

Multi-tiered System of Supports (MTSS) Overview

**MTSS Working Group
November 10, 2014**

Overview

- **MTSS Terminology**
- **Introduction to MTSS**
- **Critical Features of MTSS**
- **Challenges in Math**

Introduction to MTSS



Dreamstime. *Alphabet Soup – Save Me*. Retrieved from <https://encrypted-tbn2.gstatic.com/images?q=tbn:ANd9GcSDKU9r0pISfVWCSI2KLs7L6mTpD1gSYYeWqXzxZ1F23FMaCsnw>

Decoding the Alphabet Soup

MTSS

- Multi-tiered System of Supports (umbrella)

RTI

- Response to Intervention (academic)

PBIS

- Positive Behavioral Interventions and Supports (behavior)



Solomon McCown. *Healthcare Reform Alphabet Soup*. [Picture]. Retrieved from http://solomonmccown.com/library/img/blog/the800/Alphabet_soup.jpg

Introduction to MTSS / RTI

Overview of MTSS (0:25-2:48)

- How many tiers are there, typically? And what do they represent?
- What areas can receive a system of supports?
- How can those systems work together to meet the needs of all students?

Colorado Department of Education. (2013, Oct. 23). *Multi-Tiered System of Supports (MTSS) Overview* [video file]. Retrieved from <https://www.youtube.com/watch?v=8qhkGdL7Ugc#t=26>

Overview and Terminology

Overview of MTSS

- **Multiple systems**
- **Continuum of supports**
- **Problem-solving framework**

More terminology:

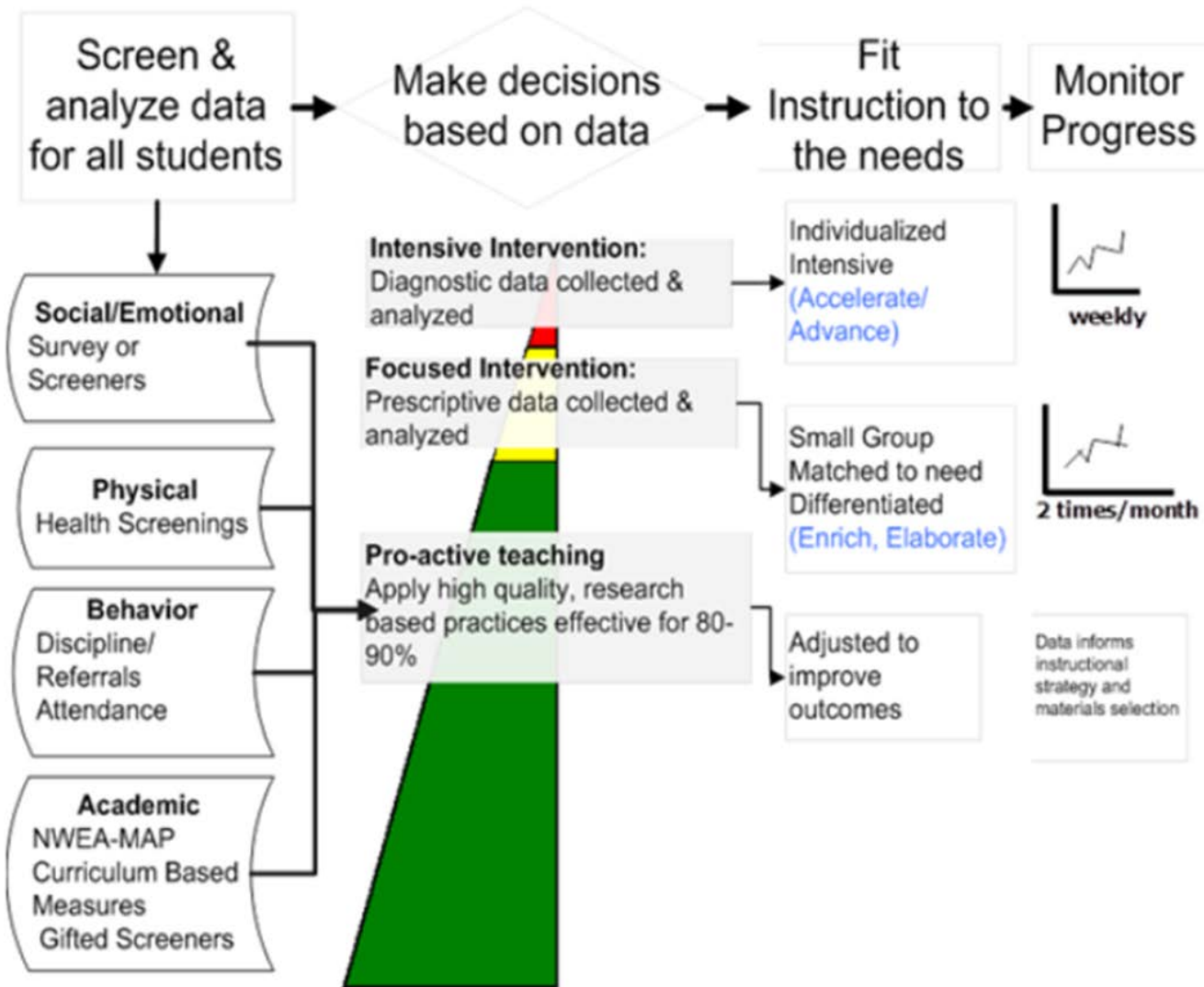
Tier 1:	Universal	Core	Primary
Tier 2:	Targeted	Supplemental	Secondary
Tier 3:	Intensive	Intensive	Tertiary

