above Average	0.6	1.3
F, M	Smith	134	156	0.90	Above Average	1.2	1.3
H, A	Smith	130	148	0.81	Above Average	1.0	1.3
E, S	Smith	115	145	0.75	Average	1.7	1.3
P, A	Jones	96	133	0.68	Average	2.1	1.3
K, C	Jones	109	114	0.51	Average	0.3	1.3
S, D	Armstrong	66	112	0.46	Average	2.6	1.3
B, C	Armstrong	92	94	0.36	Average	0.1	1.3
E, A	Armstrong	61	80	0.25	Average	1.1	1.3
A, B	Smith	39	65	0.24	Below Average	1.4	1.3
R, P	Armstrong	42	63	0.22	Below Average	1.2	1.3
M, W	Jones	50	60	0.20	Below Average	0.6	1.3
G, S	Jones	28	58	0.19	Below Average	1.7	1.3
J, J	Smith	20	54	0.17	Below Average	1.9	1.3
M, A	Smith	38	51	0.15	Below Average	0.7	1.3
B, J	Jones	47	48	0.14	Below Average	0.1	1.3
P, M	Smith	47	45	0.10	Below Average	-0.1	1.3
A, D	Armstrong	38	45	0.10	Below Average	0.4	1.3
M, T	Jones	42	41	0.08	Well Below Average	-0.1	1.3
D, Z	Armstrong	31	39	0.07	Well Below Average	0.4	1.3
M, M	Smith	30	38	0.03	Well Below Average	0.4	1.3
D, A	Jones	18	38	0.03	Well Below Average	1.1	1.3
K, A	Armstrong	8	21	0.02	Well Below Average	0.7	1.3
A, J	Jones	7	18	0.00	Well Below Average	0.6	1.3

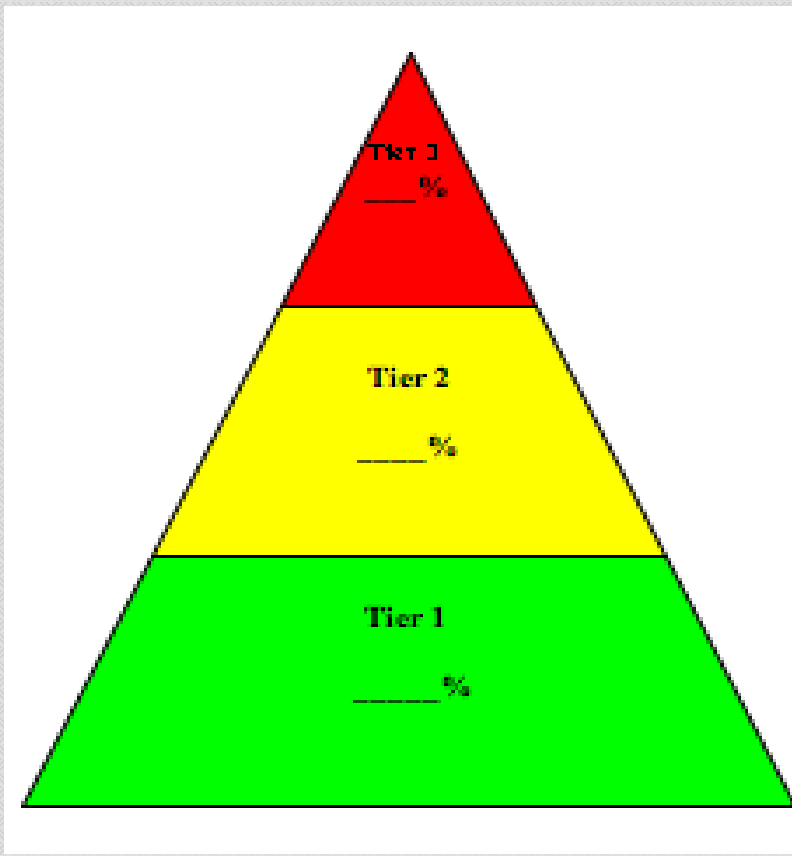
Determining Risk Status: Using Benchmark Data



