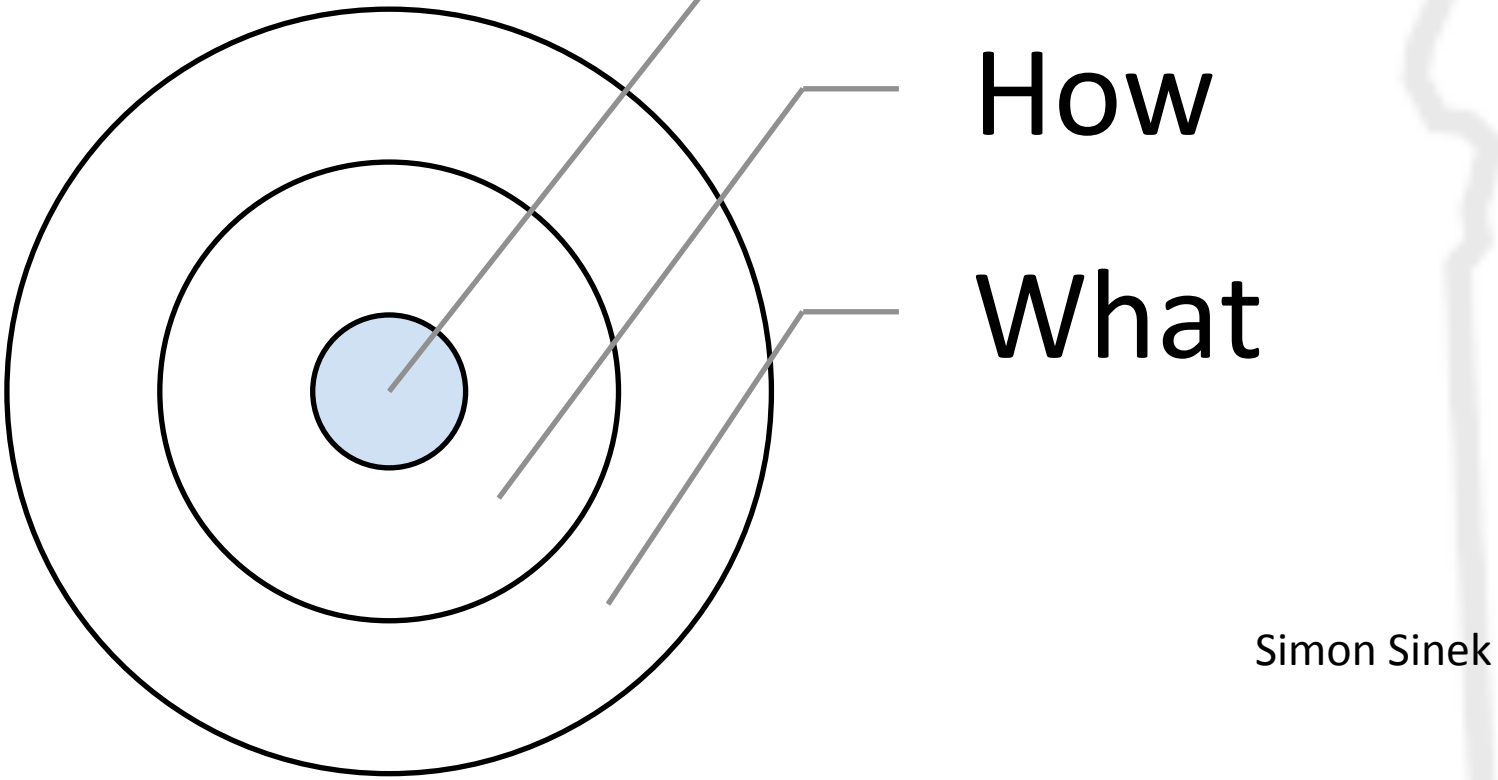
Vision: Every child in every district receives the instruction that they need and deserve…every day.

Developing a RTI system in Mathematics

Colleen Funderburg, Bend-LaPine
Dean Richards, Oregon RTIi

Start with the Why



Simon Sinek

State of Mathematics

- Achievement on the NAEP trending upward for 4th/ 8th grade and steady for 12th grade
  - Large numbers of students still lacking proficient skills
  - Persistent income and ethnicity gaps
  - Drop in achievement at the time algebra instruction begins

State of Mathematics

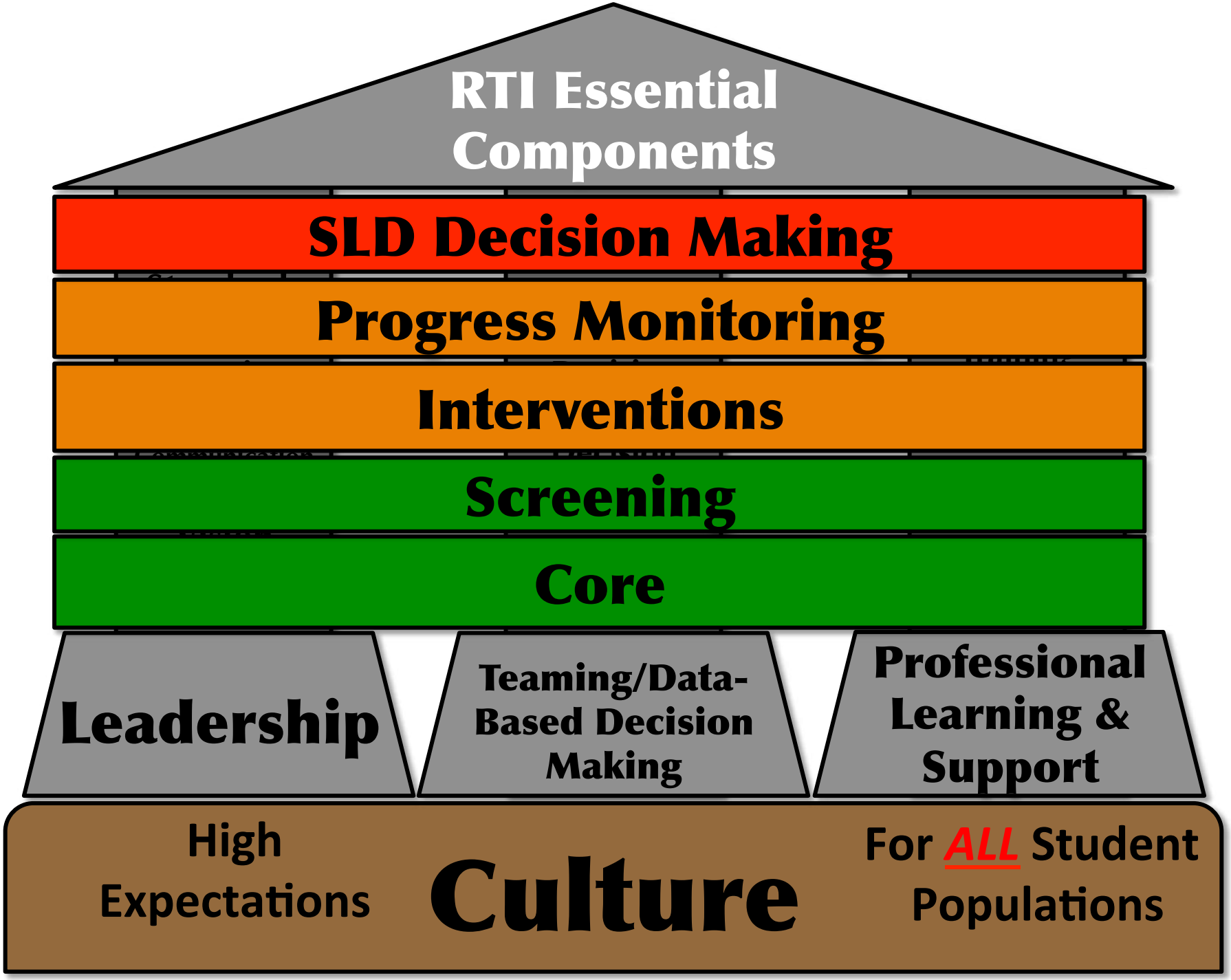
- TIMS data indicate significant lower levels of achievement between US and other nations
  - –Gap increase over time

- Jobs requiring intensive mathematics and science knowledge will outpace job growth 3:1 (STEM) and everyday work will require greater mathematical understanding

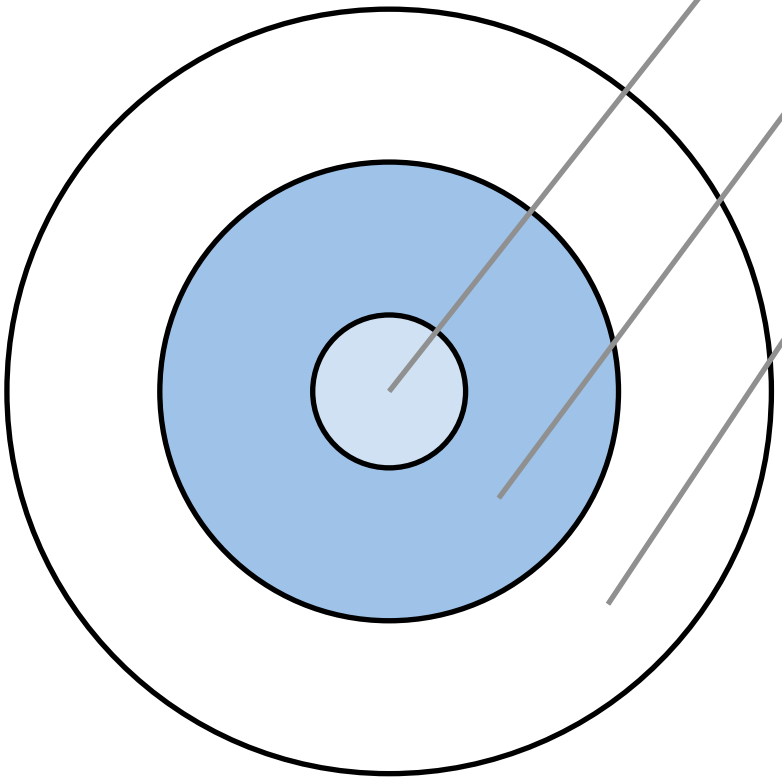
The Need for Mathematical Knowledge

- "For people to participate fully in society, they must know basic mathematics. Citizens who cannot reason mathematically are cut off from whole realms of human endeavor. Innumeracy deprives them not only of opportunity but also of competence in everyday tasks." (Kilpatrick, Swafford, & Findell, *Adding It Up*, 2001)

- Promote students' development of Number Sense, which refers to a flexibility and fluidity with numbers and their corresponding mathematical representations (Gersten & Chard, 1999).


