

MSTAR Universal Screener and Rtl

CAMT July 18-19, 2011



Purpose of this Presentation

- Review the purpose of the MSTAR Universal Screener.
- Review the types of items represented on the MSTAR Universal Screener.
- Discuss the types of decisions that can be made from the results.

Where the MSTAR Universal Screener Fits within the MSTAR Project

Three components:

- MSTAR Academies
 - Academy Part I: Core instruction
 - Academy Part II: Supplemental instruction
- MSTAR Universal Screener
 - Enables data-based decision making
- MSTAR Intervention Project
 - Provides sample intervention lessons

Response to Intervention: Multi-tiered Model

MSTAR Universal Screener

Universal Screening

- TAKS Benchmark (at or below 80%)
- Examine and diagnose students' mathematical abilities (TXRCFP/TEKS)
- Identify students who qualify for Tier II and Tier III intervention

Focused Core Curriculum/Instruction Tier I (TXRCFP/TEKS)

- Ensure all students receive the focused core curriculum and instruction
- Critical mathematics vocabulary
- Classroom teacher

Differentiated Instruction

- Allocating time
- Flexible grouping to maximize engagement
- Scaffolding instruction
- Materials/technology

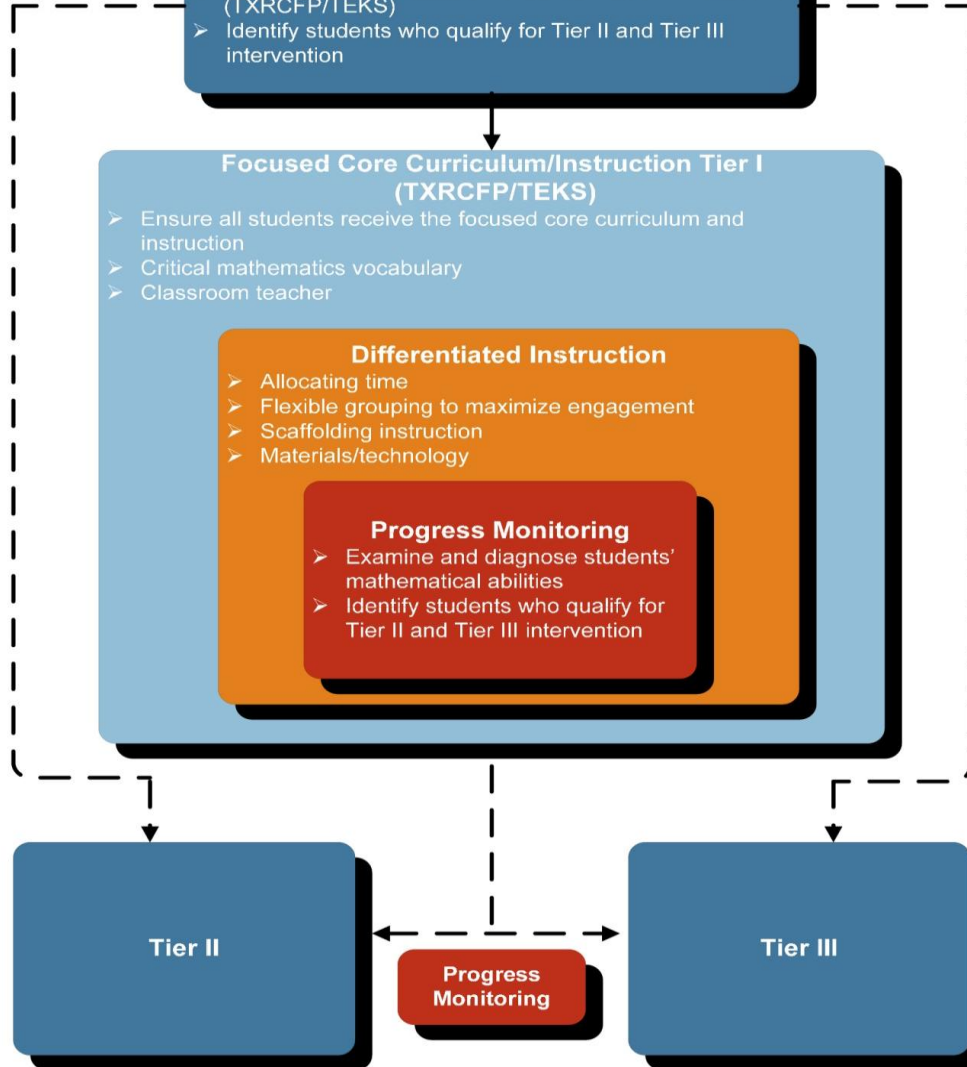
Progress Monitoring

- Examine and diagnose students' mathematical abilities
- Identify students who qualify for Tier II and Tier III intervention