The Academics – Behavior Link

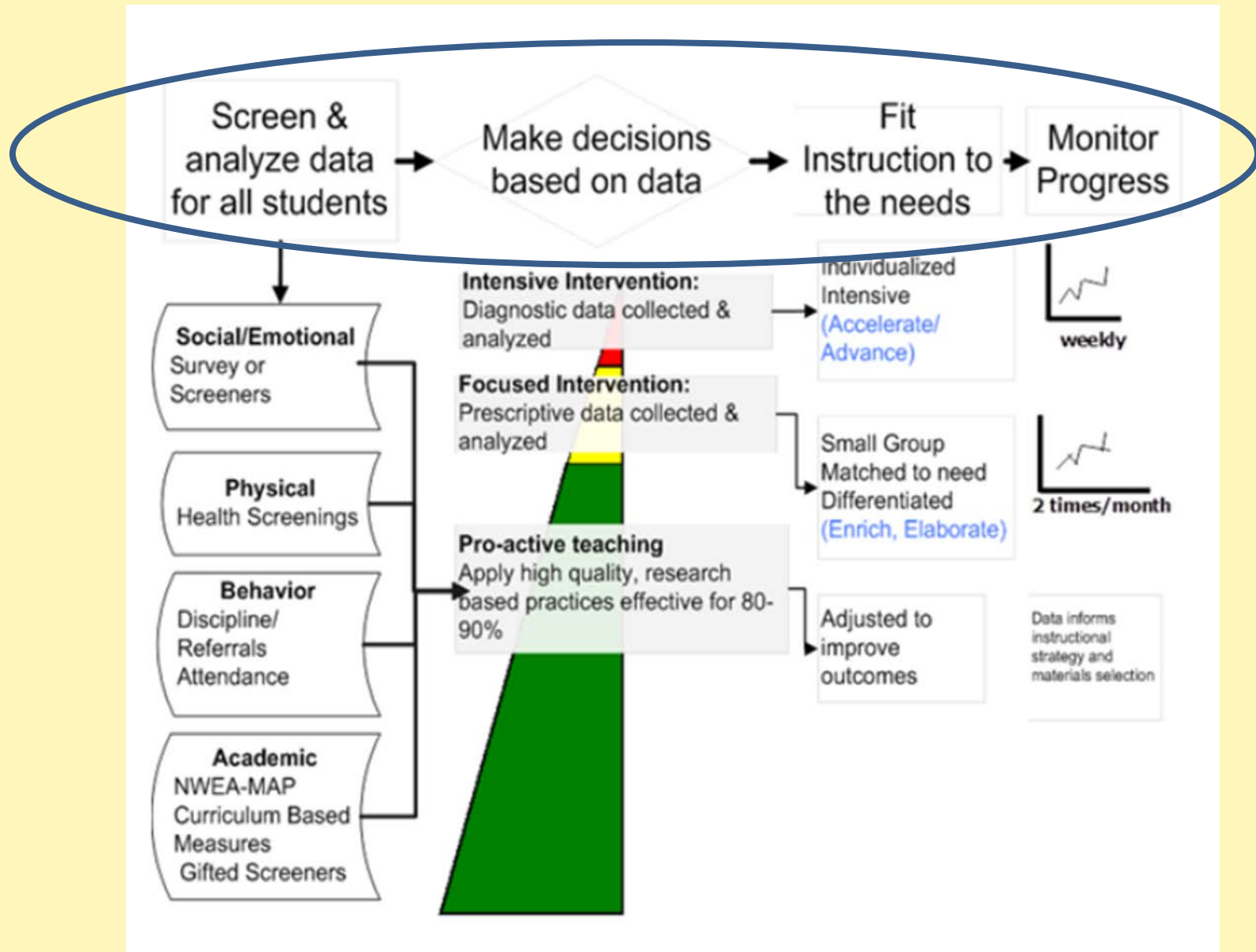
- [The Academics – Behavior Link](#) (3:44-4:55)
- [Part 2](#) (5:43-7:11)
 - **George Sugai,**
 - Director, Center for Behavioral and Education Research, Univ. of Connecticut
 - Co-director, Center of PBIS.