Step 1: Determine Criterion Cut Scores

- Cut Score Options: Norm-Based vs. Standards –Based

Step 2: Determine % of students at each tier



Determining Risk Status: Using Benchmark Data - EXAMPLE

4th Grade R-CBM Scores Fall, 2008

Corrects	Errors
195	0
163	5
149	2
142	1
135	1
121	1
120	5
112	2
106	1
105	3
104	0
103	1
102	1
70	2
60	3
59	5
55	1
47	5
46	4
41	7



Low Risk => 105
(Green)
Some Risk = 104-
High Risk = < 70
(Red)

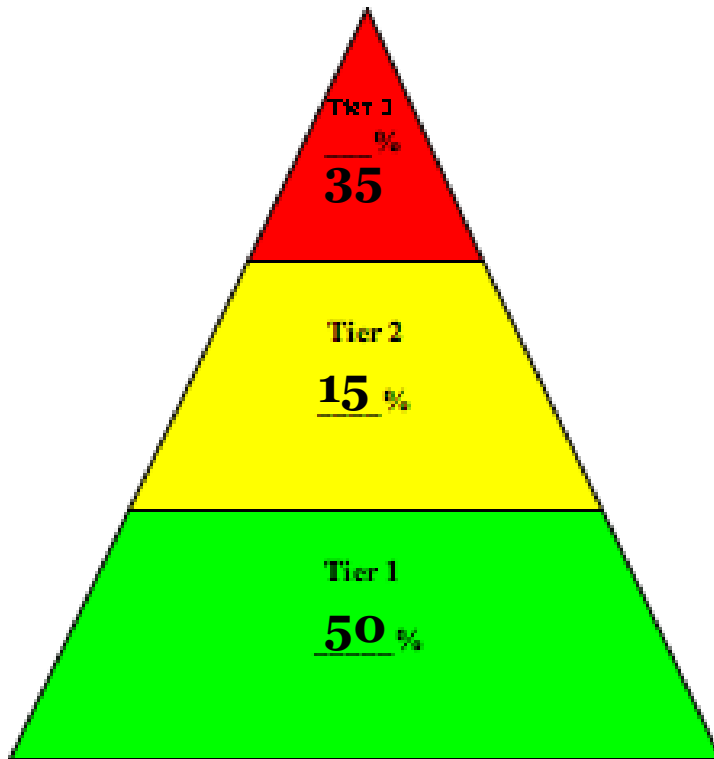
Risk Level	#	%
Low Risk (green)	10	10/20 = 50%
Some Risk (yellow)	3	3/20 = 15%
High Risk (red)	7	7/20 = 35%

Total tested = 20

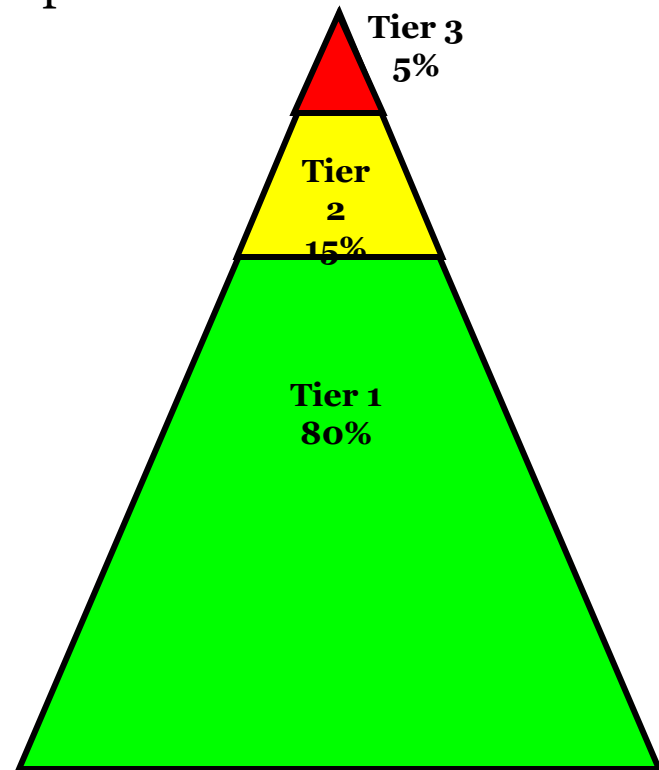
Determining Risk Status: Using Benchmark Data