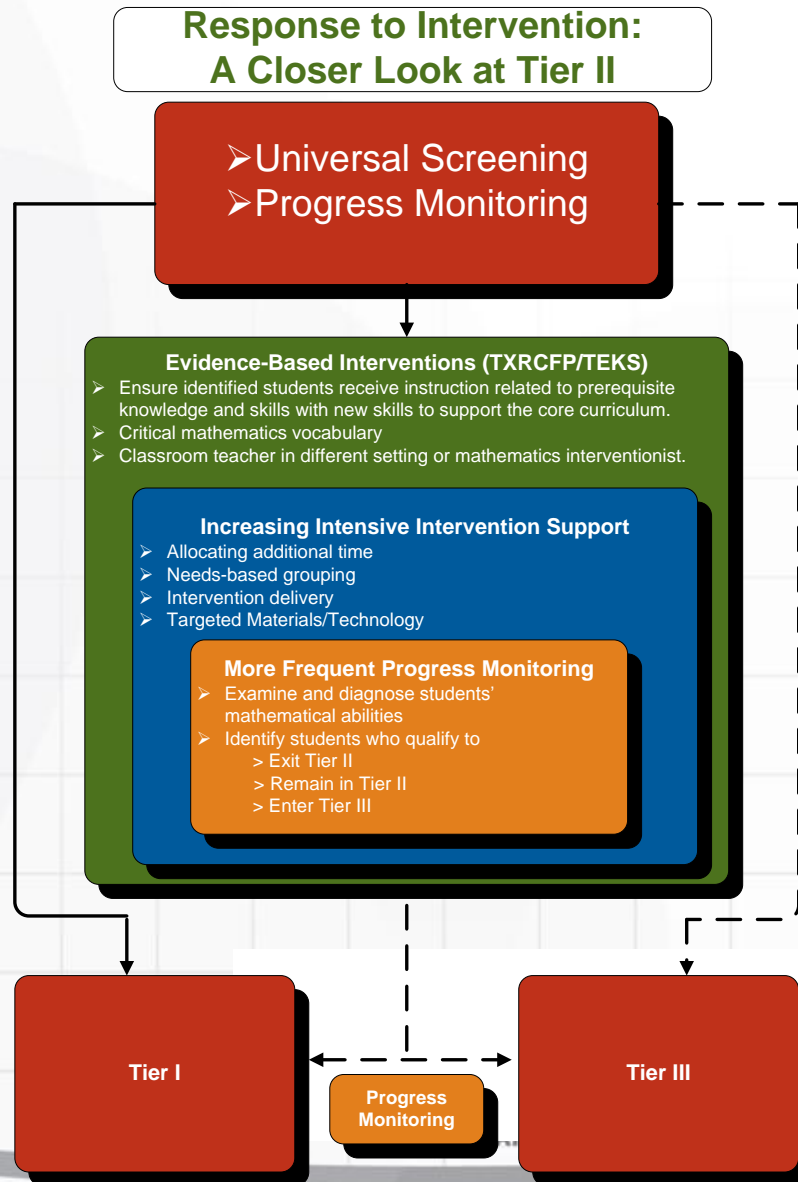
Tier II

Tier III

Progress Monitoring



Rtl: A Closer Look at Tier II



Your Current Practices

- What data do you currently use to make decisions?
- What strategies do you use to better understand your students from these data?
- What strategies do you use to make decisions from TAKS data?