RTI Essential Components
SLD Decision Making
Progress Monitoring
Interventions
Screening
Core
Leadership
Teaming/Data-Based Decision Making
Professional Learning & Support
High Expectations
Culture
For ALL Student Populations

Start with the Why

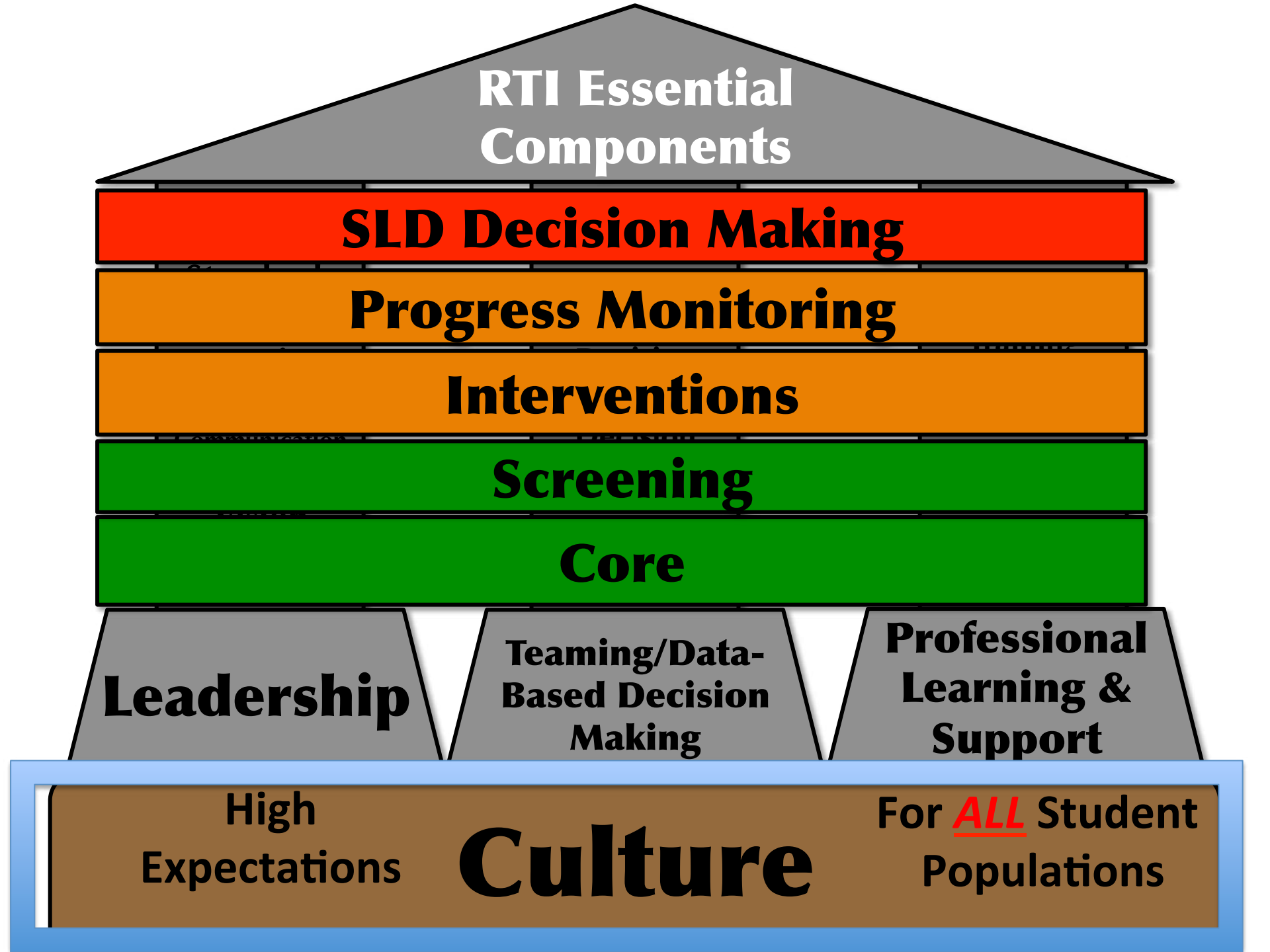


Why

How

What

Simon Sinek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"The question is not whether all students can succeed in mathematics but whether the adults organizing mathematics learning opportunities can alter traditional beliefs and practices to promote success for all."

NCTM, 2014

Mindset, Dweck

- "The New Psychology of Success"

Intelligence

Ability

Talent

Success

Achievement

Mindset

- Related to your belief about yourself
- Creates the lens used to view yourself and the world
- Growth mindset – We can change (grow) despite (or because of obstacles)
- Fixed mindset – We cannot change significantly

Mindset for *ALL*

All teachers can succeed in mathematics

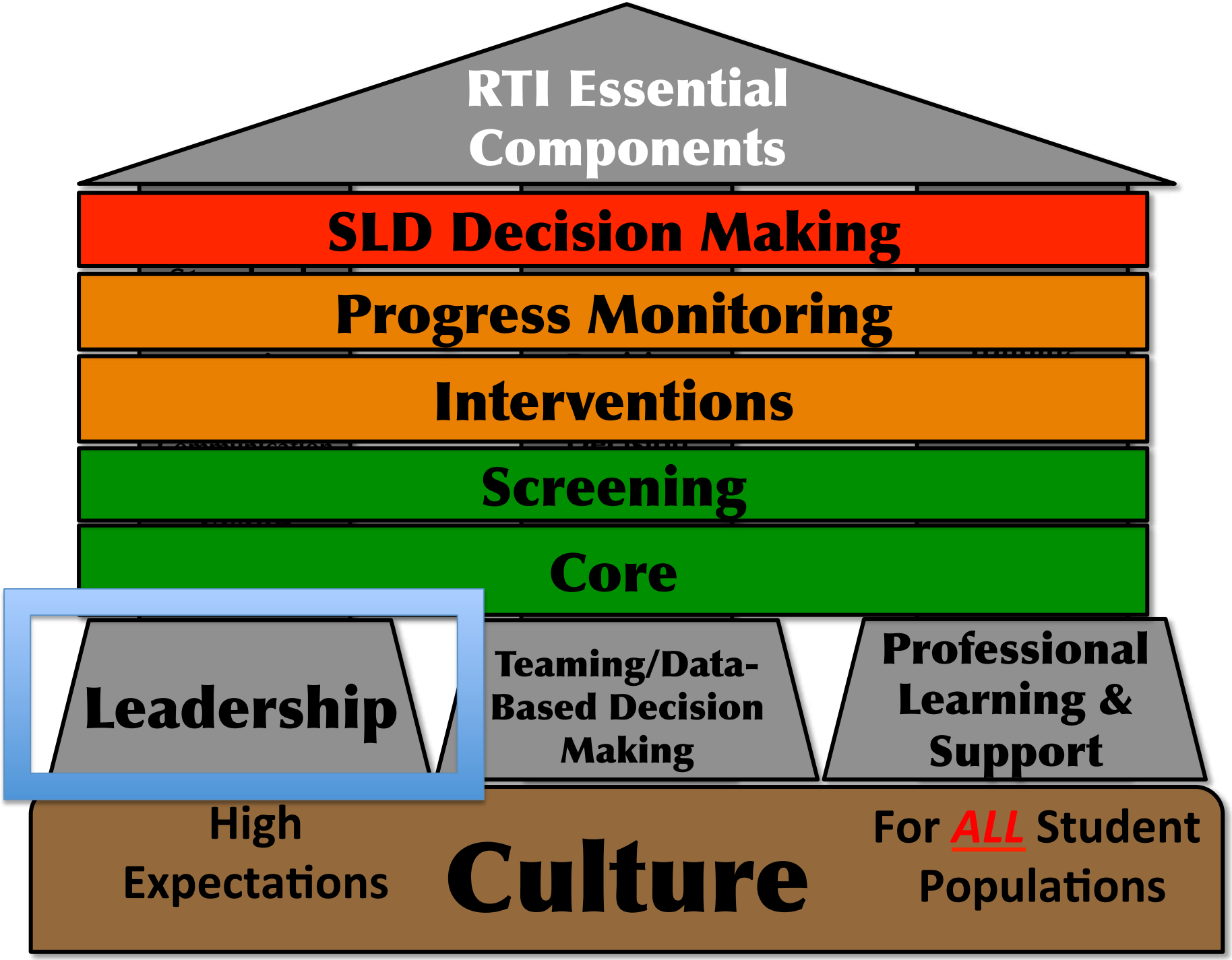
Reach & Teach *All* Students

As a leader...

- Create a cultural mindset that Mathematics is important and requires hard work on the part of teachers and students to be successful.

As a leader...

- Understand that not all teachers have a growth mindset in math
- Monitor how student and teachers perceive mathematics in your school
- Use praise of effort more than praise of outcome *as long as progress is made toward the correct outcome*.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Standards of Practice

- Determine and communicate the time that will be the standard of math instruction
  - Elementary 60 minutes
  - Secondary 1 period (daily or block?)