Step 3: Compare to EXPECTATION

4th Grade Fall



Expectation



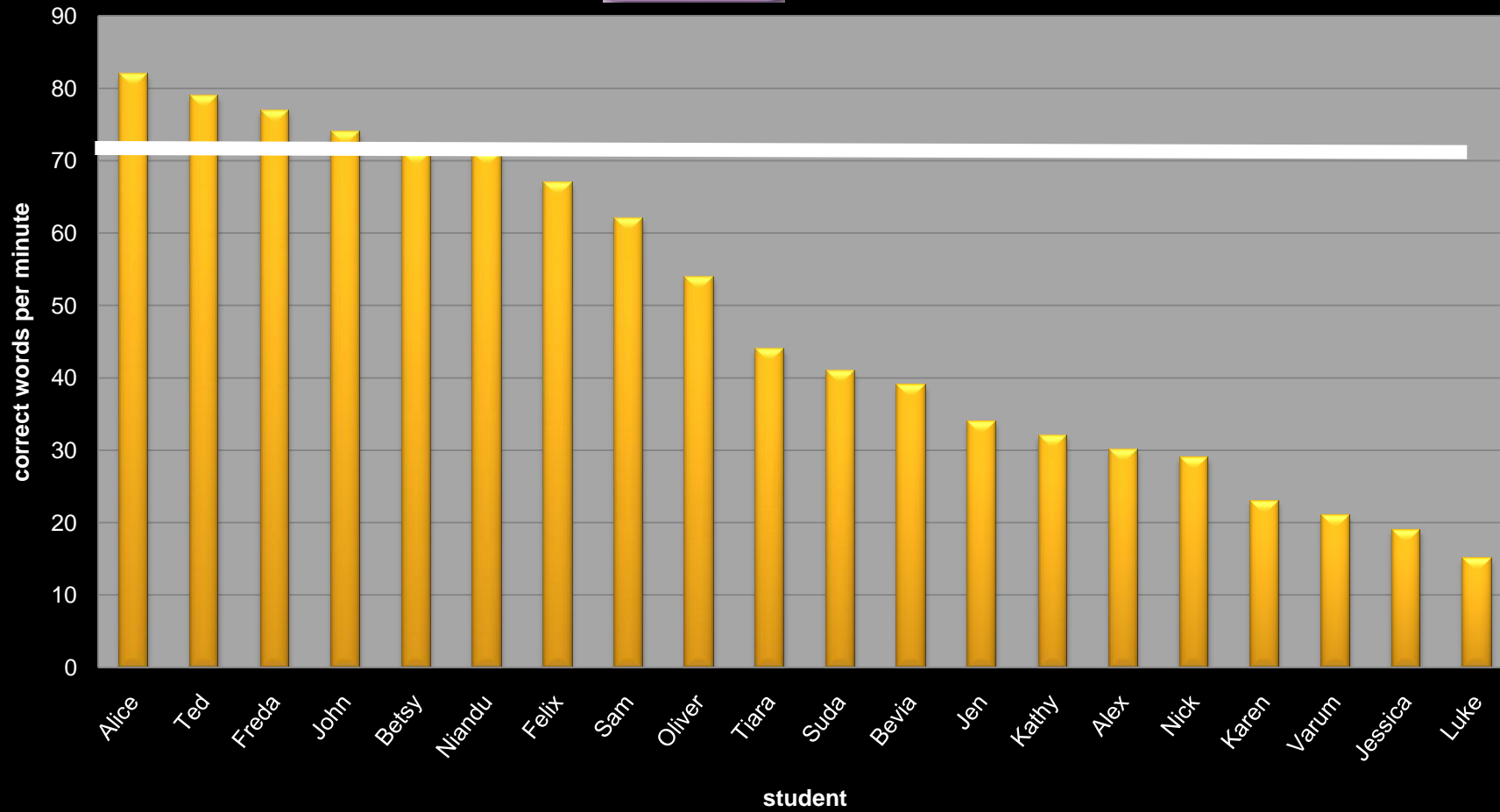
Decision Rule



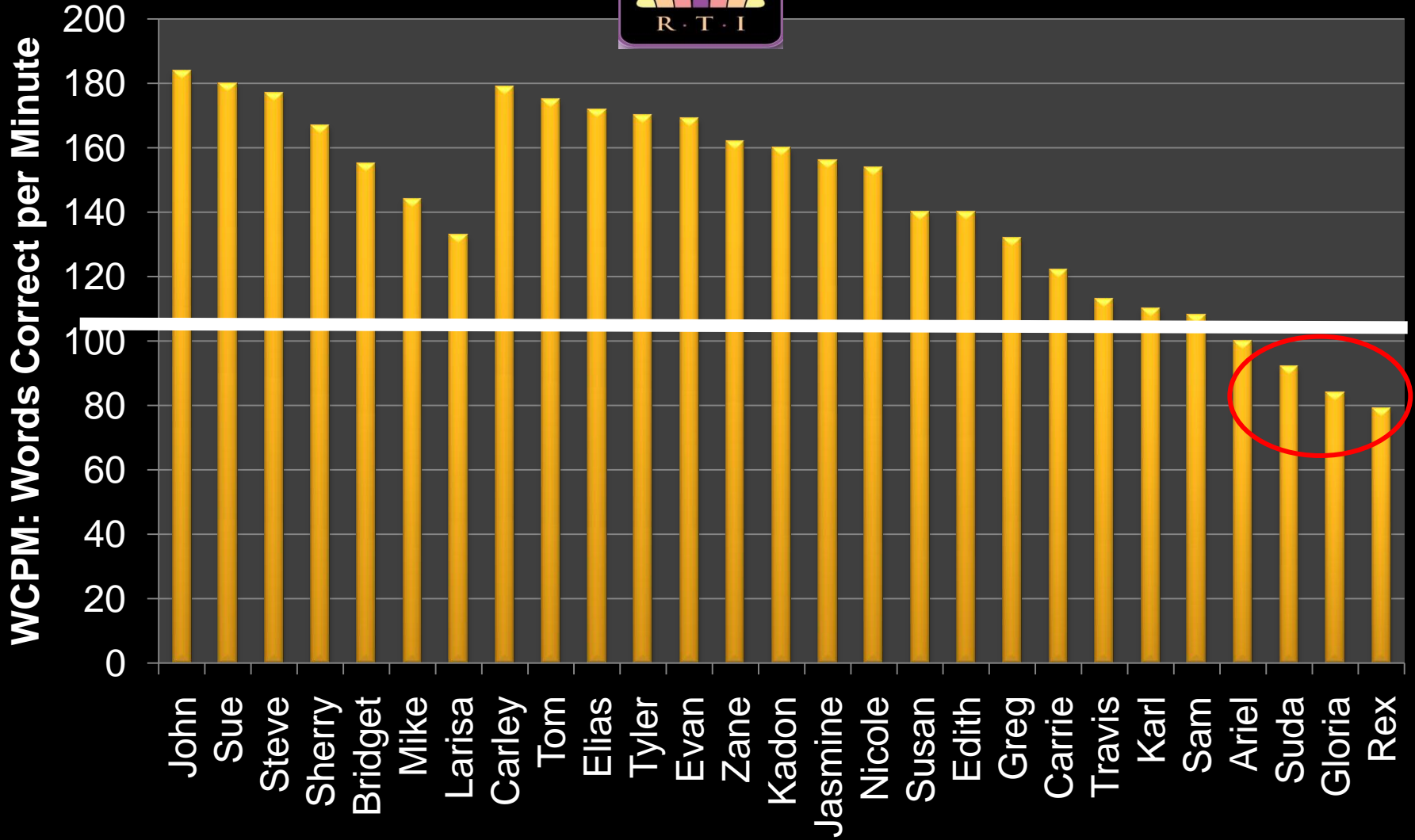
- If fewer than 80% of students in the general education classroom are meeting benchmarks, staff reviews the core programs or implementation, or both, of instruction

Mellard & Johnson, 2008

HOW HEALTHY IS YOUR CORE PROGRAM?