Overview of the MSTAR Universal Screener: True or False

- ~~The MSTAR Universal Screener measures all of the Texas Essential Knowledge and Skills.~~
- The MSTAR Universal Screener is for all students in grades 5-8 in fall, winter, and early spring.
- ~~Diagnostic decisions can be made from the results.~~

Purpose of the MSTAR Universal Screener

- Identify students who are at-risk for struggling with algebra-related core instruction
 - Determine ***IF*** interventions are needed
 - Determine ***DEGREE OF INTENSITY*** of the intervention needed
 - Monitor students' ***RISK STATUS***
- Not intended to provide diagnostic information

MSTAR Universal Screener

MSTAR Universal Screener Performance Levels and Interpretive Guide

Tier III: **Intensive**
Instructional Support



B: 1-5th Percentile Rank

A: 6-14th Percentile Rank

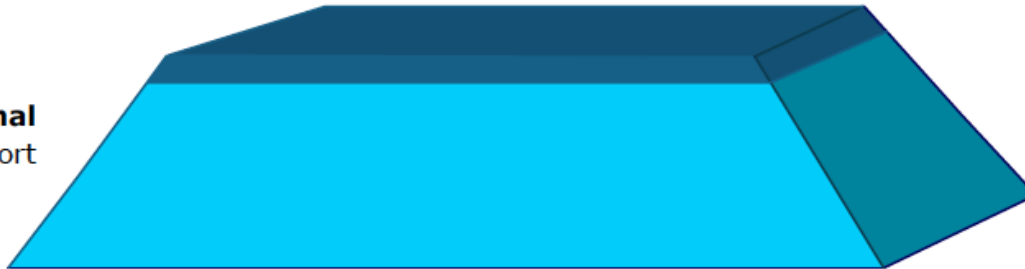
Tier II: **Strategic**
Instructional Support



B: 15-24th Percentile Rank

A: 25-39th Percentile Rank

Tier I: **Minimal**
Instructional Support



B: 40-49th Percentile Rank

A: 50-99th Percentile Rank

Performance Level	Instructional Need	Level Label	Range of Performance	Level of Additional Instructional Support
Tier III	Intensive Instructional Support	B	1-5 th Percentile Rank	Student needs urgent and intensive interventions that are highly specified to his/her individual needs. Additional instructional time is needed. Progress should be frequently and consistently monitored.
		A	6-14 th Percentile Rank	Student needs intensive interventions that are highly specified to his/her individual needs. Diagnostic assessments are needed to determine areas in need of improvement. Additional instructional time is needed. Progress should be frequently and consistently monitored.
Tier II	Strategic Instructional Support	B	15-24 th Percentile Rank	Student needs supplemental interventions that are targeted to his/her individual needs. Diagnostic assessments are needed to determine areas in need of improvement. Additional instructional time is needed. Progress should be consistently monitored.
		A	25-39 th Percentile Rank	Student needs targeted support including differentiated and scaffolded instruction, additional practice, corrective feedback. Additional instructional time may be warranted. Progress should be closely monitored to evaluate growth.
Tier I	Minimal to No Instructional Support	B	40-49 th Percentile Rank	Student needs minimal to no additional instructional support beyond the core instructional program. Student may benefit from differentiated instruction and strategic review to reinforce proficiency. Progress should be closely monitored to evaluate growth.
		A	50-99 th Percentile Rank	Student does not need additional instructional support beyond the core instructional program. Student may benefit from differentiated instruction and periodic review to reinforce proficiency.

Decision-Making

Focus of MSTAR Universal Screener is on algebra

- Results from other assessments may be similar or different depending on the relative emphasis on algebra and the students' overall skills and knowledge
- MSTAR Universal Screener results should be used *with* other information from classroom and large-scale assessments

Content of the MSTAR Universal Screener

- Algebra readiness knowledge and skills identified from the *Texas Response to Curriculum Focal Points (TXRCFP)*
- Knowledge representations
 - Target knowledge and skills
 - Bridging knowledge and skills
 - Foundational knowledge and skills