Critical Features of MTSS



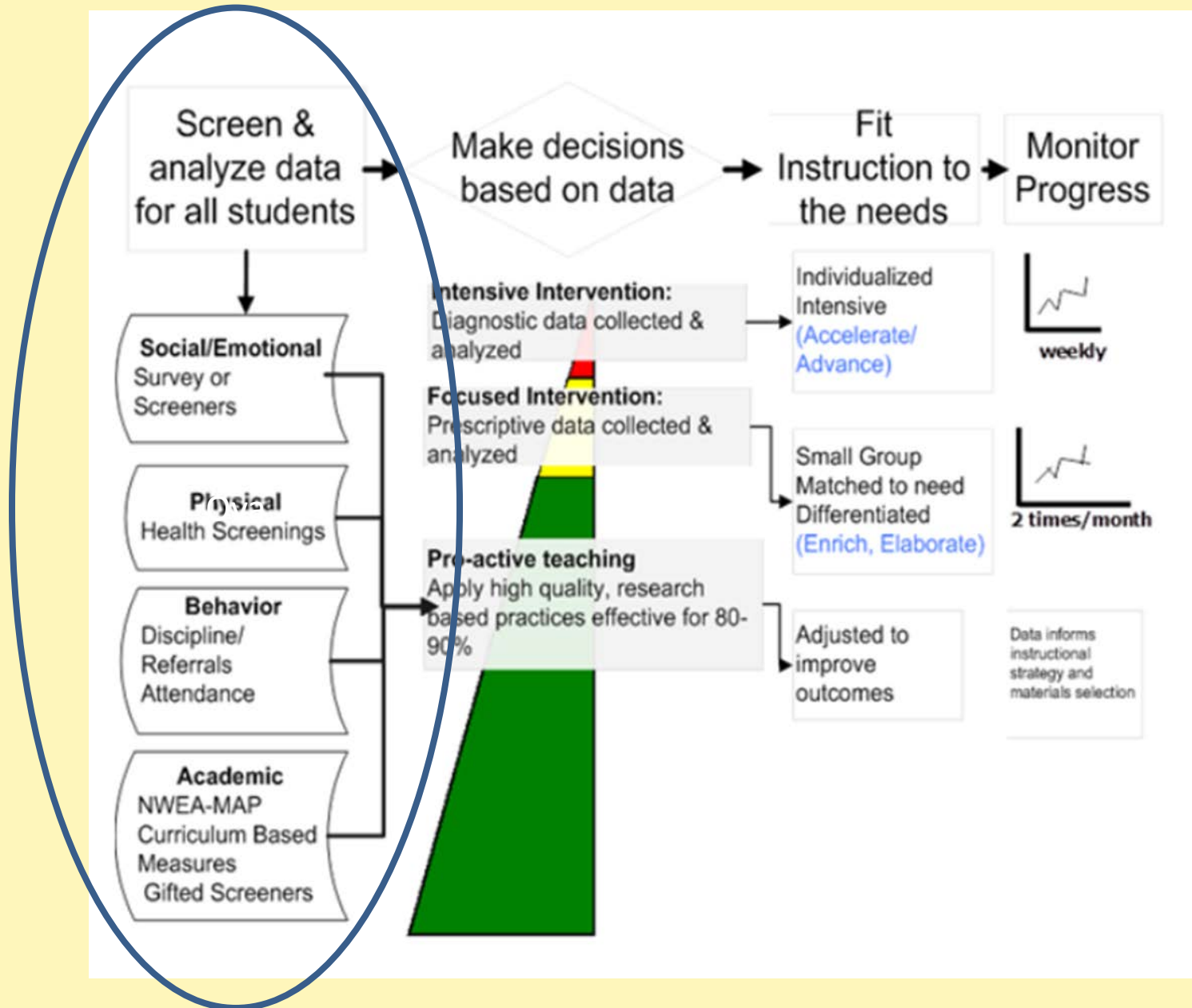
Exploring the Four Critical Features



The Four Critical Features of MTSS

- 1. Screen and analyze data for all students**
- 2. Make decisions about students' needs based on data**
- 3. Match instruction or intervention to address the identified needs**
- 4. Monitor progress**