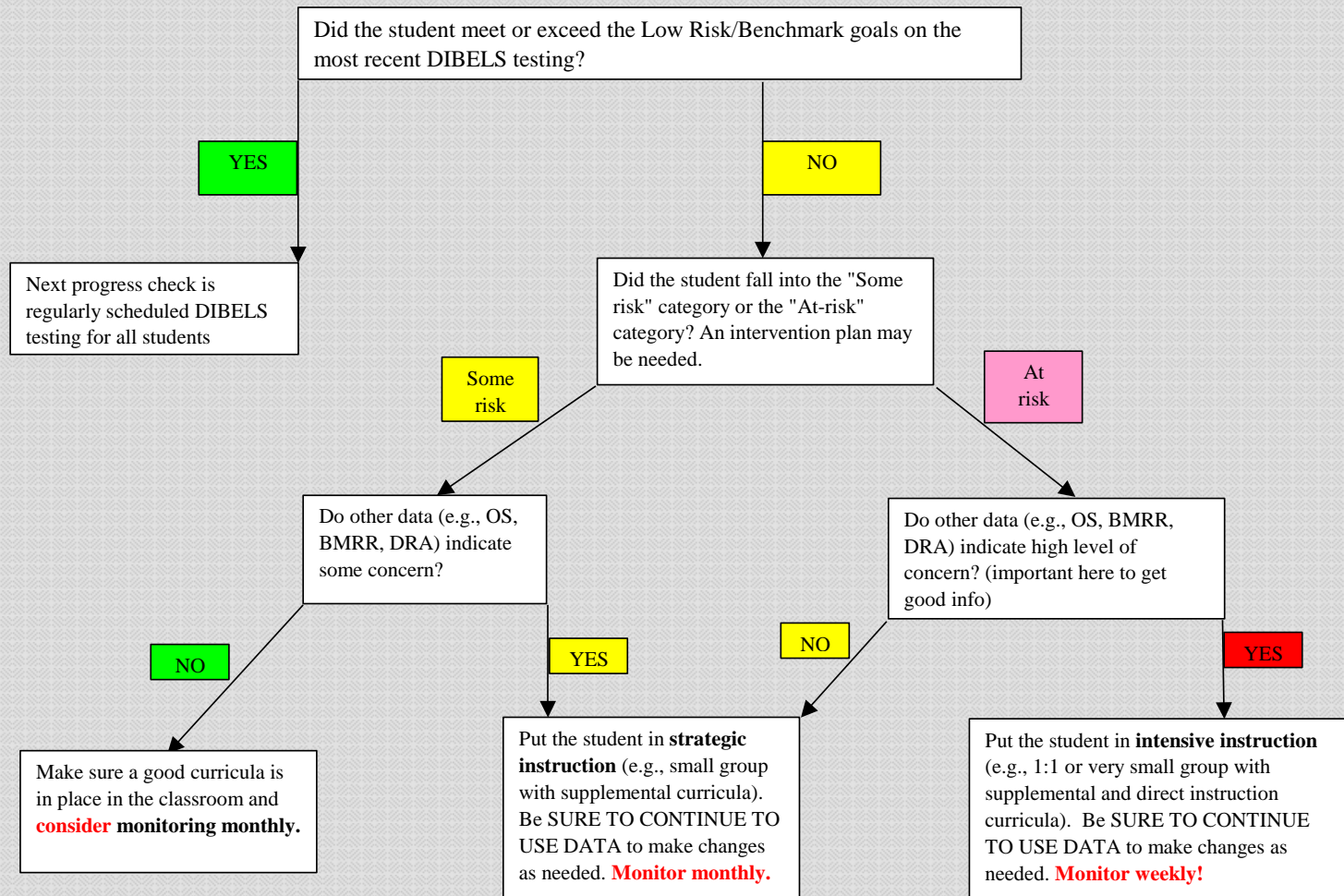


HOW HEALTHY IS YOUR CORE PROGRAM?



