

**Advancing School Leadership for Continuous Improvement**

# **“Tiered” Up to Support Numeracy through Effective MTSS Practices**

Winter Instructional Leadership Conference

February 26, 2020

**Dr. Deshonda Stringer, Regional Coach,  
Georgia’s Tiered System of Supports for Students**

# Session Norms

- Place electronics on silence/vibrate.
- Remain engaged in learning.
- Respectfully share opinions.
- Ask questions for clarification to avoid making assumptions.

# Session Goals

- Understand the essential component of **Infrastructure** in Georgia's Tiered System of Supports for Students
- Explore how Georgia's Tiered System of Supports for Students framework impacts numeracy instruction
- Reflect on how the subcomponents of infrastructure are essential to an effective numeracy program
- Understand the importance of Specially-Designed Instruction (SDI) within a multi-level prevention system, using Georgia's Tiered System of Supports for Students framework

# Georgia's Tiered System of Supports for Students: A National Definition

- A tiered system of supports integrates assessment and intervention within a school-wide, multi-level prevention system to maximize student achievement and reduce behavioral problems.
- Promotes systems alignment to increase efficiency and effectiveness of resources.

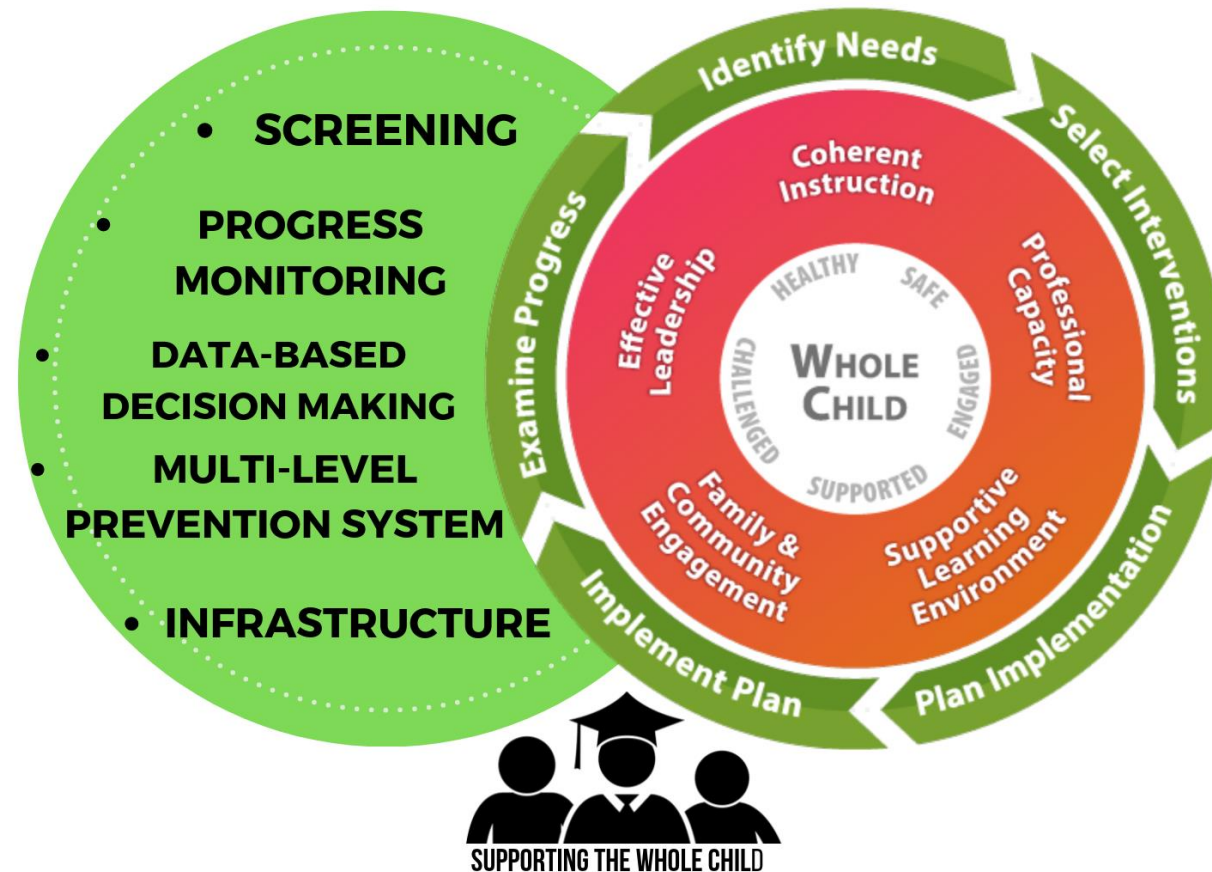
(Adopted from National Center on Response to Intervention, 2010)