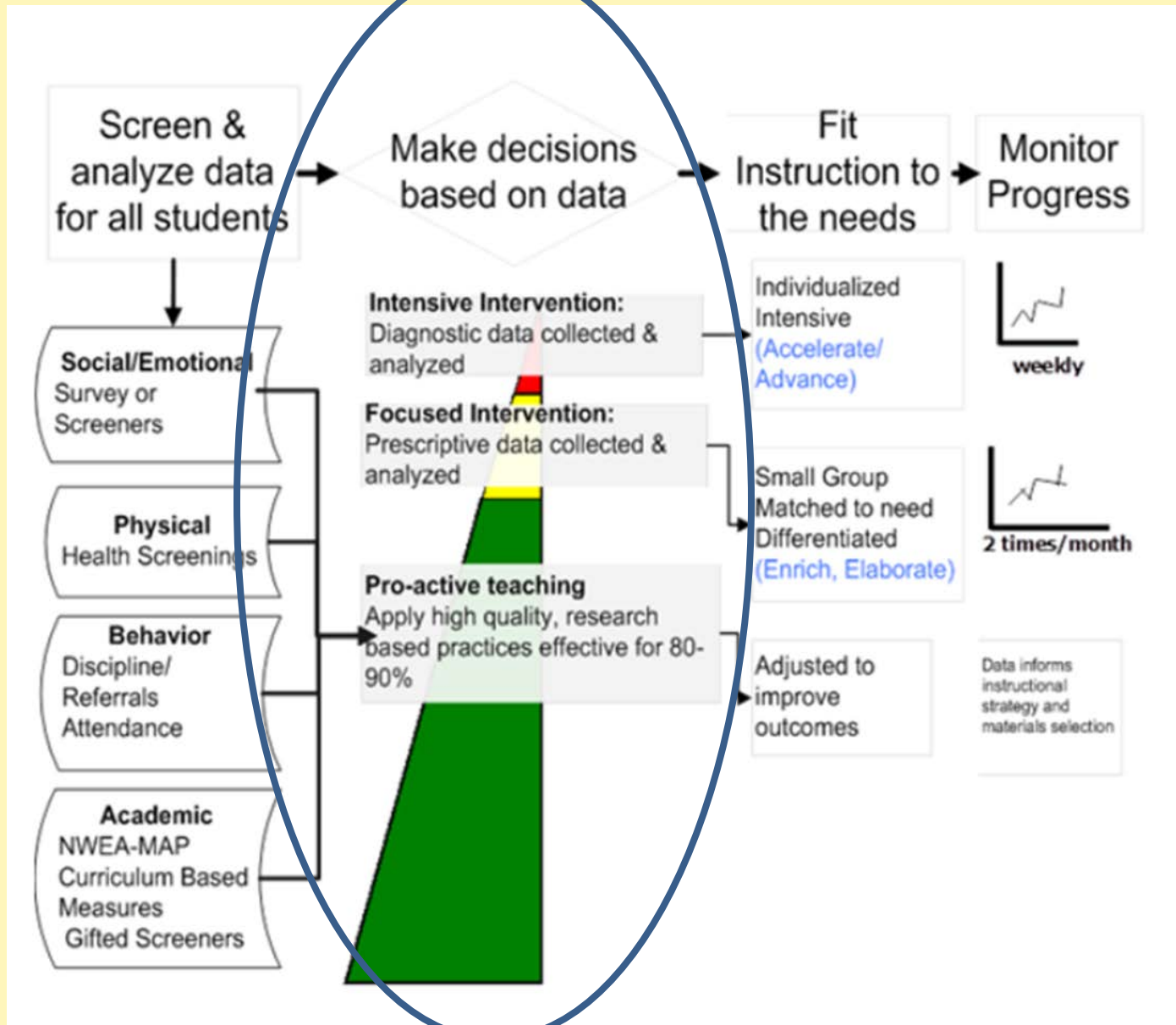
Exploring Screening Data



1. Screen and Analyze Data for All Students

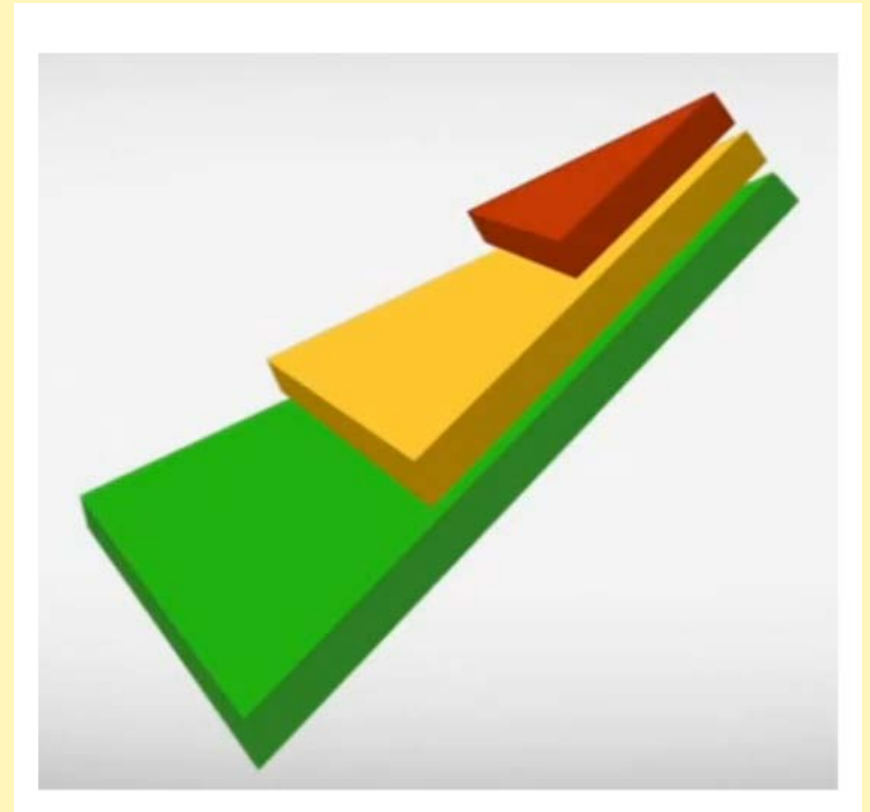
- **Social and Emotional**
 - Survey or screeners
- **Physical**
 - Health screenings
- **Behavior**
 - Discipline referrals and attendance
- **Academic**
 - Academic Screening Assessments
 - Curriculum-Based Measures
 - Gifted Screeners