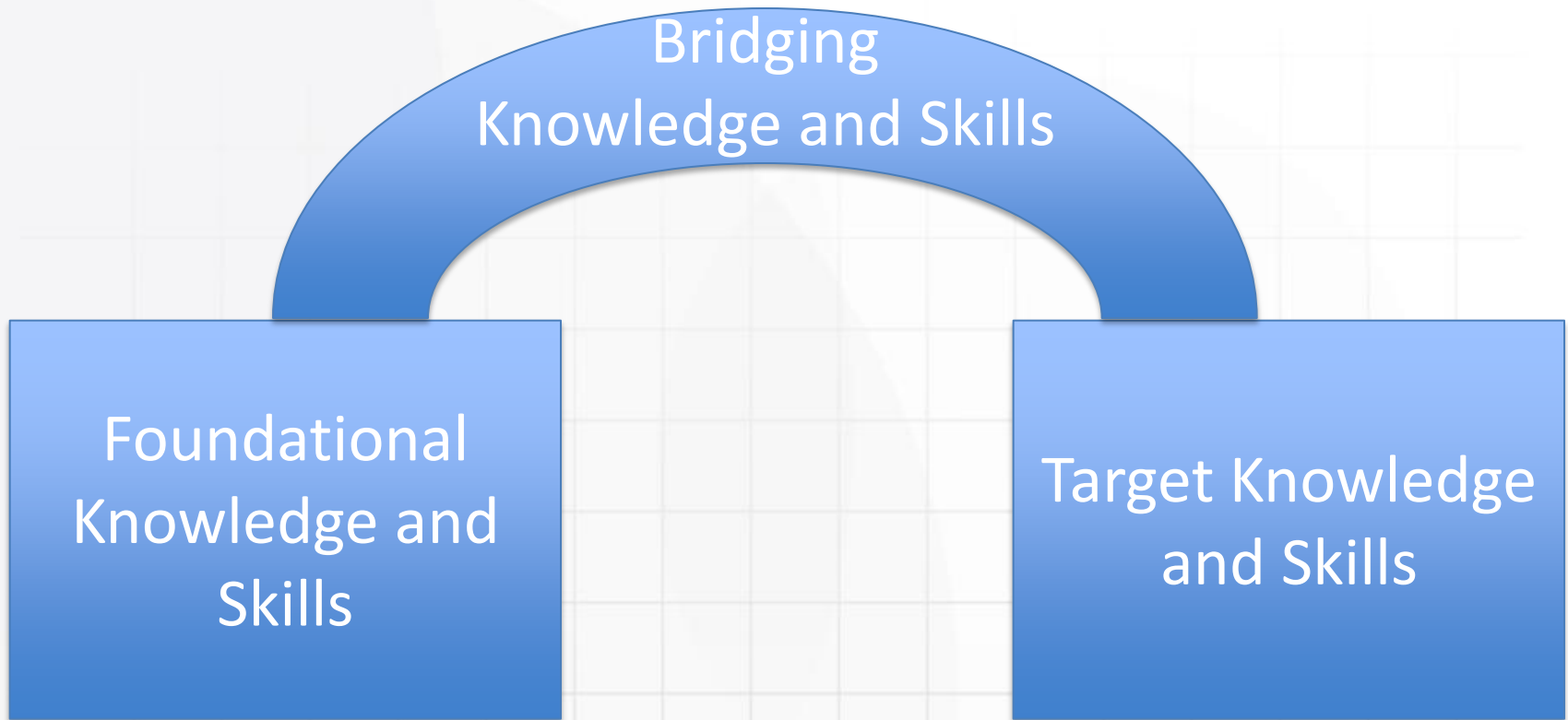
Algebra Readiness

- The National Mathematics Advisory Panel has made recommendations for mathematics instruction that develops algebra readiness.
 - Fluency with whole numbers
 - Fluency with fractions
 - Particular aspects of geometry and measurement

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Connections Across the Knowledge Representations



Example from Grade 6

Bridging:

- * Apply the concept of equality
- * Model balanced equations using the concept of equality
- * Understand and model variables as representations of unknowns
- Interpret and apply variables in expressions and equations

Foundational:

- * Understand and apply whole number operations given specific context
- * Translate mathematical operations implied in situated context to mathematical symbols

Target:

- * Use expressions and equations to represent problems in context, including positive integers, fractions, decimals (it is not expected that students will apply techniques to find the value for x in such an equation)

Target Knowledge and Skills

- Knowledge and skills in which students should ultimately be proficient at that grade level that will support future success in algebra
- Often are abstract representations of formal mathematical knowledge, but not always

Sample Target Item – Grade 5

0042

Ralph had $2\frac{3}{6}$ quarts of ice cream. He gave $1\frac{5}{6}$ quarts of ice cream to his friends.

Which equation shows how many quarts of ice cream are left?



a. $2\frac{3}{6} - 1\frac{5}{6} = \frac{4}{6}$

b. $2\frac{3}{6} + 1\frac{5}{6} = 4\frac{2}{6}$

c. $2\frac{3}{6} - 1\frac{5}{6} = 1\frac{2}{6}$

d. $2\frac{3}{6} + 1\frac{5}{6} = 3\frac{8}{12}$

correct answer: A





Foundational Knowledge and Skills

- Knowledge and skills that support the focal point and are accumulated from previous learning
- Prerequisite knowledge and skills needed to be successful at the target knowledge and skills

Sample Foundational Item – Grade 7

0349

Sal bought a skate board that was discounted 20% off the regular price. Which of these best models 20%?