# Think-Pair-Share: Barrier Activity

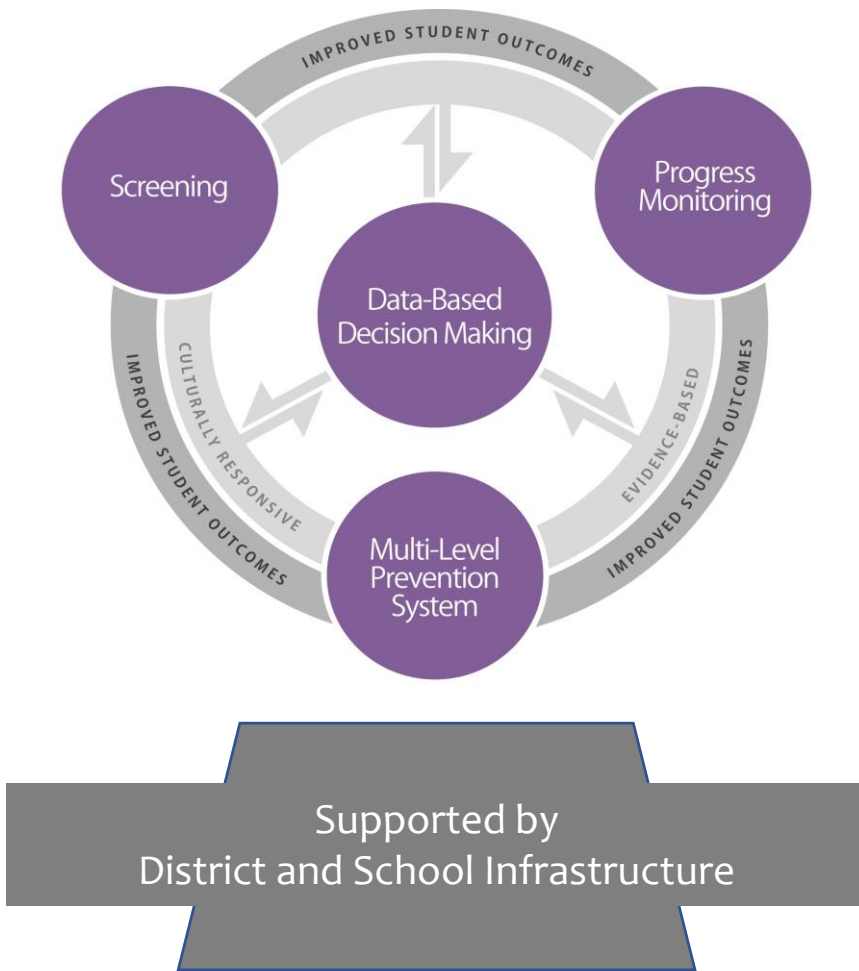
- With your groups, briefly discuss challenges that have impacted numeracy outcomes in your school/district.
- We will chart a few of these responses. and refer to these responses during the session.

# MTSS: Integrating the *What* and the *How*

Integrating the Essential Components of Georgia's Tiered System of Supports for Students with Georgia's Systems of Continuous Improvement



# Essential Components of the Nationally Aligned MTSS Framework



Georgia added the essential component of Infrastructure. Georgia will focus on Leadership, Effective Teaming, Professional Learning, and Family and Community Engagement .

# Turn and Talk

What knowledge and resources and are needed to support numeracy development and understanding?

- Group 1: Knowledge (Leaders)
- Group 2: Knowledge (Teachers)
- Group 3: Resources (Leaders)
- Group 4: Resources (Teachers)



# *Essential Component of Infrastructure*

*Knowledge, resources and organizational structures necessary to operationalize all components of the framework in a unified system to meet the established goals*

- Prevention Focus
- **Leadership**
- **Professional Learning**
- Schedules
- Resources
- **Family and Community Engagement**
- Communication with and Involvement of All Staff
- **Effective Teaming**
- Cultural and Linguistic Responsiveness

# What do schools/districts need in their infrastructure to support effective numeracy development?

- Numeracy Plan
- Assessment Plan and Calendar
- Multi-Level Prevention System
- High-Leverage Practices
- Evidence-Based Practices
- Evidence-Based Interventions
- Implementation Fidelity Plan
- Professional Learning/Professional Learning Communities
- Family and Community Engagement
- Standards for Mathematical Practice
- Specially-designed Instruction (SDI) for Students with Disabilities (SWD)
- Etc.