Decision-Tree for Screening Instructional Decision-Making & Progress Monitoring w/ DIBELS

***Decision-Tree for Screening, Instructional Decision-Making, & Progress Monitoring with DIBELS**



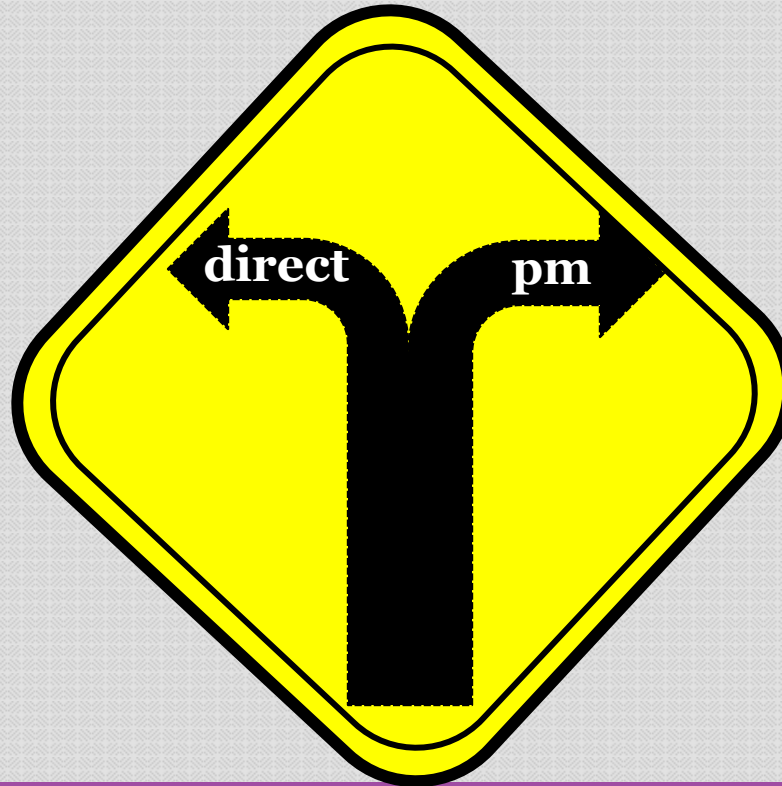
MN RtI Center

*Note: The concept and content of this model was provided by Dr. Lisa Stewart of MSUM

When Does Tier 2 Begin?



It depends on what route your take



Direct Route



- **Based on results of a one-time only screening measure**
- **Rationale: at-risk students should not have to wait to receive interventions because further observations or progress monitoring is needed**
- **Pro – students are provided intervention quickly**
- **Con – assumes a high level of accuracy in terms of identifying students who are truly at-risk**

Progress Monitoring Route



- **at-risk students are identified through initial screening**
- **additional progress monitoring of those at-risk students is provided to confirm status**
- **Pro: more reliable assessment**
- **Con: students may have to wait for additional intervention at a time when they need it the most**

Screening Challenges



Time

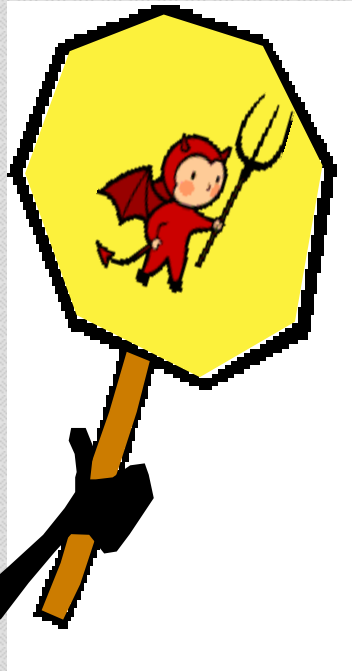


Appropriate screening materials



Data-based decision making

Caution!



*The devil is
in the details!*

So How Do We Start?



Things to do
before screening



Things to do
during screening



Things to do
after screening

Before Screening: WHAT



DETERMINE GRADE LEVELS THAT WILL BE SCREENED

✓ K-1??

✓ K-3??

✓ 1-4??

✓ All students?