Standards of Practice

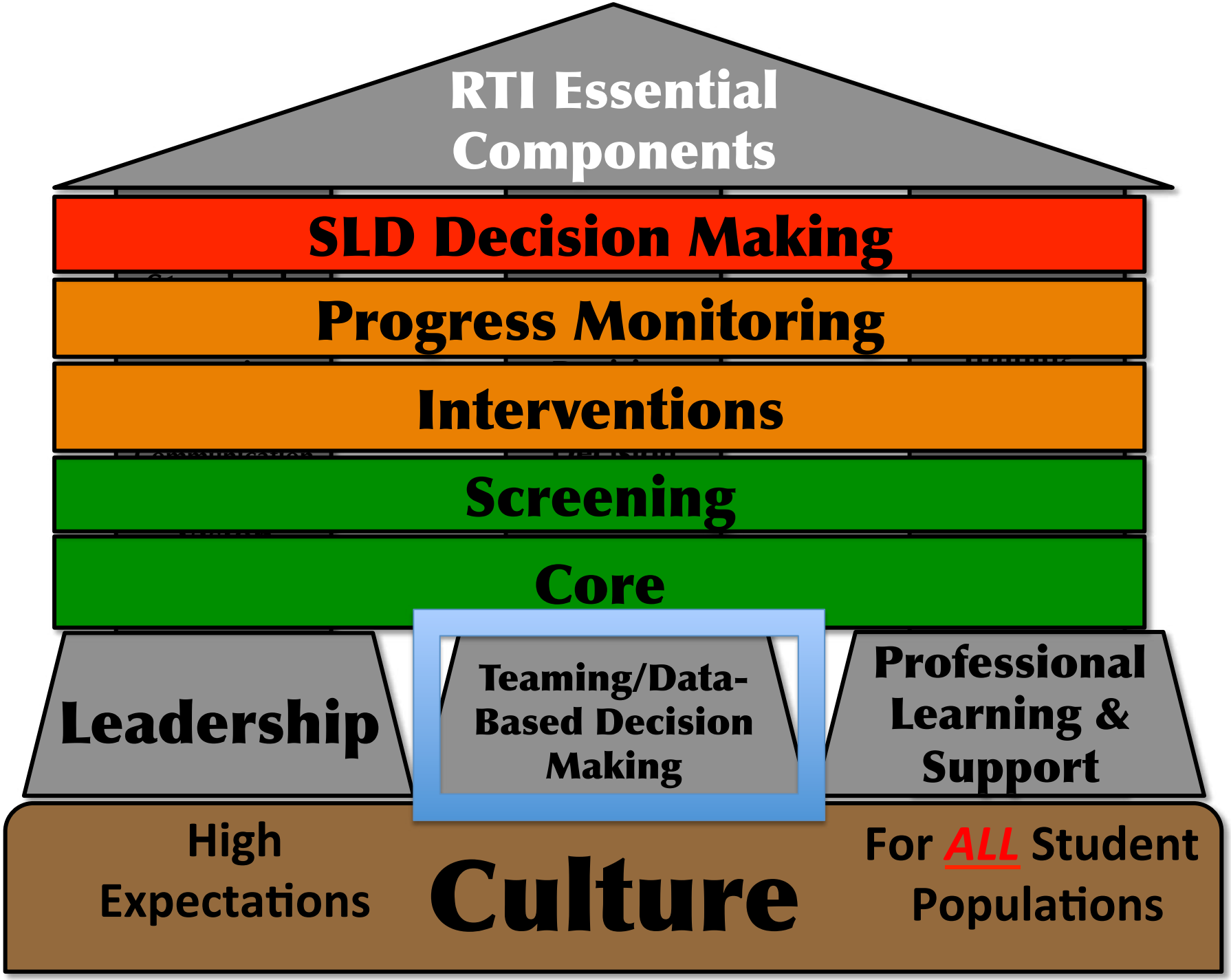
- Determine and communicate how standardized lessons are students going to delivered
  - Materials (Curriculum Adoption, state list is now before the board)
  - Tasks
  - Homework
  - Scope and Sequence

Standards of Practice

- Determine and communicate the instructional practices that will be used in mathematics instruction
  - Partnerships
  - Explaining mathematics in writing and speaking
  - Assessment
  - Mathematical Practices

As a leader...

- Understand and have a clear vision of what mathematics instruction should look like and how it fits into your school system.
- Communicate the vision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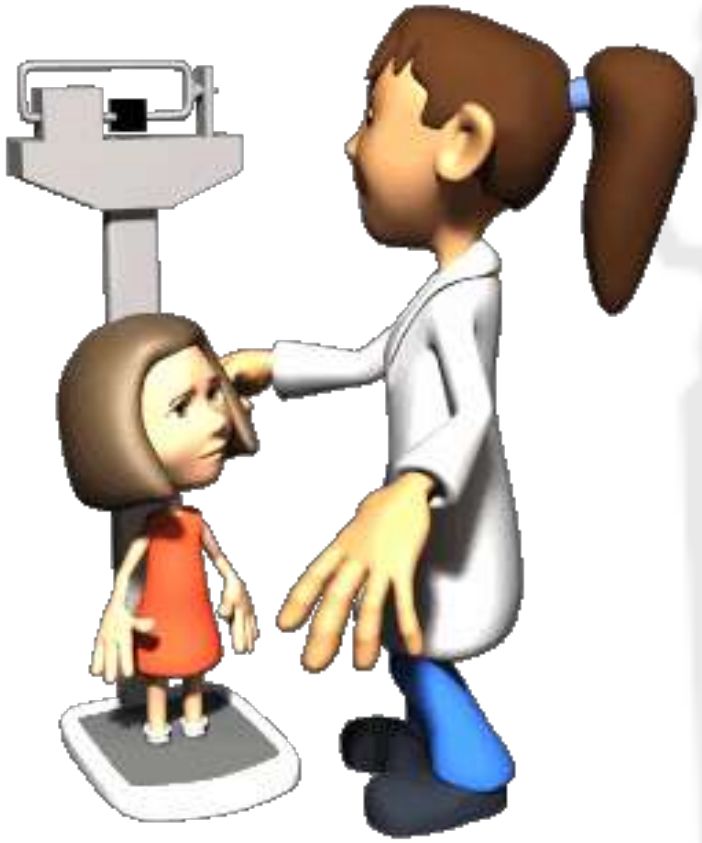
Types of assessment