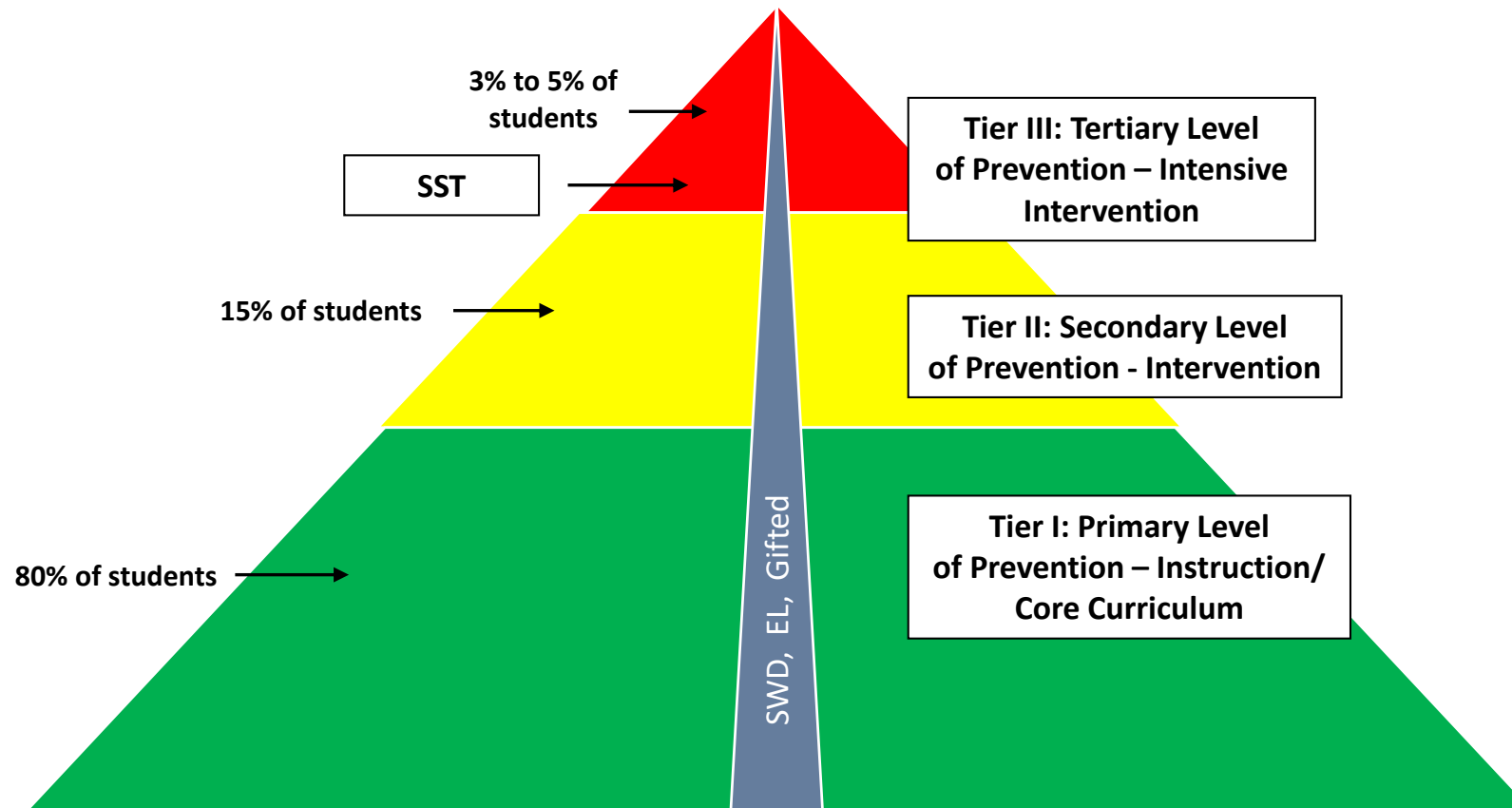
*Which of the subcomponents of infrastructure impact these needs?*

# Numeracy Plan

- Are all teachers included in collaborative planning to unpack the standards?
- Are adequate supports provided for teachers that are unable to co-plan/plan with their grade level(s)/department(s)?
- What are students expected to learn and do?
- How will we get students there?
  - What do we teach?
  - How do we teach it?
  - When do we teach it?
- What resources are needed (i.e. manipulatives, data protocols, professional learning for leaders and teachers, etc)?