Make this determination first

Before Screening: WHAT



✗ CHOOSE THE MEASURES

▣ Early Literacy

- ▣ Letter Naming Fluency
- ▣ Letter Sound Fluency
- ▣ Phonemic Segmentation
- ▣ Nonsense Word Fluency

▣ Reading

- ▣ R-CBM
- ▣ MAZE

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

Before Screening: WHAT TOOL?



☒ REVIEW EXISTING SCREENING TOOL OR SELECT A SELECT A TOOL WITH ACCEPTABLE PSYCHOMETRIC PROPERTIES :

- ☐ Does it have adequate reliability?**

- ☐ Does it have adequate predictive and concurrent validity?**

- ☐ Has it been normed on the population that is similar to the student population in your school ?**

Before Screening: WHEN



☒ ESTABLISH A SCREENING SCHEDULE

- **Fall**

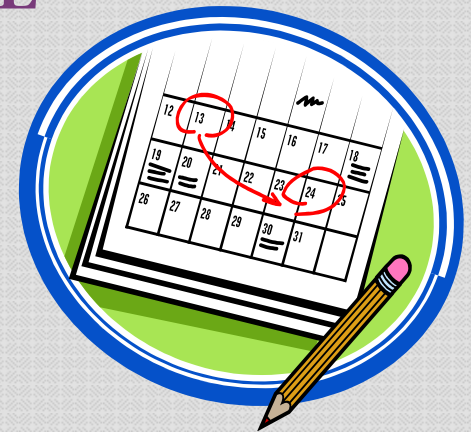
- ✦ Mid-September to October

- **Winter**

- ✦ January 1st to beginning of February

- **Spring**

- ✦ Mid-May to mid-June



- ☐ **Keep this to a two-week time frame for each benchmark period.**

Universal Screening Planning Sheet



Suggested Benchmark Weeks	Proposed School Calendar Week	Enhancers	Barriers
Fall (9/1-10/15)			
Winter (1/1-2/1)			
Spring (5/1-6/1)			

adapted from Illinois ASPIRE (n.d.)
Universal Screening

Develop the Schedule

Universal Screening/Benchmark Assessment Schedule Tuesday, June 4th

Grade/Teacher/ Classroom/#Students	Time	Testers	Location
Grade K • Jones – Rm. 201 (18) • Kelly – Rm. 202 (19)	9:15- 10: 15 10:20- 11:20	Besil, Gery, Deny	Cafeteria
Grade 1			
Grade 2			
Grade 3			
Grade 4			

Before Screening: WHO?



DETERMINE WHO WILL DO THE TESTING

- SWAT Team Approach?
- Classroom Teachers Approach?
- Classroom Teachers with Support Approach?

Type of Approach	Who's Involved	Pros	Cons
SWAT Team Approach	Support staff: Psychologists, speech therapists, social workers, counselors, special education teachers, etc.,	<ul style="list-style-type: none"> • Fewer staff to train • More control over process • Support staff may have more familiarity/expertise with CBM • Day collected within 1-2 days 	<ul style="list-style-type: none"> • Requires a large team • scheduling & logistical issues (space) • Disruption in support services • Limited connection to classroom practice
Classroom Teachers Approach	Classroom teachers	<ul style="list-style-type: none"> • High connection to classroom • Better “buy-in” for R-CBM as GOM • Less disruptive to school schedule 	<ul style="list-style-type: none"> • Need to train more staff • Less control over process • Staff - less familiar w/ CBM initially • Detracts from instructional time
Classroom Teacher with Support	classroom teacher plus support personnel	<ul style="list-style-type: none"> • Same as above • Promotes “We’re all in this together” attitude • Limited classroom disruption 	<ul style="list-style-type: none"> • Requires a large team • More staff to train • Can be more difficult to schedule • Support services disrupted

Before Screening: TRAINING



PROVIDE TRAINING ON ADMINISTRATION AND INTERPRETATION OF ALL SCREENING MEASURES TO SCREENING PERSONNEL

Refreshers sessions prior to each screening administration

Training for new staff members



Before Screening: MATERIALS



✘ SECURE SCREENING MATERIALS

- ✓ Have the student copies ready
- ✓ Have the examiner copies ready

✘ ADDITIONAL ITEMS

- ✓ A list of students to be screened
- ✓ Stop watch (required- digital preferred)
- ✓ Clipboard
- ✓ Pencil transparencies or paper copies of examiner passages
- ✓ Dry marker or pencil
- ✓ Wipe cloth (for transparencies only)