- Universal Screeners

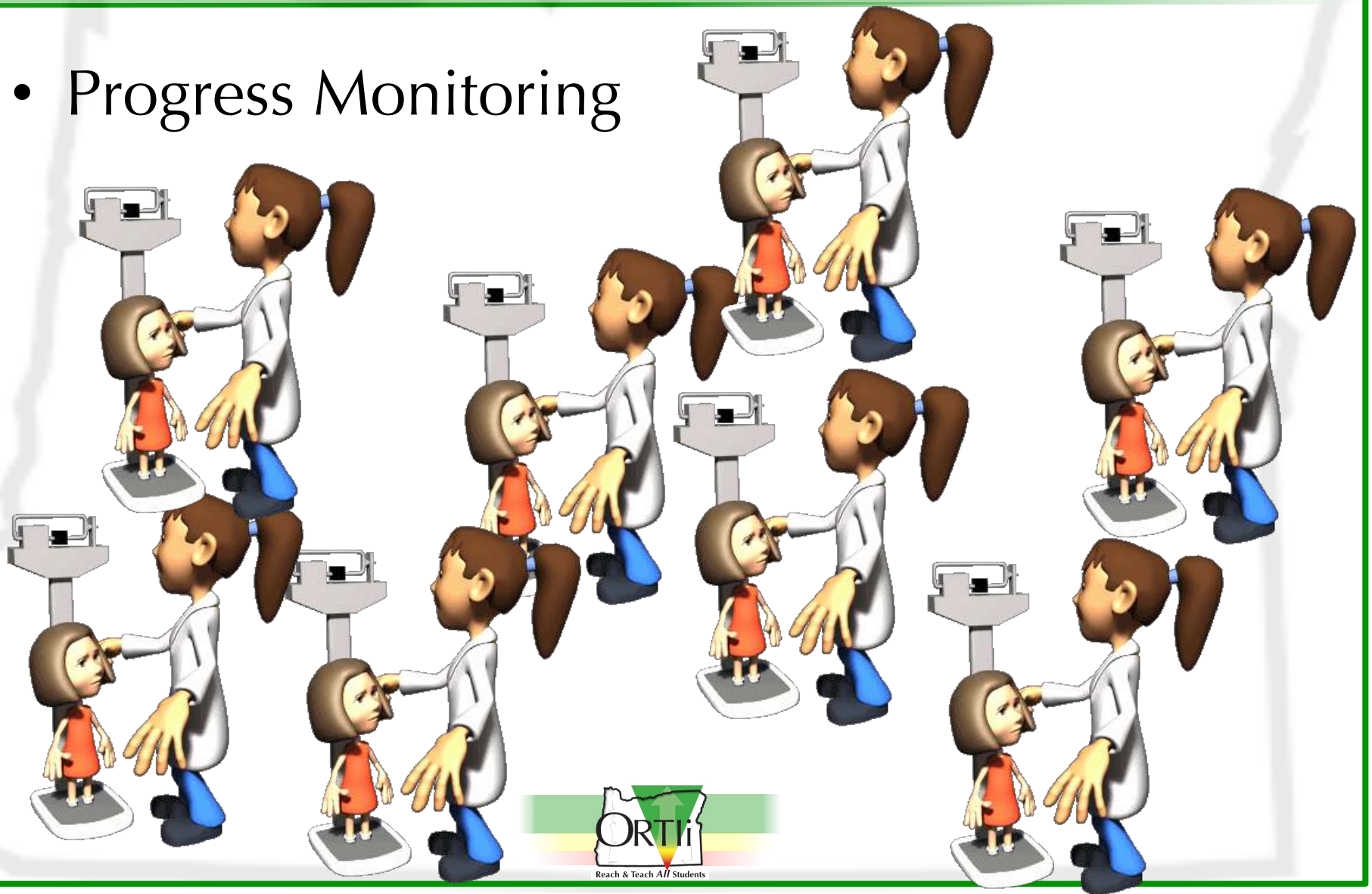


Types of assessment

- Diagnostic Assessment

Types of assessment

- Progress Monitoring



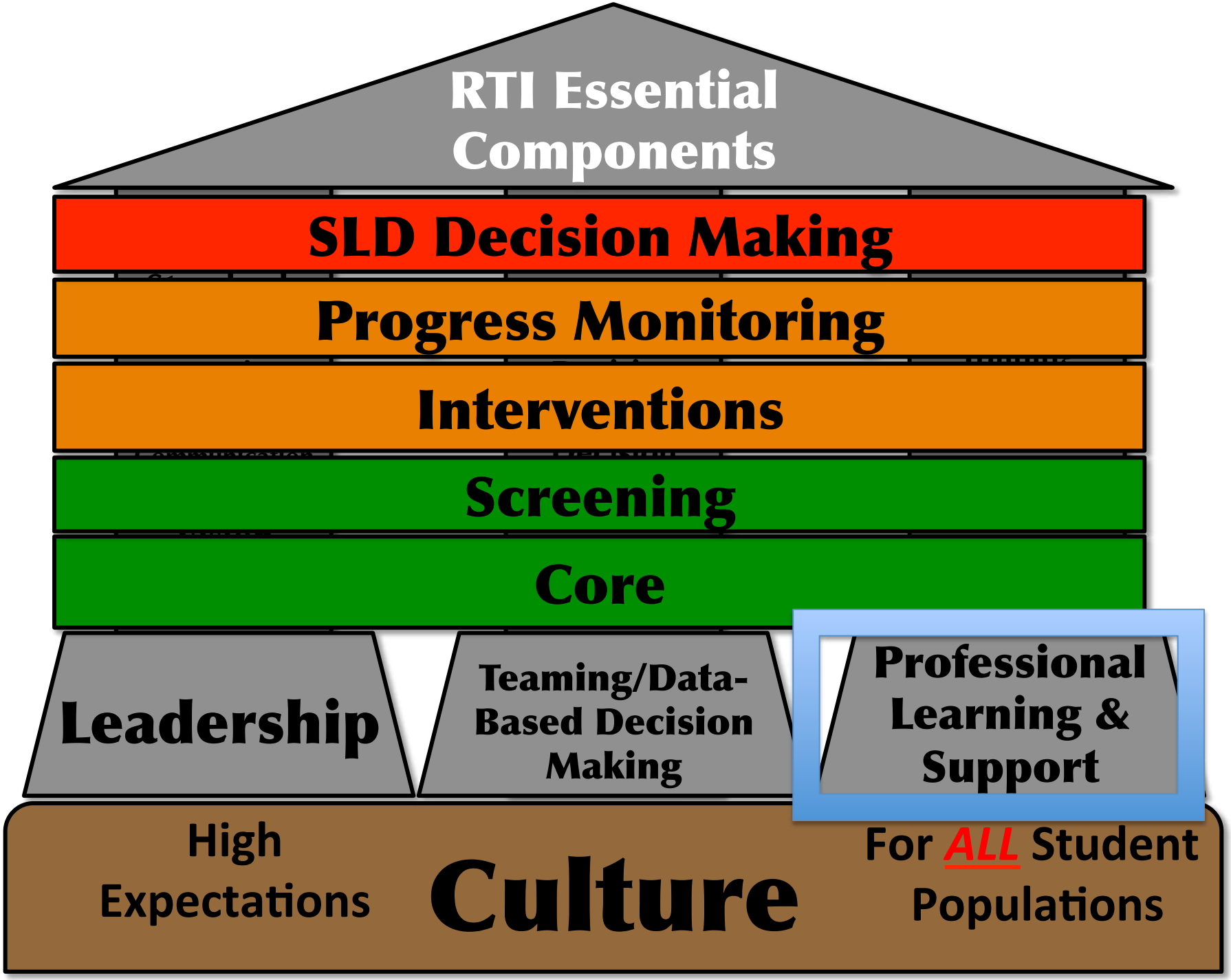
Types of assessment

- Mastery (aka Outcome)

	100%	PLC	20%	IPS
Data	•Screening Data •SBAC	•Mastery •Screening •Progress monitoring	•Progress monitoring •Mastery •Intervention and core assessments	•Progress monitoring •Mastery •Diagnostic •Intervention and core assessments
Outcomes	•Professional development •Grade level/team agreements around instruction	•Differentiated instruction within the classroom based on data	•Action on progress monitoring data: exit, intensify, or continue interventions •Increase teaming across adults working with students: classroom, ELD, Title I & SpEd	•Determine and match instruction to the intensity of need •Referral to Special Education

As a leader...

- Understand the purpose of assessments and articulate the need for each type of assessment to your staff
- Use data and an agenda to hold efficient data meetings with a clear purpose and measurable outcomes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Professional Learning & Support

There Is Only One Way to Improve Student Achievement

The teacher is the only factor that can improve student achievement.

"Mathematics teachers should deeply understand the mathematical ideas (concepts, procedures, reasoning skills) that are central to the grade levels they will be teaching and be able to communicate these ideas in a developmentally appropriate manner. They should know how to represent and connect mathematical ideas so that students may comprehend them and appreciate the power, utility, and diversity of these ideas, and they should be able to understand student thinking (questions, solution strategies, misconceptions, etc.) and address it in a manner that supports student learning." (Papick 2011)

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Professional Learning & Support

Instruction during the intervention should be explicit and systematic. This includes providing models of proficient problem-solving, verbalization of though processes, guided practice, corrective feedback, and frequent cumulative review.

What to look for:

- Ensure that intervention materials are systematic and explicit and include numerous models of easy and difficult problems with accompanying teacher think-alouds.
- Provide students with opportunities to solve problems in a group and communicate problem- solving strategies.
- Ensure that instructional materials include cumulative review in each session.

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The National Mathematics Advisory Panel stated that

"Explicit systematic instruction typically entails teachers explaining and demonstrating specific strategies and allowing students many opportunities to ask and answer questions and to think about the decisions they make while solving problems" (p.48).

This is different than Direct Instruction.

Effect Sizes of Instructional Strategies

Instructional Strategy	Effect Size	
	Special Education Students	*Low-Achieving Students*
1. Visual and graphic descriptions of problems	0.50	N/A
2. Systematic and explicit instruction	1.19 *	0.58 *
3. Student think-alouds	0.98 *	N/A/
4. Use of structured peer-assisted learning activities involving heterogeneous ability groupings	0.42	0.62 *
5. Formative assessment data provided to teachers	0.32	0.51
6. Formative assessment data provided directly to students	0.33	0.57*

*Indicates a large or moderate to large effect size.

Source: The National Council of Teachers of Mathematics[14]

Professional Learning & Support

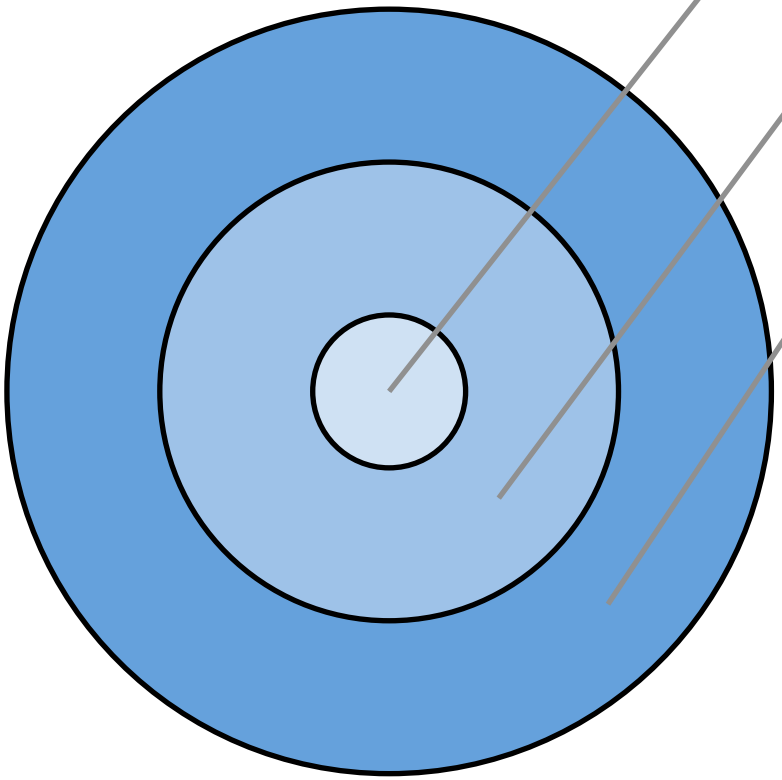
"Design learning for teachers that is ongoing, embedded in teachers' daily work, and allows for teachers to develop a shared language for talking about practice" (Desimone, 2011; Gibbons & Cobb, 2015).

- School leaders have to be present in classrooms regularly in order to gauge what teachers currently know and can do.
- Effective leaders must play an active role in promoting and contributing to talk among teachers in order to create a culture of learning and growth.
- These conversations must happen schoolwide, crossing grade-level teams and departments.

As a leader...

- Understand that staff members require training and adequate support to successfully implement recommended practices.
- Provide continuous professional development for mathematics content knowledge.
  - For interventions consider:
    - The focus of the content (and underlying scope and sequence)
    - The instructional design of the materials
    - You can overcome some issues with materials but not all
- Use building level teams, coaches and specialists to provide staff development, ongoing classroom support and collaborative experiences to advance teachers' skills.