**Which of the subcomponents impact effective development and implementation of a numeracy plan?**

# Georgia's Multi-Level Prevention System



*Question to Ponder -  
What factors might  
impact a school that  
has an inverted  
pyramid based upon  
their numeracy data?*

Students receive services at all levels, depending on need.

# Table Talk

- In groups of three to four, create a list of 4-5 non-negotiables that should be evident in every mathematics classroom to support **high quality** Tier I instruction.
- Identify a spokesperson from your group to share with the rest of the group.

# What were your some of your non-negotiables?

- Standards-based instruction framework (opening, work period, and closing)
- Homework expectations
- Active vocabulary instruction
- Word wall usage
- Formative assessments
- Unpacking standards and learning targets
- Use of manipulatives
- Standards for mathematical practice
- Collaborative groups
- Explicit instruction
- High Leverage Practices (HLPs)
- Etc.

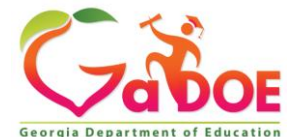
# Standards for Mathematical Practice are Evidence-Based Practices for Math

<https://www.georgiastandards.org/Georgia-Standards/Documents/Standards-for-Mathematical-Practice-Look-Fors.pdf>



## Standards for Mathematical Practice

1. Make sense of 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.



# What are High-Leverage Practices (HLPs)?

Fundamental to effective teaching

Cut across content domains and grade levels

Used frequently

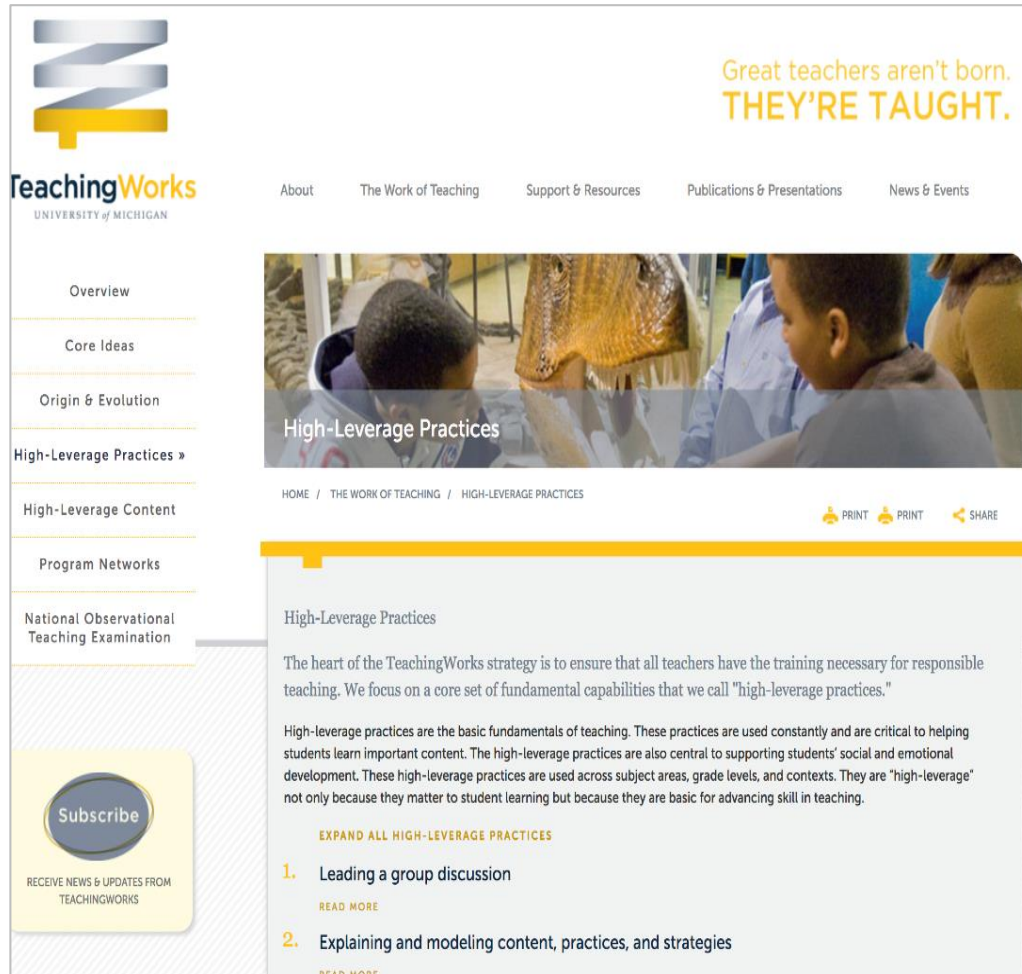
Supported by research

<http://www.teachingworks.org/work-of-teaching/high-leverage-practices>

How do these practices impact an effective numeracy program?