Data-based Decisions

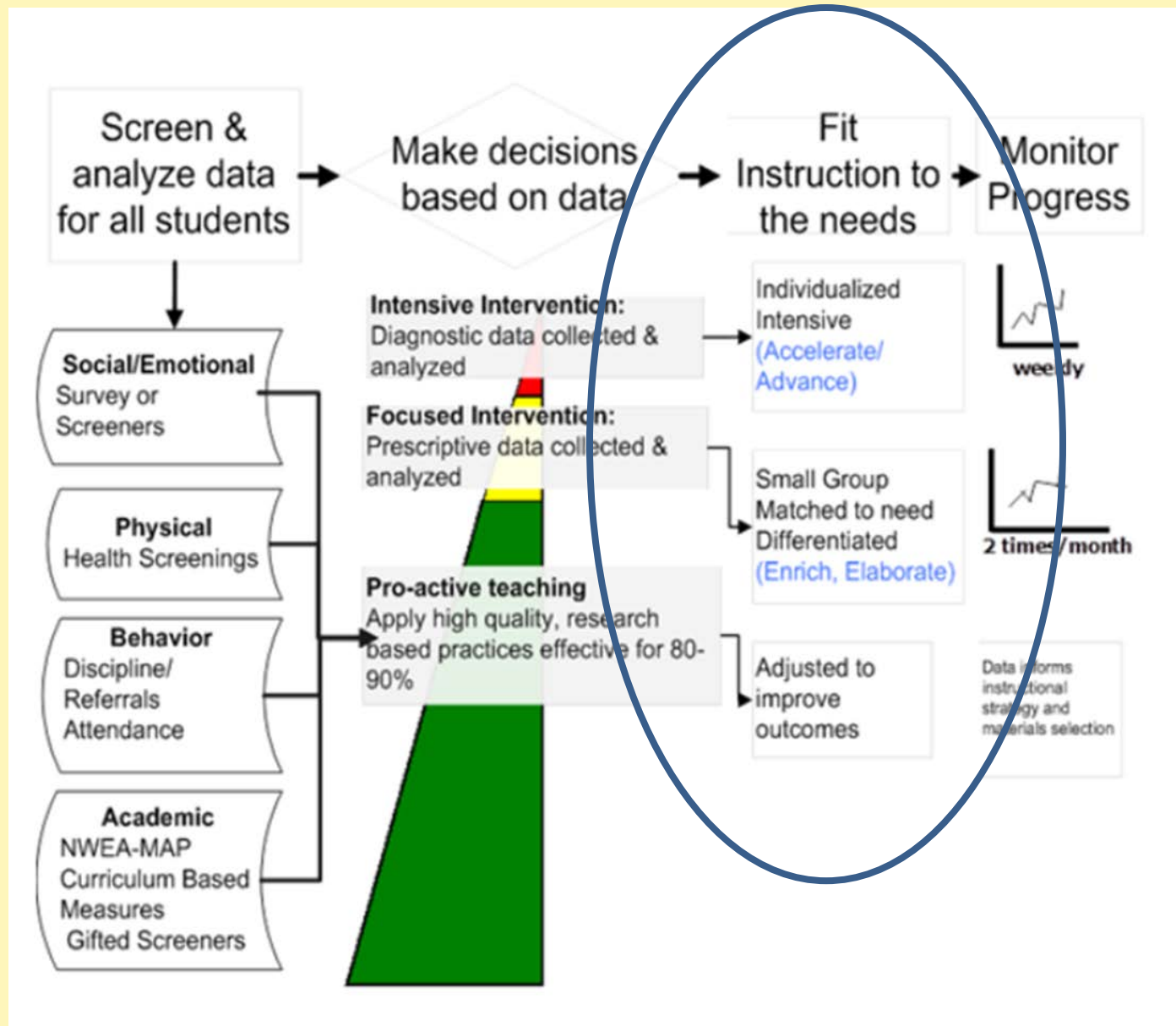


2. Make Decisions Based on Data

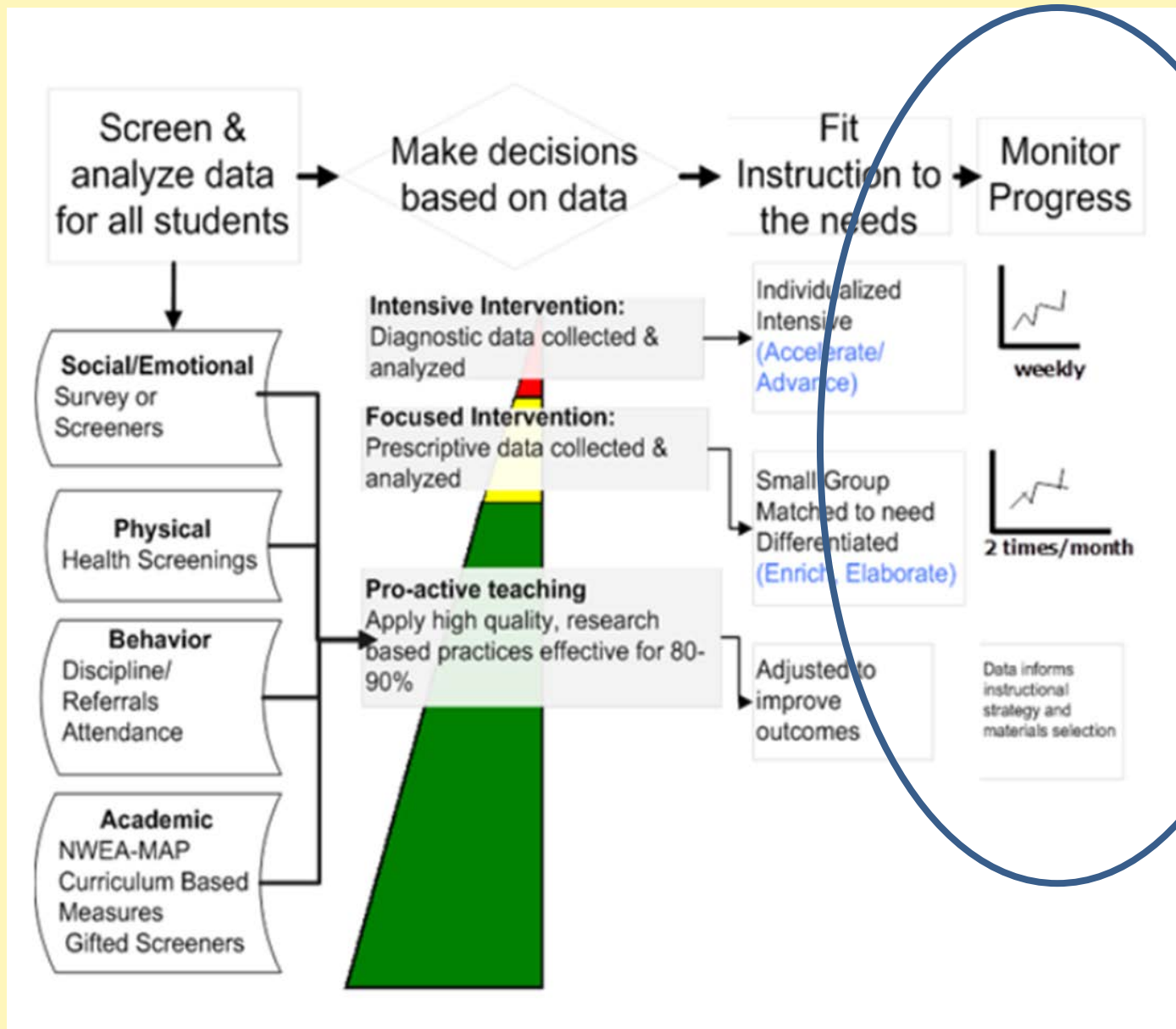
- **Intensive Intervention**
 - Diagnostic assessment
- **Focused Intervention**
 - Prescriptive assessment
- **Proactive Teaching**
 - Research-based best practices effective for 80-90% of students