Start with the Why

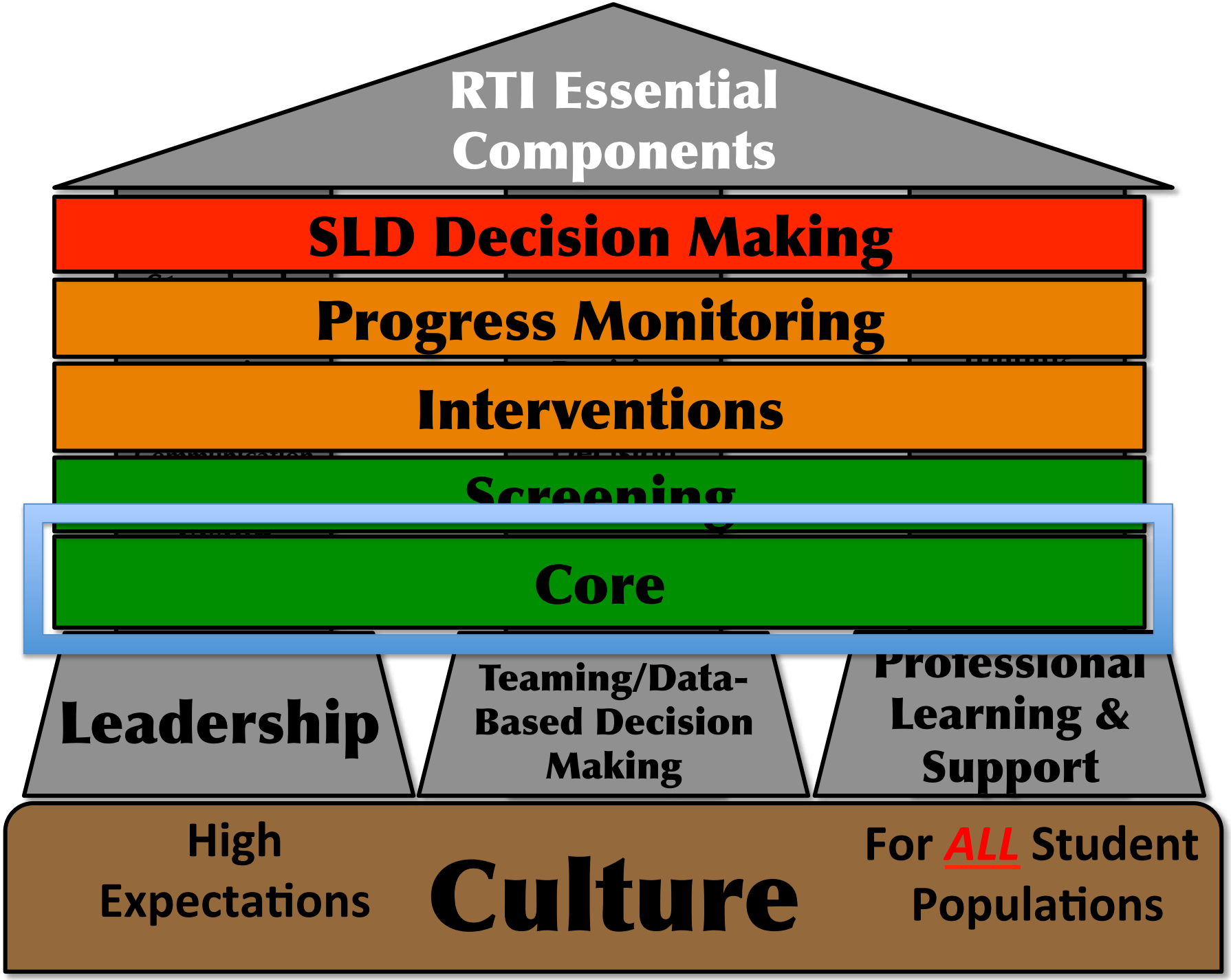


Why

How

What

Simon Sinek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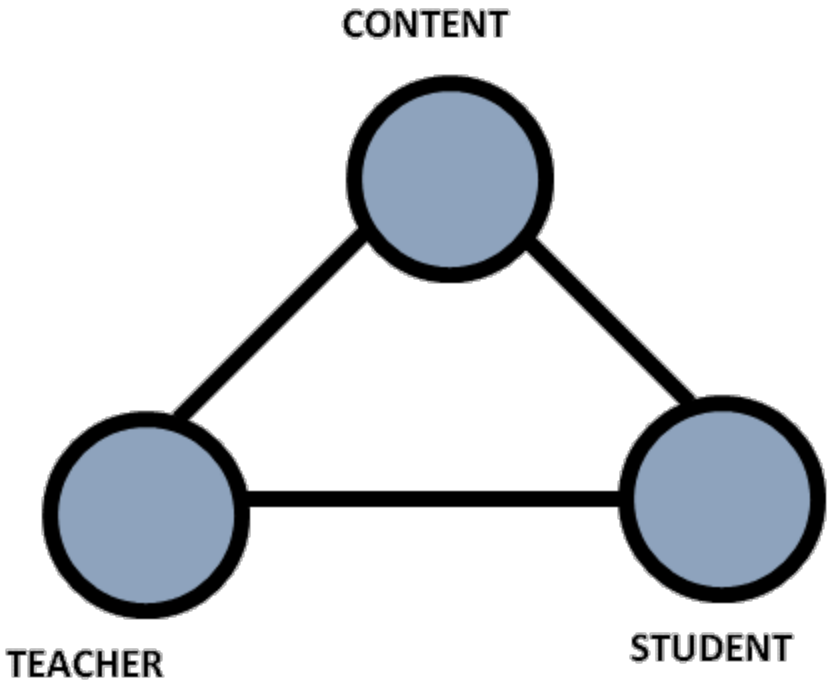
Instruction

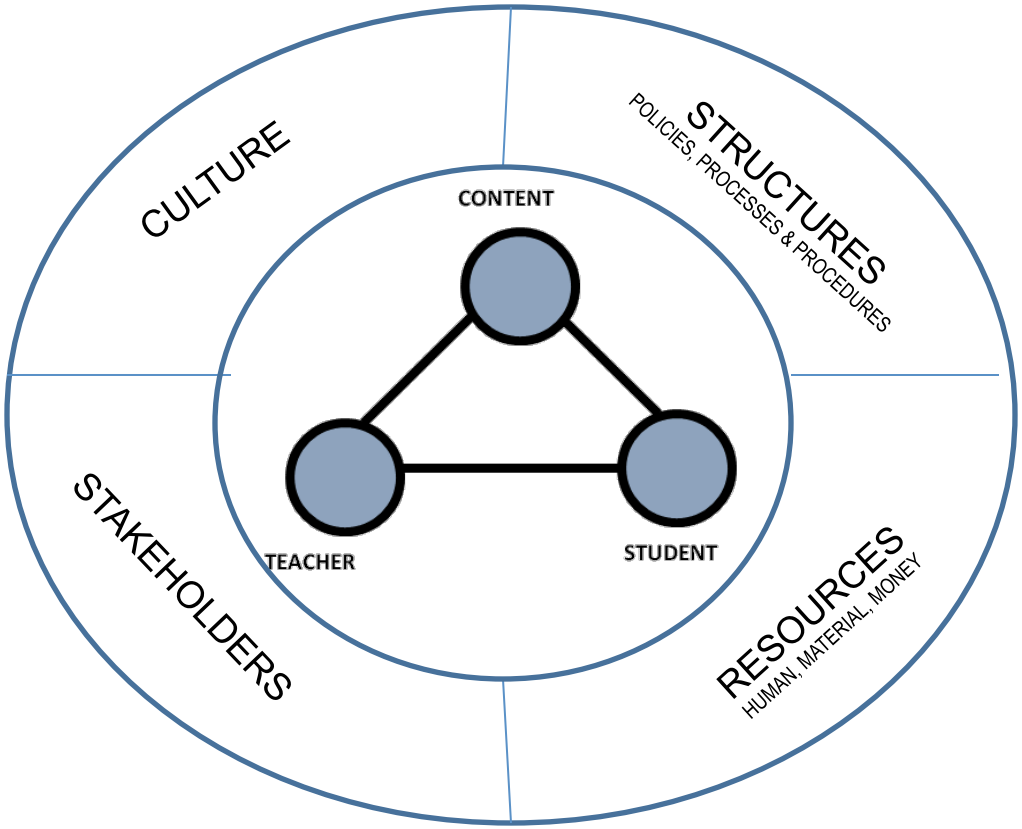


Principle #1: Increases in student learning occur only as a consequence of improvements in the level of content, teachers' knowledge and skill, and student engagement.

Principle #2: If you change one element of the instructional core, you have to change the other two.

Richard Elmore, Ph.D., Harvard Graduate School of Education

Organizational Elements



Adapted from the Public Education Leadership Project at Harvard University

The CCSS Require Three Shifts in Mathematics

1. **Focus:** *Focus* strongly where the Standards focus.
2. **Coherence**: *Think* across grades, and *link* to major topics within grades.
3. **Rigor:** In major topics, pursue conceptual *understanding,* procedural skill and *fluency*, and *application.*

Focus

- Move away from "mile wide, inch deep" curricula identified in TIMSS.
- Learn from international comparisons.
- Teach less, learn more.

"Less topic coverage can be associated with higher scores on those topics covered because students have more time to master the content that is taught."

– Ginsburg et al., 2005

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Progress to Algebra in Grades K-8

K	1	2	3	4	5	6	7	8
Know number names and the count sequence Count to tell the number of objects Compare numbers Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from Work with numbers 11-19 to gain foundations for place value	Represent and solve problems involving addition and subtraction Understand and apply properties of operations and the relationship between addition and subtraction Add and subtract within 20 Work with addition and subtraction equations Extend the counting sequence Understand place value Use place value understanding and properties of operations to add and subtract Measure lengths indirectly and by iterating length units	Represent and solve problems involving addition and subtraction Add and subtract within 20 Understand place value Use place value understanding and properties of operations to add and subtract Measure and estimate lengths in standard units Relate addition and subtraction to length	Represent & solve problems involving multiplication and division Understand properties of multiplication and the relationship between multiplication and division Multiply & divide within 100 Solve problems involving the four operations, and identify & explain patterns in arithmetic Develop understanding of fractions as numbers Solve problems involving measurement and estimation of intervals of time, liquid volumes, & masses of objects Geometric measurement: understand concepts of area and relate area to multiplication and to addition	Use the four operations with whole numbers to solve problems Generalize place value understanding for multi-digit whole numbers Use place value understanding and properties of operations to perform multi-digit arithmetic Extend understanding of fraction equivalence and ordering Build fractions from unit fractions by applying and extending previous understandings of operations Understand decimal notation for fractions, and compare decimal fractions	Understand the place value system Perform operations with multi-digit whole numbers and decimals to hundredths Use equivalent fractions as a strategy to add and subtract fractions Apply and extend previous understandings of multiplication and division to multiply and divide fractions Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition Graph points in the coordinate plane to solve real-world and mathematical problems*	Apply and extend previous understandings of multiplication and division to divide fractions by fractions Apply and extend previous understandings of numbers to the system of rational numbers Understand ratio concepts and use ratio reasoning to solve problems Apply and extend previous understandings of arithmetic to algebraic expressions Reason about and solve one-variable equations and inequalities Represent and analyze quantitative relationships between dependent and independent variables	Apply and extend previous understanding of operations with fractions to add, subtract, multiply, and divide rational numbers Analyze proportional relationship and use them to solve real-world and mathematical problems Use properties of operations to generate equivalent expressions Solve real-life and mathematical problems using numerical and algebraic expressions and equations	Work with radical and integer exponents Understand the connections between proportional relationships, lines, and linear equations Analyze and solve linear equations and pairs of simultaneous linear equations Define, evaluate, and compare functions Use functions to model relationships between quantities*

Coherence: Think across grades

One of several staircases to Algebra designed in the OA domain.

Expressions and Equations **6.EE**

3. Apply the properties of operations to generate equivalent expressions. *For example, apply the distributive property to the expression 3 (2 + x) to produce the equivalent expression 6 + 3x; apply the distributive property to the expression 24x + 18y to produce the equivalent expression 6 (4x + 3y); apply properties of operations to y + y + y to produce the equivalent expression 3y.*

Operations and Algebraic Thinking **5.OA**

2. Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. *For example, express the calculation "add 8 and 7, then multiply by 2" as 2 x (8 + 7). Recognize that 3 x (18932 + 921) is three times as large as 18932 + 921, without having to calculate the indicated sum or product.*

Operations and Algebraic Thinking **3.OA**

5. Apply properties of operations as strategies to multiply and divide.[2] *Examples: If 6 x 4 = 24 is known, then 4 x 6 = 24 is also known. (Commutative property of multiplication.) 3 x 5 x 2 can be found by 3 x 5 = 15, then 15 x 2 = 30, or by 5 x 2 = 10, then 3 x 10 = 30. (Associative property of multiplication.) Knowing that 8 x 5 = 40 and 8 x 2 = 16, one can find 8 x 7 as 8 x (5 + 2) = (8 x 5) + (8 x 2) = 40 + 16 = 56. (Distributive property.)*

Operations and Algebraic Thinking **1.OA**

3. Apply properties of operations as strategies to add and subtract.[3] *Examples: If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known. (Commutative property of addition.) To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12. (Associative property of addition.)*

Core Scheduling

You need time for core + more

- Students should receive at least 60 minutes of core instruction daily in mathematics. Students requiring additional support require another 30 minutes.
- Consider common instructional times by subject of each grade level, and where possible across grade levels. Schedules should provide the flexibility to group and regroup students across grade levels.

Mathematics Content

Discourse

- Use think alouds so that students can hear your thought process.
  - Justifications, solution methods, and math reasoning
- Foster opportunities for students to use think alouds on their own (mathematical verbalizations).
- Math verbalizations permit students to interact with the teacher and peers around critical mathematics content.
- Specifically, verbalizing can be viewed as a way to process and practice math content and, in this manner, becomes a critical component for supporting early development of mathematical proficiency.