# Examples of HLPs



The screenshot shows the TeachingWorks website. At the top left is the TeachingWorks logo with the University of Michigan name. A navigation menu includes 'About', 'The Work of Teaching', 'Support & Resources', 'Publications & Presentations', and 'News & Events'. A quote reads 'Great teachers aren't born. THEY'RE TAUGHT.' Below this is a large image of students in a museum. The page title is 'High-Leverage Practices'. A sidebar on the left lists navigation options: Overview, Core Ideas, Origin & Evolution, High-Leverage Practices (selected), High-Leverage Content, Program Networks, and National Observational Teaching Examination. A 'Subscribe' button is also present. The main content area includes a breadcrumb trail 'HOME / THE WORK OF TEACHING / HIGH-LEVERAGE PRACTICES', social sharing icons, and a section titled 'High-Leverage Practices' with an introductory paragraph and a list of practices.

TeachingWorks  
UNIVERSITY of MICHIGAN

Great teachers aren't born.  
THEY'RE TAUGHT.

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High-Leverage Practices

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PRINT PRINT SHARE

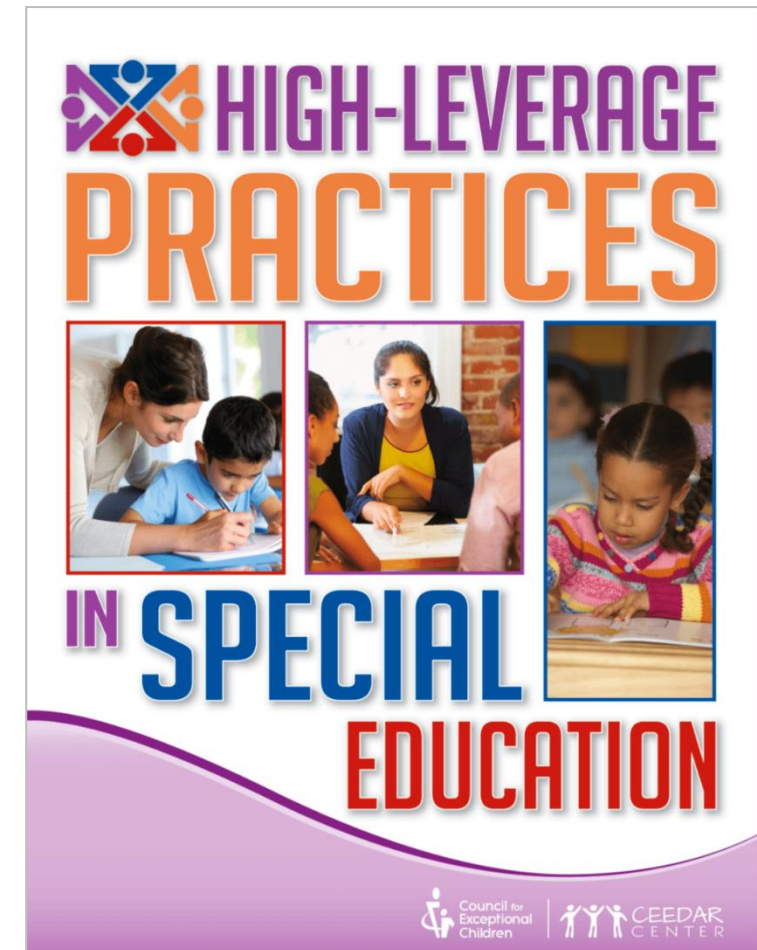
High-Leverage Practices

The heart of the TeachingWorks strategy is to ensure that all teachers have the training necessary for responsible teaching. We focus on a core set of fundamental capabilities that we call "high-leverage practices."

High-leverage practices are the basic fundamentals of teaching. These practices are used constantly and are critical to helping students learn important content. The high-leverage practices are also central to supporting students' social and emotional development. These high-leverage practices are used across subject areas, grade levels, and contexts. They are "high-leverage" not only because they matter to student learning but because they are basic for advancing skill in teaching.

[EXPAND ALL HIGH-LEVERAGE PRACTICES](#)

1. Leading a group discussion  
[READ MORE](#)
2. Explaining and modeling content, practices, and strategies  
[READ MORE](#)



The graphic features the title 'HIGH-LEVERAGE PRACTICES IN SPECIAL EDUCATION' in large, colorful letters. It includes three inset photos of teachers interacting with students. At the bottom, logos for the Council for Exceptional Children and CEDAR CENTER are displayed.