Identifying Instruction / Intervention

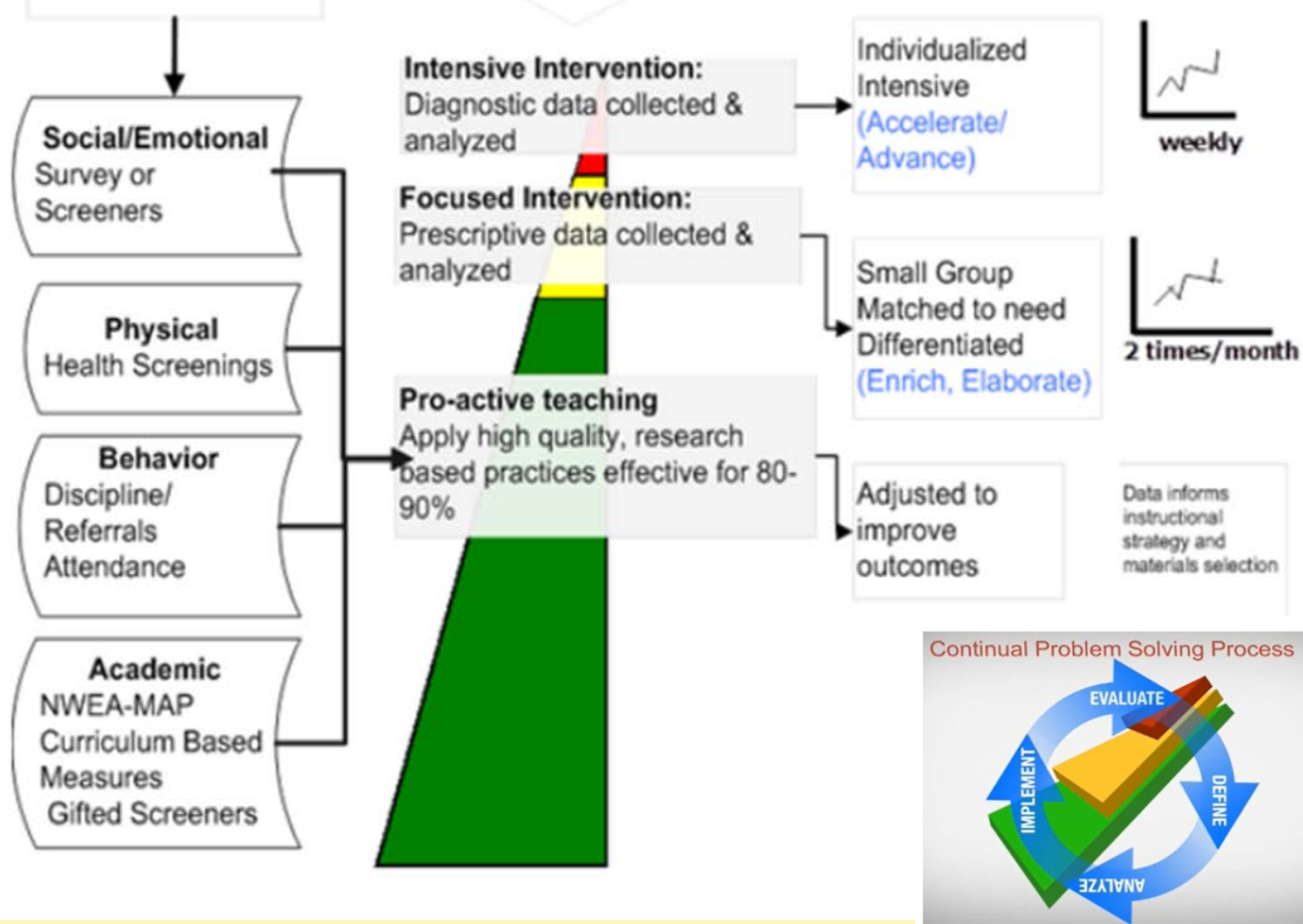


Monitoring Progress



Putting It Together

Define → Analyze → Implement → Evaluate → (Define)



MTSS is Designed to Improve Achievement with Problem Solving

Evaluate:

Evaluate the data and determine if the plan is working.

Implement:

Carry out the intervention/instruction as intended.