Mathematics Content

Fluency and Flexibility

- Fluency = efficient and correct
- Flexibility = multiple solution strategies determined by the problem.
- Assessing fluency by occasionally using timed tests is acceptable. Using timed tests as an instructional tool to build fluency is *ineffective and inefficient.*

Standards of Mathematical Practices CCSS

1. **Make sense of** complex problems and persevere in solving them.
2. **Reason abstractly** and **quantitatively**
3. **Construct** viable arguments and **critique** the reasoning of others.
4. **Model** with mathematics.
5. **Use** appropriate tools strategically.
6. **Attend** to precision.
7. **Look for** and **make** use of structure.
8. **Look for** and **express** regularity in repeated reasoning.

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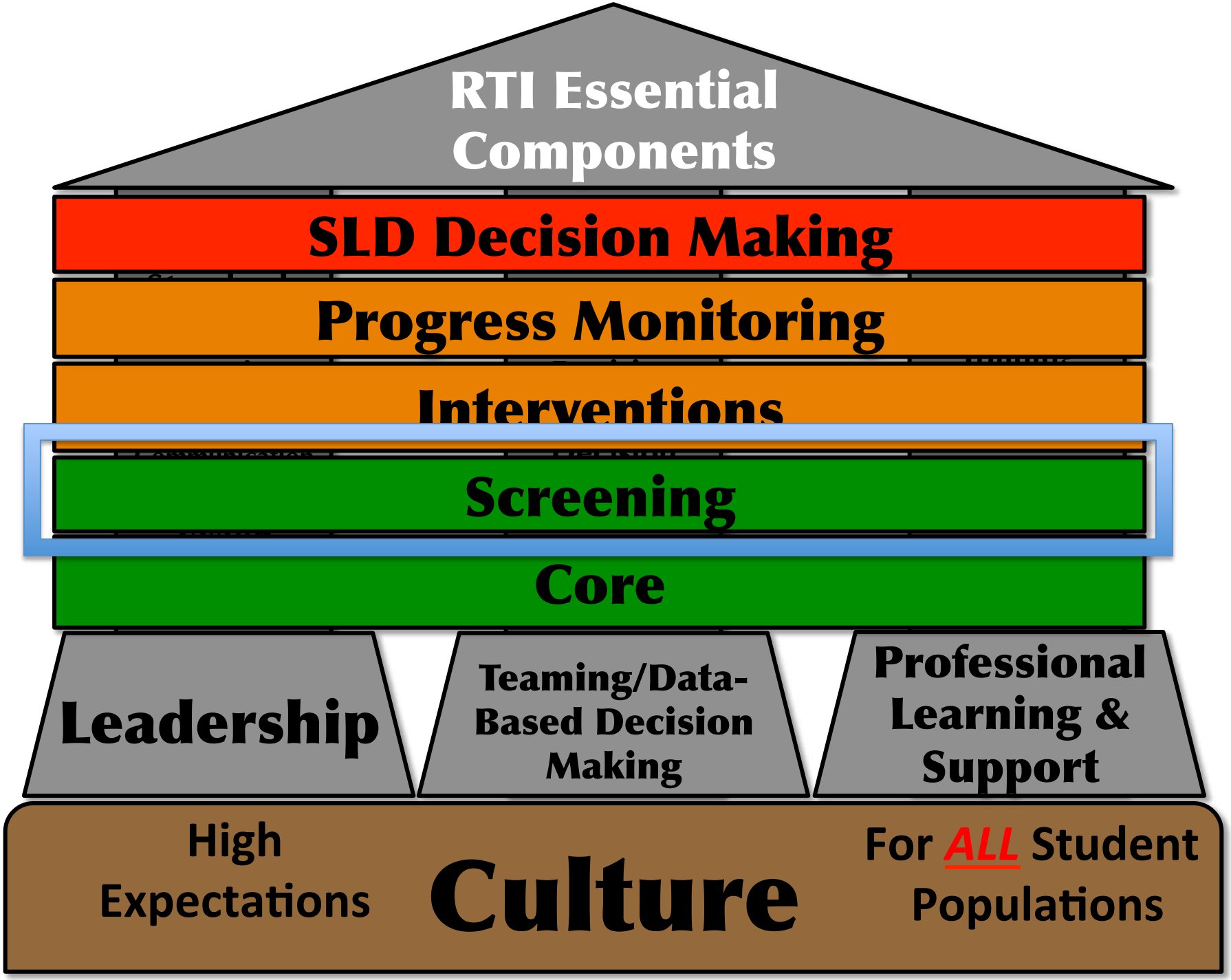
As a leader...

- Understand the three Shifts, which represent the overarching messages in the CCSS.
  - Focus, Coherence and Rigor
  - Mathematical Practices
- Provide opportunities for staff to collaborate across grade levels to ensure coherence
- Create schedules which assure core instructional time recommendations are met
- Understand that an intense focus on the most critical material at each grade allows depth in learning which is carried out through the standards of mathematical practices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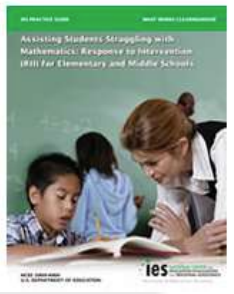
- Recommendation 1

  Screen all students to identify those at risk for potential mathematics difficulties and provide interventions to students identified as at risk.

Level of Evidence: Moderate



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Types of Curriculum Based Measures for Math

Computation focus

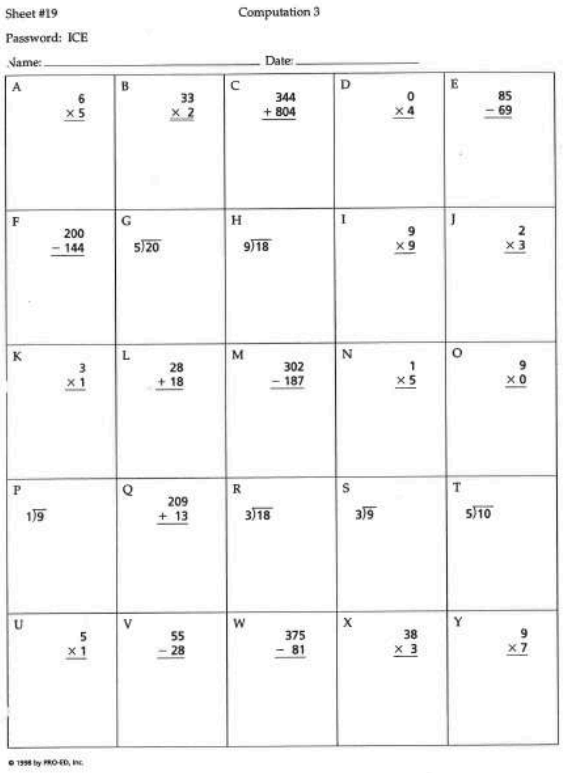
- Total digits correct
- Timed

Application Focus

- Not always timed
- Not sampled from directly from curriculum
- Scored by correct answers

Computation Focus

MBSP
(Monitoring Basic Skills Progress)



Sheet #19 Computation 3

Password: ICE

Name: _____ Date: _____

A $\begin{array}{r} 6 \\ \times 5 \end{array}$	B $\begin{array}{r} 33 \\ \times 2 \end{array}$	C $\begin{array}{r} 344 \\ +804 \end{array}$	D $\begin{array}{r} 0 \\ \times 4 \end{array}$	E $\begin{array}{r} 85 \\ -69 \end{array}$
F $\begin{array}{r} 200 \\ -144 \end{array}$	G $5\overline{)20}$	H $9\overline{)18}$	I $\begin{array}{r} 9 \\ \times 9 \end{array}$	J $\begin{array}{r} 2 \\ \times 3 \end{array}$
K $\begin{array}{r} 3 \\ \times 1 \end{array}$	L $\begin{array}{r} 28 \\ +18 \end{array}$	M $\begin{array}{r} 302 \\ -187 \end{array}$	N $\begin{array}{r} 1 \\ \times 5 \end{array}$	O $\begin{array}{r} 9 \\ \times 0 \end{array}$
P $1\overline{)9}$	Q $\begin{array}{r} 209 \\ +13 \end{array}$	R $3\overline{)18}$	S $3\overline{)9}$	T $5\overline{)10}$
U $\begin{array}{r} 5 \\ \times 1 \end{array}$	V $\begin{array}{r} 55 \\ -28 \end{array}$	W $\begin{array}{r} 375 \\ -81 \end{array}$	X $\begin{array}{r} 38 \\ \times 3 \end{array}$	Y $\begin{array}{r} 9 \\ \times 7 \end{array}$

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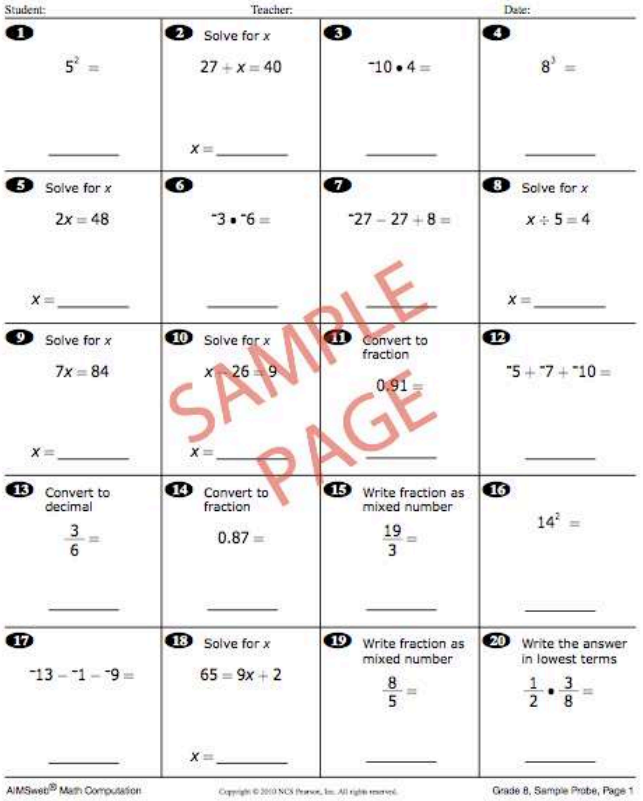

Student: Teacher: Date:

1 $5^2 =$	2 Solve for x $27 + x = 40$	3 $^-10 \bullet 4 =$	4 $8^3 =$
5 Solve for x $2x = 48$	6 $^-3 \bullet ^-6 =$	7 $^-27 - 27 + 8 =$	8 Solve for x $x \div 5 = 4$
9 Solve for x $7x = 84$	10 Solve for x $x - 26 = 9$	11 Convert to fraction $0.91 =$	12 $^-5 + ^-7 + ^-10 =$
13 Convert to decimal $\frac{3}{6} =$	14 Convert to fraction $0.87 =$	15 Write fraction as mixed number $\frac{19}{3} =$	16 $14^2 =$
17 $^-13 - ^-1 - ^-9 =$	18 Solve for x $65 = 9x + 2$	19 Write fraction as mixed number $\frac{8}{5} =$	20 Write the answer in lowest terms $\frac{1}{2} \bullet \frac{3}{8} =$

SAMPLE PAGE

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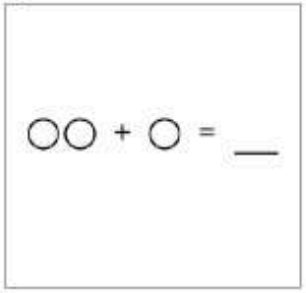
Screening Tools

Math Numbers and Operations K_1

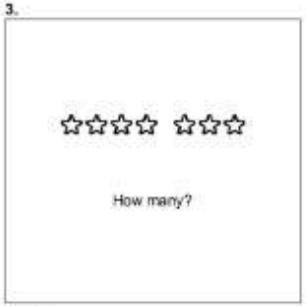
Student Name:_____

1.