- a. 
- b. 
- c. 
- d. 

correct answer: B

Sample Foundational Item – Grade 8

0559

Sam earns \$5 per hour plus \$0.50 for each cup of lemonade he sells (s). He works 4 hours. Which equation represents the total amount he earns (e)?

- a. $e = 0.50s + 5(4)$
- b. $e = 10s + 0.50(4)$
- c. $e = 0.50(4) + 5(s)$
- d. $e = 4(0.50s + 4)$

correct answer: A

Bridging Knowledge and Skills

- Knowledge and skills needed to bridge from the foundational knowledge to the targeted knowledge and skills
- The knowledge and skills that are often brought to students by the teacher or in instructional materials; described as “preformal” in MSTAR Intro PD

Sample Bridging Item – Grade 5

0025

Look at the number line below.



Which set of numbers shows the values from the number line in order from **least to greatest**?

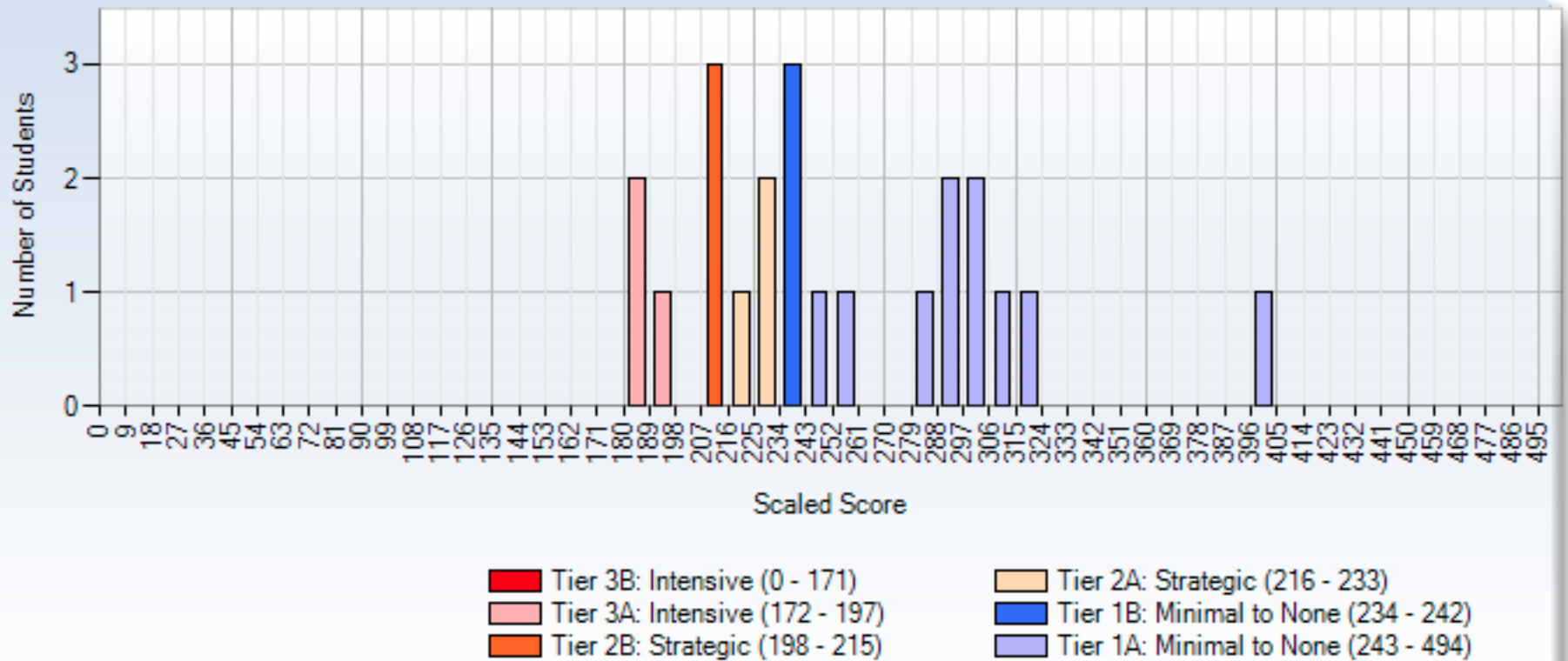
- a. $\frac{1}{2}$, 2.0, $\frac{3}{4}$
- b. 0.5, 2.5, $\frac{3}{4}$
- c. $\frac{1}{2}$, 2.5, $3\frac{1}{2}$
- d. 0.2, $2\frac{1}{2}$, 3.5