HIGH-LEVERAGE PRACTICES  
IN SPECIAL EDUCATION

Council for Exceptional Children | CEDAR CENTER

# High Leverage Practices Crosswalk

<https://cedar.education.ufl.edu/wp-content/uploads/2017/11/HLP-Crosswalk-with-PSEL1.pdf>



Offering a holistic education to **each and every child** in our state.

# Multi-Level Prevention System

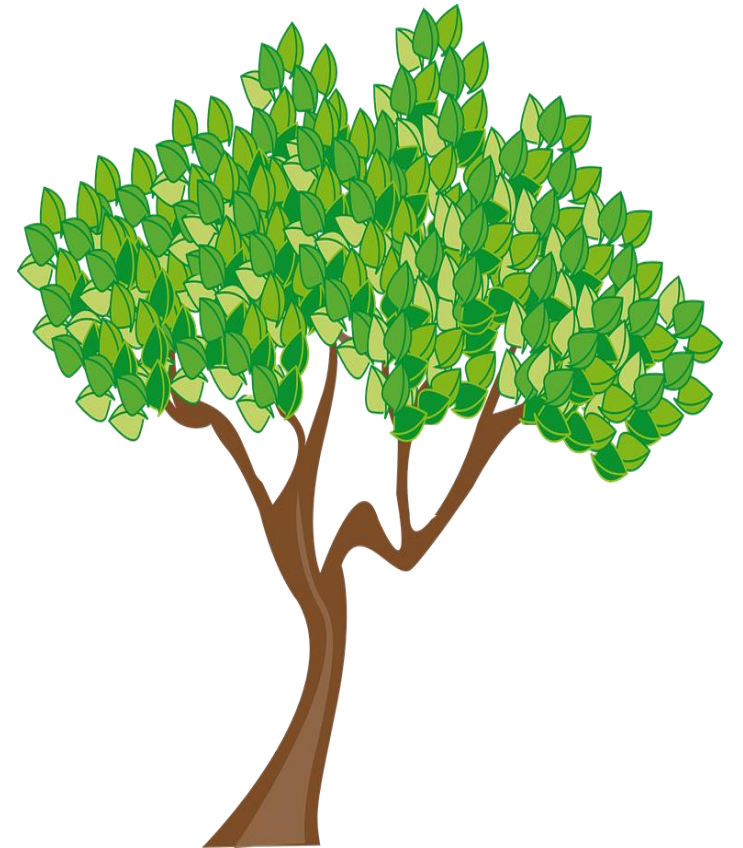
- How do you evaluate the effectiveness of your primary level of prevention (Tier I)?
- How do you evaluate the effectiveness of your secondary level of prevention (Tier II)?
- How do you evaluate the effectiveness of your tertiary level of prevention (Tier III)?

**Which of the subcomponents impact effective implementation of a Multi-Level Prevention System?**

# Specially Designed Instruction (SDI)

## Specially Designed Instruction is....

Adapting as appropriate the content, methodology or delivery of instruction (i) to address the unique needs of a child that result from the child's disability; and (ii) to ensure access of the child to the general curriculum, so that the child can meet the same educational standards within the Jurisdiction of the public agency that apply to all children. Individuals with Disabilities Education Act (IDEA), 34C.F.R §300.39.



# Specially Designed Instruction...

## *Adapting the...*

### Content

Refers to knowledge and skills being taught to the student with a disability are different from what is being taught to general education students.

### Methodology

Refers to utilizing different instructional strategies and approaches to teach content to a student with disability, which may not be utilized with general education students.

### Delivery

Refers to the way instruction is delivered to a student with a disability is different from how delivered to general education students.

# SDI within Georgia's Tiered System of Supports for Students

- All students, including students with disabilities, receive core instruction in mathematics (Tier I) and supplemental (Tier II) and intensive interventions (Tier III ) as needed; students with disabilities also receive SDI
- SDI occurs within all tiers of the MTSS framework
- SDI is required under IDEA and only available to eligible students with identified disabilities with an IEP
- SDI is what the teacher does

<https://www.gadoe.org/Curriculum-Instruction-and-Assessment/Special-Education-Services/Documents/SDI-chart.pdf>

# Implementing Specially-Designed Instruction (SDI) in Mathematics for Students with Disabilities at Tier I

- Within Tier I implement appropriate instructional accommodations/SDI to support students with disabilities in accessing grade-level mathematics standards
- Within Tier I, implement high leverage practices frequently and with fidelity
  - High-Leverage Practices in Special Education
  - Teachingworks.org
- Within Tier I implement evidence-based practices

# Assessment Plan

- How do you determine a student's level of risk?
- What do you use to monitor students' response to core numeracy instruction (Tier I)?
- How do you ensure progress monitoring data is **collected and used** effectively (Tiers II and III)?
- How do you ensure effectiveness of your assessment plan?
- What is the role of data-based decision making at **each** of the Tiers?