A. 9
B. 5
C. 3

3.



A. 10
B. 7
C. 6

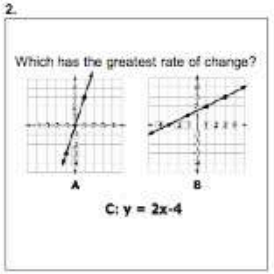
Common Core State Standards Math 8_2

Student Name:_____ Date:_____

1.

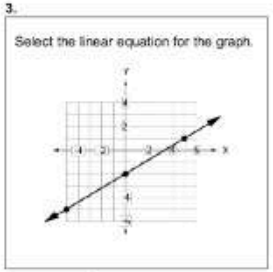
A. 3
B. 2
C. 4

2.



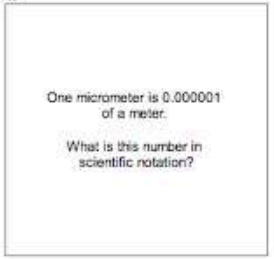
A. A
B. B
C. C

3.



A. $y = -2x + \frac{3}{5}$
B. $y = -\frac{3}{5}x + 2$
C. $y = \frac{3}{5}x - 2$

4.

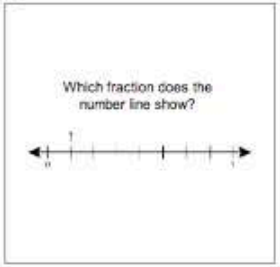


A. 1.0×10^{6}
B. 1.0×10^{-5}
C. 1.0×10^{-6}

Common Core State Standards Math 3_1

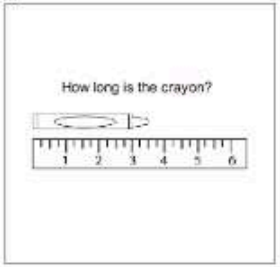
Date:_____

2.



A. $\frac{8}{1}$
B. $\frac{1}{8}$
C. $\frac{2}{8}$

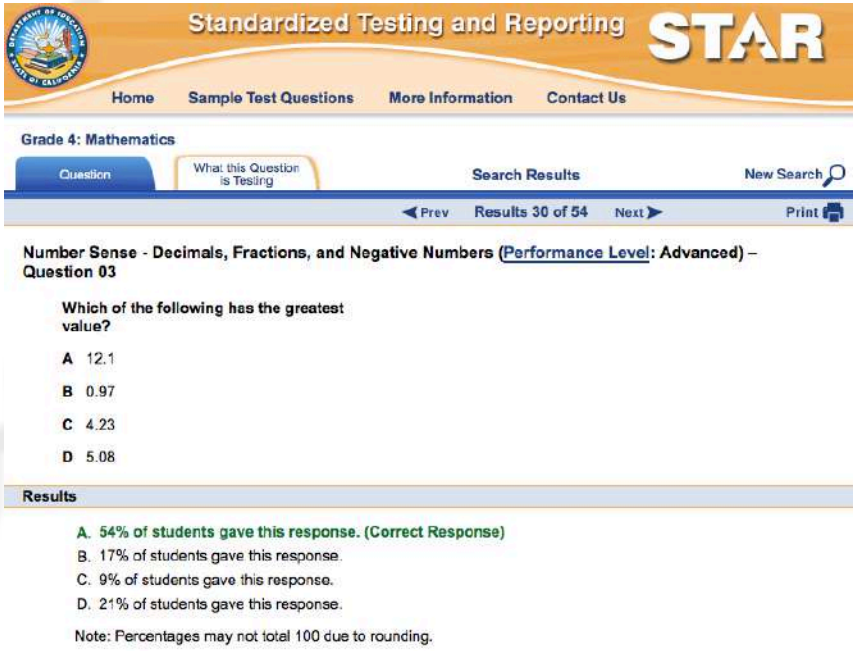
4.



A. $3\frac{1}{2}$ inches
B. 3 inches
C. 4 inches

Computer Adaptive Tests

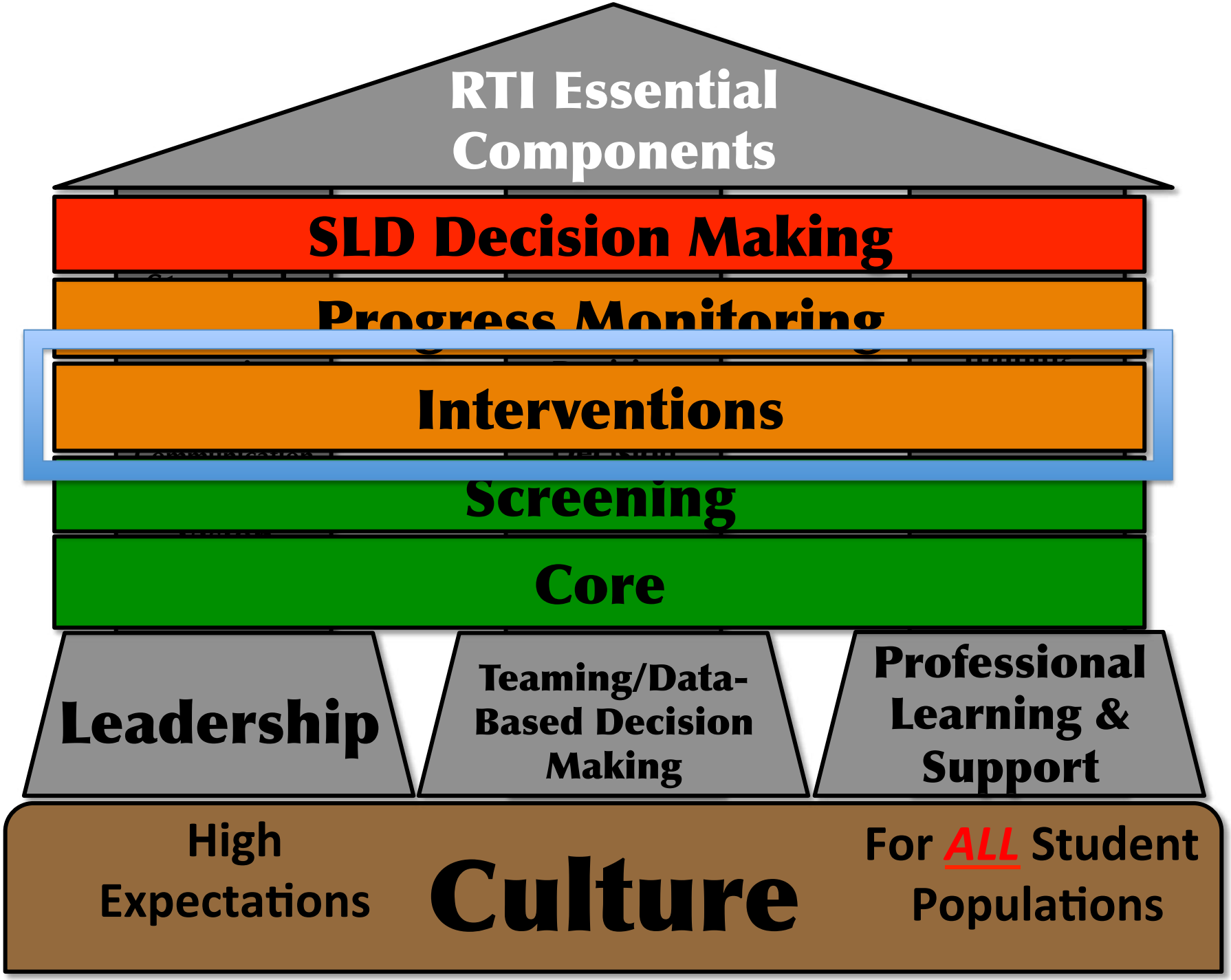
STAR



Steps for Carrying Out the Recommendation		
1.	Working with an assessment team, select a screening measure that is efficient and reliable and has good predictive validity.	
2.	Select screening measures based on the content they cover, with an emphasis on critical instructional objectives for each grade.	
3.	Administer screening measures at least twice a year--in the beginning and middle of the year--or in fall, winter & spring.	
4.	In grades 4 through 8, use screening data in combination with state testing results to identify students who need additional help.	
5.	Use the same screening tool across the district to enable analyzing results across schools.	

As a leader...

- Understand that you must allocate resources (time, money, people) to allow screening to occur
- Provide clarity about the purpose of screening
- Use the data to make instructional decisions


RTI Essential Components
SLD Decision Making
Progress Monitoring
Interventions
Screening
Core
Leadership
Teaming/Data-Based Decision Making
Professional Learning & Support
High Expectations
Culture
For ALL Student Populations

Math Intervention Recommendations

1. Be in a small group of no more than six
2. Address skills that are necessary for the unit at hand
3. Be explicit and systematic
4. Require the student to think aloud as she or he solves problems or uses graphic representation to work through problem-solving options
5. Balance work on basic whole-number or rational-number operations (depending on grade level) with strategies for solving problems that are more complex

Source: The National Council of Teachers of Mathematics

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Skill specific vs. Broad Based Interventions

Single-skill Interventions

"Single-skill interventions intend to provide targeted instruction to solidify knowledge of distinct mathematical concepts and allow instructors to closely monitor and gauge mathematics skill development."

Broad-based

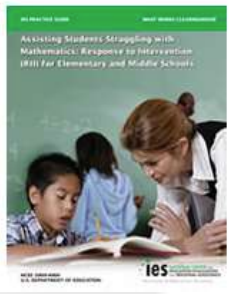
"(B)road whole-number interventions intend to provide integrated mathematics instruction on a variety of skills and concepts and allow instructors to utilize interspersed practice to evaluate numeracy development and mathematics skill integration."

Clarke et al, 2015

Recommendation 2

Instructional materials for students receiving interventions should focus intensely on in-depth treatment of whole numbers in K-5 and on rational numbers in grades 4-8.