correct answer: C

MSTAR Universal Screener Reports

- Class Performance Summary Report
- MSTAR Comparison Reports
 - Comparisons Over Time
 - Comparisons Across Classes
 - Comparisons Across Grades
 - Comparisons Across Teachers

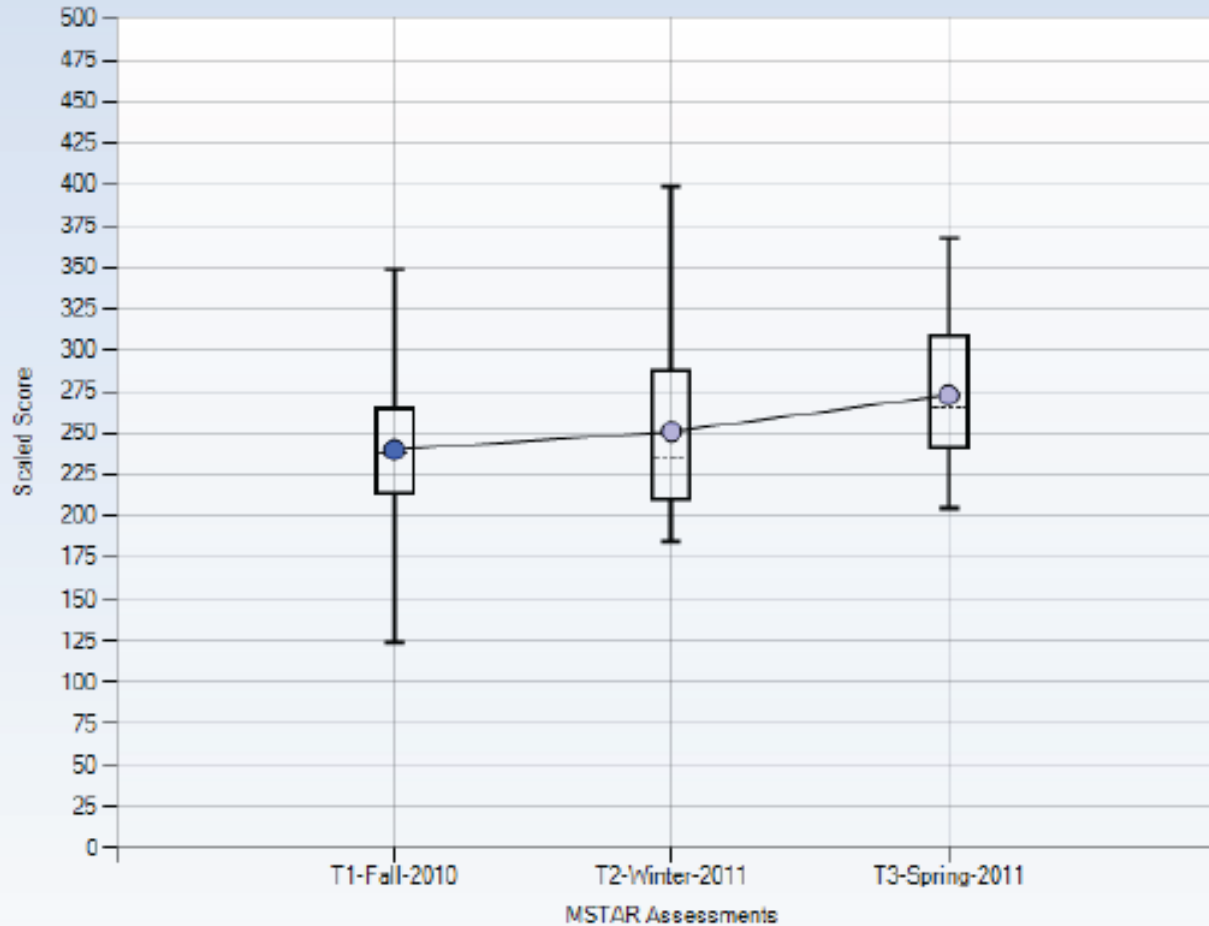
Classroom Performance Summary Report



● Tier 3A: Intensive (3 Students)