**Which of the subcomponents impact the development and implementation of an assessment plan?**



# What are Evidence-Based Practices/Interventions?

Are Content  
Specific

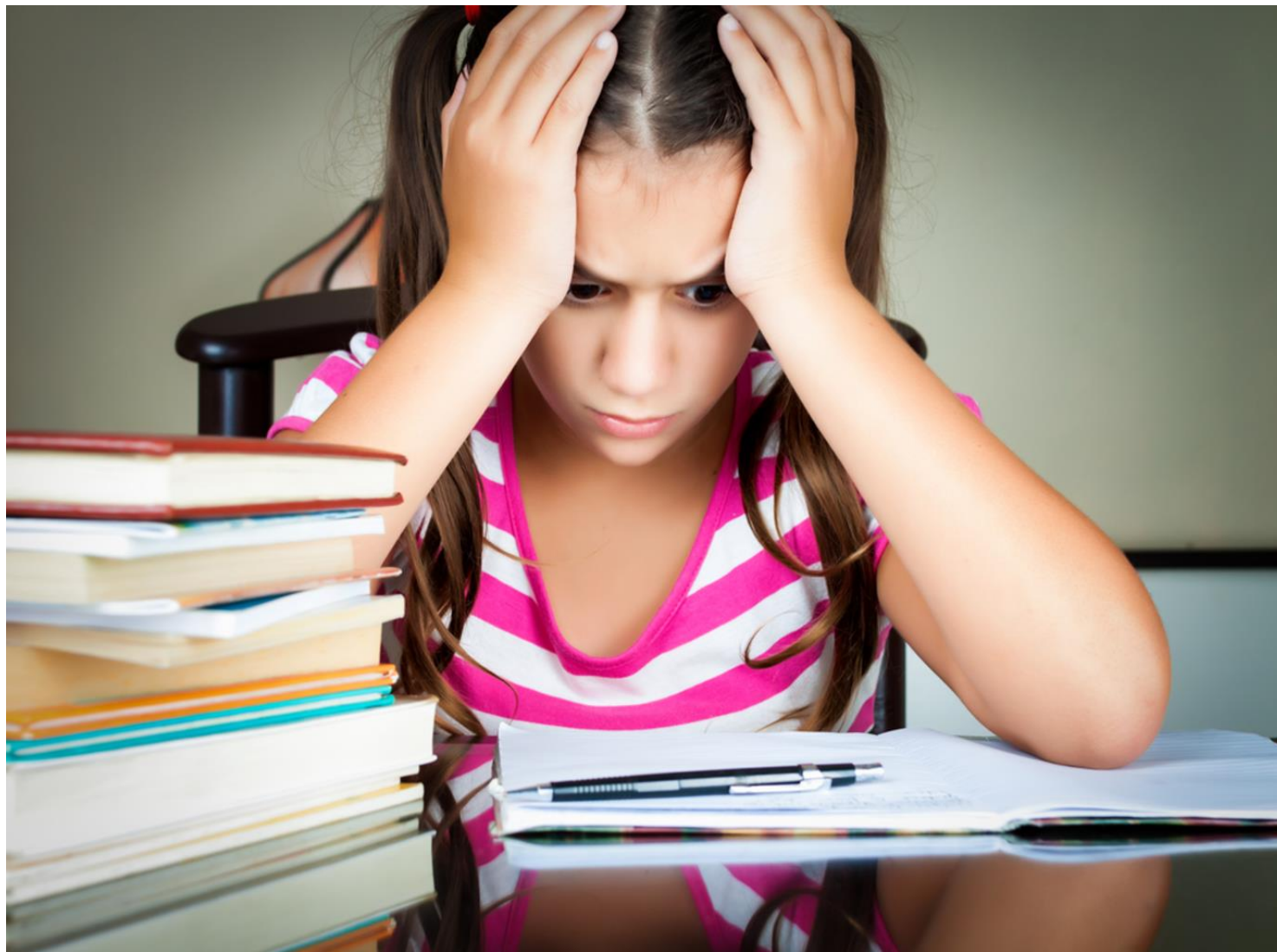
Developmentally  
Appropriate

Learner  
Dependent

Supported by  
Research

Tessie Bailey, American Institutes for Research (tbailey@air.org)

**How do these practices impact an  
effective numeracy program?**



What happens  
when students  
struggle?