Level of Evidence: Low

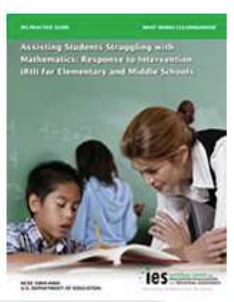


Steps for Carrying Out the Recommendation		
1.	In grades K-5, tier 2 and 3 interventions should focus on properties and operations involving whole numbers	
2.	In grades 4-8, tier 2 and 3 interventions should focus on in-depth coverage of rational numbers and advanced topics in whole number arithmetic.	
3.	Ensure that specific criteria are covered in depth in any intervention materials selected.	

Recommendation 3

- Instruction provided in math interventions should be explicit and systematic, incorporating modeling of proficient problem-solving, verbalization of thought processes, guided practice, corrective feedback and frequent cumulative review.

Level of Evidence: Strong

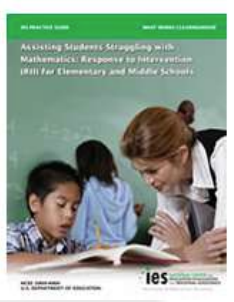


Steps for Carrying Out the Recommendation		
1.	Be sure that instructional materials used for math interventions are conducive to systematic and explicit teaching	
2.	Provide students with opportunities to solve problems in a group and to communicate problem-solving strategies	
3.	Ensure that instructional materials include cumulative review in each session.	

Recommendation 4

- Interventions should include instruction on solving word problems that is based on common underlying structures.

Level of Evidence: Strong



Common Underlying Structures

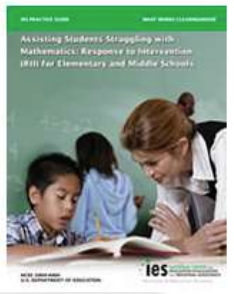
- Change Problem
  - Iguanas can lose parts of their tails. There are 7 sections on this iguana's tail. If 3 sections break off, how many sections are left?
- Group
  - Farmer Joe has 55 animals on his farm. He only has cows and pigs. There are 39 cows on the farm. How many pigs are on the farm?
- Compare
  - Lin is 5 years older than his cousin. If Lin is 11 years old, how old is his cousin?

Steps for Carrying Out the Recommendation		
1.	Teach students about the structure of various problem types, how to categorize them based on structure and how to determine solutions for each problem type.	
2.	Teach students to see common, underlying structures between familiar and unfamiliar problems and to transfer known solution strategies from familiar to unfamiliar problems.	

Recommendation 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.

Level of Evidence: *Moderate*



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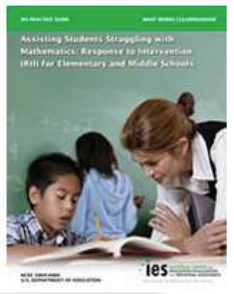
Steps for Carrying Out the Recommendation		
1.	Use visual representations such as number lines, arrays, and strip diagrams.	
2.	If visuals are not sufficient for developing accurate abstract thought and answers, use concrete manipulatives first. Although this can also be done with students in upper elementary and middle school grades, use of manipulatives with older students should be expeditious because the goal is to move toward understanding of--and facility with--visual representations, and, finally, to the abstract.	

Recommendation 6

Interventions at all grade levels should devote about **10 minutes** in each session to building fluent retrieval of **basic arithmetic facts.**

Level of Evidence: *Moderate*

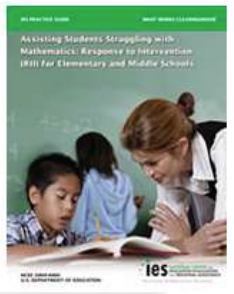


Steps for Carrying Out the Recommendation		
1.	Provide about 10 minutes per session of instruction to build quick retrieval of basic arithmetic facts. Consider using technology, flash cards, and other materials for extensive practice to facilitate automatic retrieval.	
2.	For students in kindergarten through grade 2, explicitly teach strategies for efficient counting to improve the retrieval of mathematics facts.	
3.	Teach students in grades 2 through 8 how to use their knowledge of properties, such as commutative, associative, and distributive law, to derive facts in their heads.	

Recommendation 8

Include motivational strategies in Tier 2 and Tier 3 interventions.

Level of Evidence: Low



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Steps for Carrying Out the Recommendation		
1.	Reinforce or praise students for their effort and for attending to and being engaged in the lesson.	
2.	Consider rewarding student accomplishments.	
3.	Allow students to chart their progress and to set goals for improvement.	

As a leader

- Understand that staff members require training and adequate support to successfully implement recommended practices.
- Provide continuous professional development for mathematics content knowledge.
  - For interventions consider:
    - The focus of the content (and underlying scope and sequence)
    - The instructional design of the materials
    - You can overcome some issues with materials but not all
- Use building level teams, coaches and specialists to provide staff development, ongoing classroom support and collaborative experiences to advance teachers' skills
- Understand Some clusters demand greater emphasis than others based on:
  - Depth of ideas
  - Time taken to master
  - Importance to future mathematics

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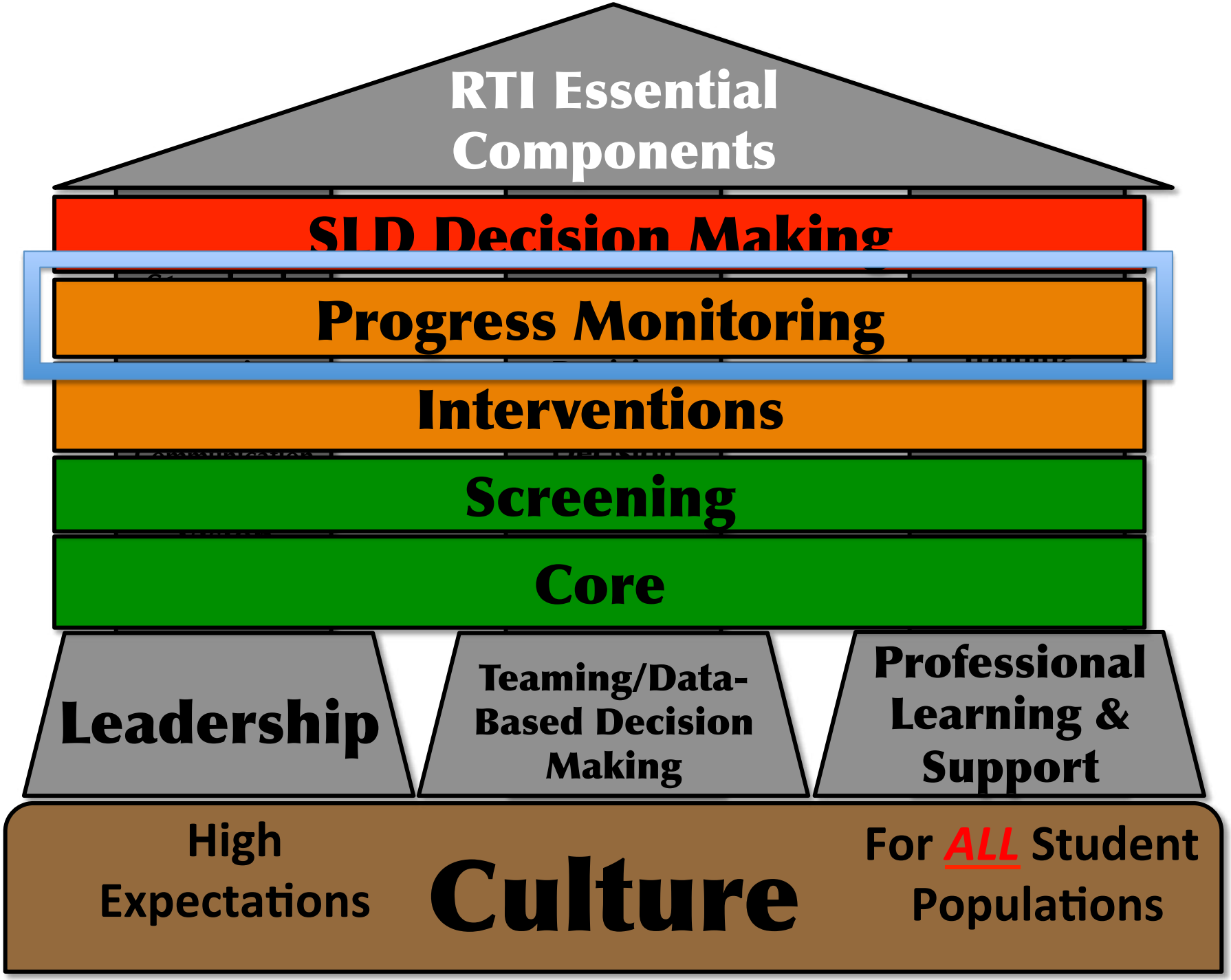
RTI Essential Components
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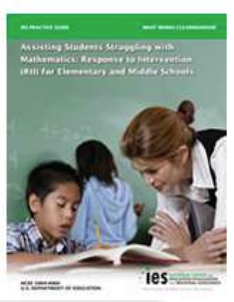
Core
Leadership
Teaming/Data-Based Decision Making
Professional Learning & Support
High Expectations
Culture
For ALL Student Populations

Recommendation 7

Monitor the progress of students receiving supplemental instruction and other students who are at risk.

Level of Evidence: Low



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Steps for Carrying Out the Recommendation		
1.	Monitor the progress of tier 2, tier 3, and borderline tier 1 students at least once a month using grade-appropriate general outcome measures.	
2.	Use curriculum-embedded assessments in interventions to determine whether students are learning from the intervention.	
3.	Use progress monitoring data to regroup students when necessary.	

Progress Monitoring

- Variety of assessments to tell us "Is what we are doing working?"

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Progress Monitoring Assessment

Purpose: Frequent, timely measures to determine whether students are learning enough of critical skills

When: Weekly, Bi-Weekly or Monthly

Who: At-risk students

Relation to Instruction: Indicates student response to instruction

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Does your school collect data to make decisions or to collect data?

- Common pitfalls
  - Focus is on procedure
  - Data collected does not match the purpose for collecting data (e.g. collecting diagnostic data on all students)
  - Layering of data sources
  - Different data for different programs (e.g. Title 1)
  - Lack of logistics
    - Scheduling
    - Entering
    - Bringing data to meetings

As a leader...

- Understand Tier 2 and Tier 3 students require progress monitoring regularly with general outcome and curriculum embedded measures.
- Monitor progress of Tier 1 students who perform just above the cutoff score for general outcome measures so they can be moved to Tier 2 support if needed.
- Use progress monitoring data to regroup students when necessary, skills levels change over time and in varying degrees.

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