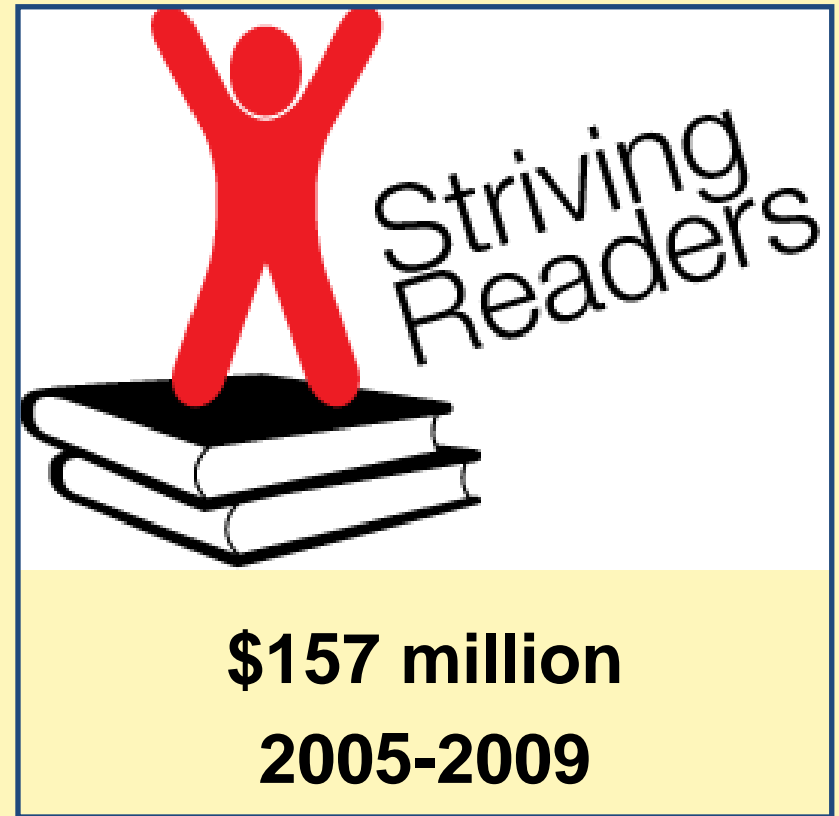
Define:

Identify gaps between performance and grade-level expectations.

Analyze:

Identify the instruction that will address the gap.

Some Background



**MathNow: Advancing Math Education in
Elementary and Middle School Archived---**
Proposed: \$260 million in 2006 & \$95 million in 2007

Challenges in Math

- **Lack of appropriate resources**
- **Adult dispositions regarding math**
- **Beliefs about math and about learners**
- **Content understanding**
- **Changing Instructional Practices**
- **Heavy focus on “following rules”**

IES PRACTICE GUIDE

WHAT WORKS CLEARINGHOUSE

Assisting Students Struggling with Mathematics: Response to Intervention (RtI) for Elementary and Middle Schools



Assisting Students Struggling with Mathematics: Response to Intervention (RtI) for Elementary and Middle Schools (2009)

<http://ies.ed.gov>

Institute of Education Sciences Guide: 8 Recommendations

1. Screen all students to identify those at risk.
2. Focus on whole numbers in K-5 and on rational numbers in grades 4-8
3. Explicit and systematic instruction: provide models of proficient problem solving, verbalization of thought processes, guided practice, corrective feedback, and frequent cumulative review
4. Include strategies for solving word problems based on common underlying structures.
5. Use visual representations of mathematical ideas; teachers should be proficient in the use of visual representations of mathematical ideas.
6. Include practice on strategies for fact fluency.
7. Monitor the progress of students.
8. Include motivational strategies.

5. Visual Representations of Mathematical Ideas

The ability to express mathematical ideas using visual representations and to convert visual representations into symbols is critical for success in mathematics.

- Use visual representations such as number lines, arrays, and strip diagrams.
- Use visual representations extensively and consistently.
- Explicitly link visual representations with symbolic representations.

How Old is the Shepherd?

How do you think 32 eighth grade students would respond to this nonsensical question:

There are 125 sheep and 5 dogs in a flock. How old is the shepherd?

75% gave numerical responses!

- **2 students calculated $125 + 5 = 130$**
- **2 students calculated $125 - 5 = 120$**
- **12 students calculated $125 \div 5 = 25$**
- **4 students stated that they guessed their answer (90, 5, 42, and 50)**
- **4 students tried to divide 125 by 5 but did not divide correctly**

Monitoring for Reasoning

- How old is the shepherd?

<https://www.youtube.com/watch?v=kibaFBgaPx4>

- Marisa

<https://mathreasoninginventory.com/home/video-library>

- Griffin

<http://christopherdanielson.wordpress.com/category/talking-math-with-your-kids/>

Next up...

How MTSS aligns with other initiatives