# 4<sup>th</sup>-8<sup>th</sup> Math Instructional Evidence-based Practices

#	Recommendations	Evidence
1	<b>Prepare problems</b> and use them in whole-class instruction	Minimal
2	Assist students in <b>monitoring and reflecting on the problem-solving process.</b>	Strong
3	Teach students how to use <b>visual representations.</b>	Strong
4	Expose students to <b>multiple problem-solving</b> strategies.	Moderate
5	Help students <b>recognize and articulate mathematical concepts</b> and notation.	Moderate

(Woodward, Beckmann, Driscoll, et al., 2018)

# Evidence-Based Practices/Interventions

Instructional Strategy	Strong Evidence	Moderate Evidence	Promising Practice
<a href="#">Mathematical Representation of Problems</a>	◆		
<a href="#">Cognitively Guided Instruction</a>			◆
<b>Using visuals to support mathematics learning</b>	◆		
Modeling with Mathematics	◆		
Collaborative Groupwork		◆	
Problem-based learning			◆
Task-based learning			◆
Building Fluency through Strategy Development		◆	

# Resources for Evaluating Evidence Base of Practices and Standardized Interventions

NCII Interventions  
Tools Chart

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

What Works  
Clearinghouse

<https://ies.ed.gov/ncee/wwc/>

Best Evidence  
Encyclopedia

<http://www.bestevidence.org>

# Next Steps

- Discuss with your group, at least 2 next steps using the content from today.
- Participants will be asked to share out some of their responses.

# Final Thought: Infrastructure

You can't build a great building on a weak foundation. You must have a solid foundation if you're going to have a strong superstructure.

Gordon B. Hinckley

Read more at:

[https://www.brainyquote.com/quotes/gordon\\_b\\_hinckley\\_539629](https://www.brainyquote.com/quotes/gordon_b_hinckley_539629)



**Dr. Deshonda Stringer, MTSS Regional Coach**

**[Dstringer@doe.k12.ga.us](mailto:Dstringer@doe.k12.ga.us)**





# Georgia's Tiered System of Supports for Students

## Atlanta Office

Wina Low,  
Program Manager Senior

Karen Suddeth,  
Program Manager/ Project Director

Carole Carr,  
Communications & Visibility  
Specialist

Andrea Catalano,  
Professional Learning Specialist

Rondalyn Pinckney,  
Research & Evaluation Specialist

# Georgia's Tiered System of Supports for Students

## Field Team

Laura Brown,  
Coordinator for Coaching Services

Christy Jones,  
Regional Coach

Jody Drum,  
Regional Coach

Claire Smith,  
Regional Coach

Deshonda Stringer,  
Regional Coach

Launa Chamberlin,  
Regional Coach

# Need More Information?

**Georgia's Tiered System of Supports for Students**

[www.gadoe.org/TieredSystemofSupports](http://www.gadoe.org/TieredSystemofSupports)

or

[www.gadoe.org/MTSS](http://www.gadoe.org/MTSS)

## **Resources Available**

- Fact Sheets: Simplify essential components/framework
- Professional Learning Units
- Training Webinars
- Subscribe to Newsletter
- Register for Upcoming Events

**The contents of presentation were developed under a grant from the U.S. Department of Education, #H323A170010. However, those contents do not necessarily represent the policy of the U.S. Department of Education, and you should not assume endorsement by the Federal Government.  
Project Officer, Jennifer Coffey.**



# Session Feedback

Thank you for attending our session.  
Please take a moment to provide  
your feedback.

<https://tinyurl.com/2020ILC>



Share your conference highlights now!



[@GaDOESDE](https://twitter.com/GaDOESDE)

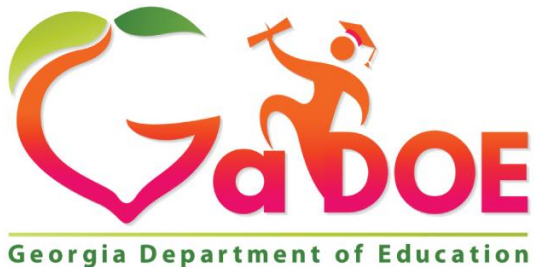
[www.gadoe.org](http://www.gadoe.org)

   @georgiadeptofed

 [youtube.com/c/GeorgiaDepartmentofEducation](https://youtube.com/c/GeorgiaDepartmentofEducation)

**Dr. Deshonda Stringer**

**[Dstringer@doe.k12.ga.us](mailto:Dstringer@doe.k12.ga.us)**



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