Student	Scaled Score	Measurement Error ⁱ
Chism, Christopher	185	30
Evans, Laney	196	30

MSTAR Comparison Report – Comparison Over Time



Box and Whisker ○ Averages

REPORT KEY

Tier 3B: Intensive (0 - 171)	Tier 2A: Strategic (216 - 233)
Tier 3A: Intensive (172 - 197)	Tier 1B: Minimal to None (234 - 242)
Tier 2B: Strategic (198 - 215)	Tier 1A: Minimal to None (243 - 494)

Project Share Course on Interpreting Reports

- Describes how to interpret the results obtained after administering the screener
- Can be accessed through Project Share
 - Search for “MSTAR Universal Screener Overview” and use access code 1899

2011-2012 Administration Windows

- Fall
 - August 29, 2011 – September 27, 2011
- Winter
 - January 2 – 31, 2012
- Spring
 - April 2, 2012 – May 9, 2012

Logistical Information

- District/school enrollment instructions can be found at <https://www.tmsds.org>.
- A new data file must be uploaded for the 2011-2012 school year to participate.
- All Texas public and charter schools can access the MSTAR Universal Screener free of charge.
- Contact mstarscreener@tea.state.tx.us or TMSDS@region10.org with questions.

Exemplar Intervention Lessons on Project Share

MSTAR Intervention Project

Funded by the Meadows Foundation in Dallas

- Lesson plans for teachers working with grade 7/8 students
- Help for teachers to intervene with Tier II students
- Units based on concepts and skills which prohibit learning
- Available in the Project Share Platform

Purpose of the Intervention Lessons

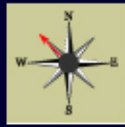
- These lessons were designed to provide a concrete structure to help students learn the foundational skills necessary for success in increasingly complex mathematics curricula.
- Each lesson will take at least 30 minutes, depending on student experience and need, and some lessons will need to be broken up over several days.

Intervention Course Features

epsilen
ENVIRONMENT

Multiplication a
<http://www.epsilen>

- Course Home
- Syllabus
- Announcements
- ★ Welcome
- ★ Standards
- ★ Outcomes
- ★ Key Ideas
- ★ Background
- ★ Scaffolding
- ★ Misconceptions
- ★ Vocabulary
- ★ Online Practice
- ★ Extra Practice
- ★ Assessment
- Login



Welcom

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Purpose

The
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take

- Course Home
- Syllabus
- Announcements
- ★ Welcome
- ★ Standards
- ★ Outcomes
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- ★ Extra Practice
- ★ Assessment
- Login

on Fact lessons target struggling Tier 2 students.
ire to help students learn the foundational skills
complex mathematics curricula.

ded time limit, as students may move at varying
with the content. We estimate that each lesson will
e lessons will need to be broken up over several

ION AGENCY

Lesson Features

- Each lesson contains several aspects of research-based intervention strategies and lesson design.
- Additional activities are included for students who need further practice.

Lesson Features

- **Overview**
- **Timed Fact Practice**
- **Engage Prior/Informal Knowledge**
- **Preview**
- **Demonstrate**
- **Practice**
- **Independent Practice**
- **Closure**

Available Courses



My Portal

Search for: In **People**

Welcome: **David Chard**
<http://www.epsilen.com/dchard>

[Log Out](#)

Add your favorite tools by dragging the links from left navigation

Courses ?

Use the Courses tool (Epsilen Global Learning System, or GLS) to access and manage your courses. [Create a new course](#)

[Courses](#)

[Archived Courses](#)

[Courses Open to My Institution](#)

[Courses Open to All Epsilen](#)

[Course License Status](#)

Course	Description	My Role	Messages	Forums	Starts/Ends	Action
Multiplication and Division Facts		Student			9/3/2010 6/30/2011	
Members: 10						
Equivalent Fractions	equivalent fractions	Student			6/27/2010 6/30/2011	
EQF 1						
Members: 9						

- My Portal
- My ePortfolio
- Groups
- Calendar
- Courses**
- Create Course
- Search Courses
- My Invitations
- My Requests
- Learning Matrix
- Epsilen Mail
- Files / Folders
- My Networks
- Share It
- Take Notes

Thank You