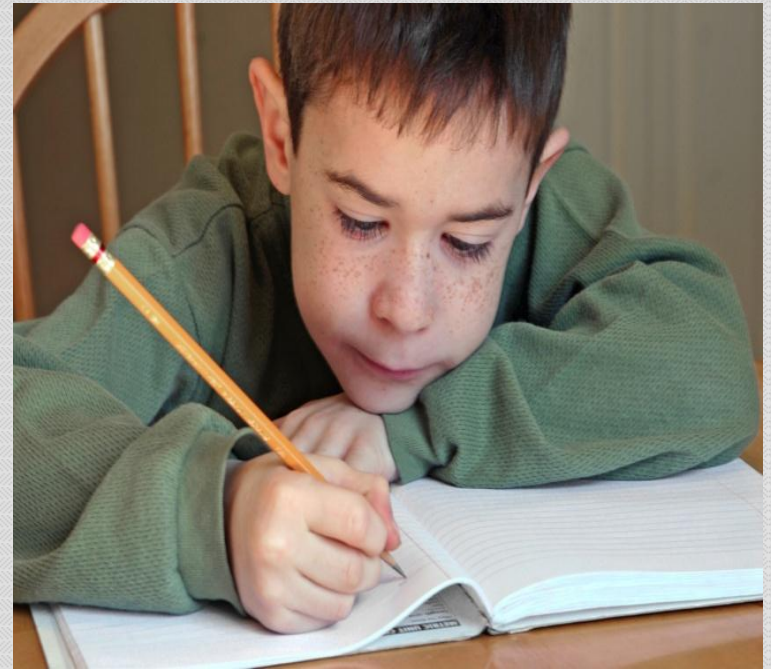


Before Screening: **WHERE?**



✘ DETERMINE LOCATION

- ✓ Cafeteria?
- ✓ Gym?
- ✓ Classrooms?
- ✓ Reading Stations?



Before Screening: HOW?



ESTABLISH PROTOCOL TO FOLLOW IN CASE OF INTERRUPTIONS

- ✓ fire drills
- ✓ announcements



During Screening



ADMINISTER SCREENING MEASURES THE SAME WAY TO EVERY STUDENT BEING SCREENED

- Curriculum Based Measures are standardized tests that need to be given the same way to every student, every time!**
- Benchmark assessments are not the time to teach, but to test the students' current skills.**



During Screening



✕ CONDUCT PERIODIC CHECKS ON SCREENING ADMINISTRATION PROCEDURES

- ✓ Determines adherence to establish screening protocol
- ✓ Screening administration checklist of procedures
- ✓ FIDELITY



After Screening



- ☒ SCORE ASSESSMENTS IMMEDIATELY
 - ✓ Follow standardization guidelines for scoring each measure.

- ☒ REVIEW WITH RTI TEAM ANY CONCERNS OR CONFLICTS THAT OCCURRED DURING THE BENCHMARK ASSESSMENT

- ☒ SCHEDULE ANY MAKE-UP TESTING FOR STUDENTS THAT WERE ABSENT — REMEMBER THE 2 WEEK TIME FRAME!



After Screening



- ☒ ADD SCREENING RESULTS TO A DATABASE TO MONITOR STUDENT PERFORMANCE OVER TIME
- ☒ SHARE SCREENING RESULTS AS SOON AS POSSIBLE WITH SCHOOL PERSONNEL



NOTE:

Screening constitutes just ONE part of a comprehensive RtI Assessment system

A RtI assessment system should include:

- Universal screening or benchmarking of ALL students
 - Identify students in need of additional intervention
- Progress monitoring of students identified as at-risk
 - 1 to 4x per month
 - Typically weekly
- Additional diagnostic assessment to match instruction to student need (as needed)

THANK YOU!

New York State



RESPONSE TO
INTERVENTION

Technical Assistance Center

<http://www.nysrti.org>