

Cassandra Hatfield & Savannah Hill, SMU RME Jo Ann Bilderback, TEA





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Goals

- Understand the purpose of the TXAR Initiative
- Examine the connection between RTI and the ESTAR/MSTAR Assessment System
- Collect information to support you in using the ESTAR/MSTAR Assessment System





Purpose of TXAR Initiatives





TXAR Implementation

Curriculum

Revised TEKS
Revised TX-RCFP

Formative Assessments: Universal Screeners and Diagnostic Assessments

Assessment



Professional Development Lessons for Intervention

Instruction





What is RTI?



Home / Curriculum and Instruction / Special Education / Programs and Services

Response to Intervention

Response to Intervention (RtI) is an approach that schools use to help all students, including struggling learners. The RtI approach gives Texas students opportunities to learn and work at their grade level. The idea is to help all students be successful.



What is Rtl?

Systems Level Framework



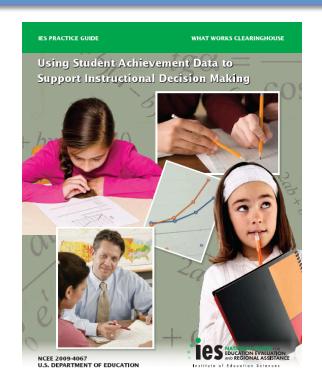


Using Data to Support Instructional Decision Making

Recommendation 1.

Make data part of an ongoing cycle of Instructional Improvement

- ☐ Collect and prepare a variety of data about student learning.
- ☐ Interpret data and develop hypotheses about how to improve student learning.
- Modify instruction to test hypotheses and increase student learning.







What tools are you using in your classroom and at your school to gather data that support instructional decision making?





Qualitative or Quantitative

Qualitative:

- Strong taste
- White cup
- No cream or sugar

Quantitative:

8 Ounces

Cost: \$2.25





Are the tools that you listed qualitative or quantitative?





Algebra Readiness Success

ESTAR/MSTAR
Universal Screener

ESTAR/MSTAR
Diagnostic Assessments

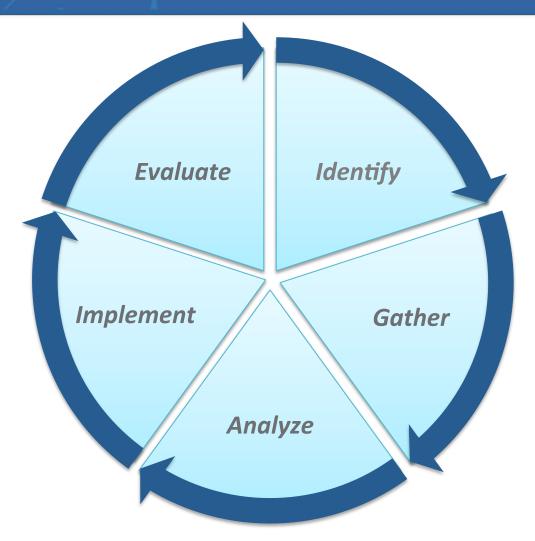
Quantitative

Qualitative





The Data Use Cycle







- Administer the ESTAR/MSTAR
 Universal Screener to all students in your classroom.
- Use the results to help you determine which students should take an ESTAR/MSTAR Diagnostic Assessment.







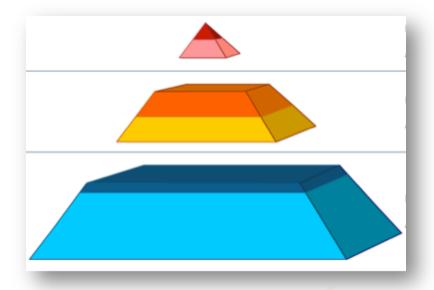
Identify

if students are on track or at risk



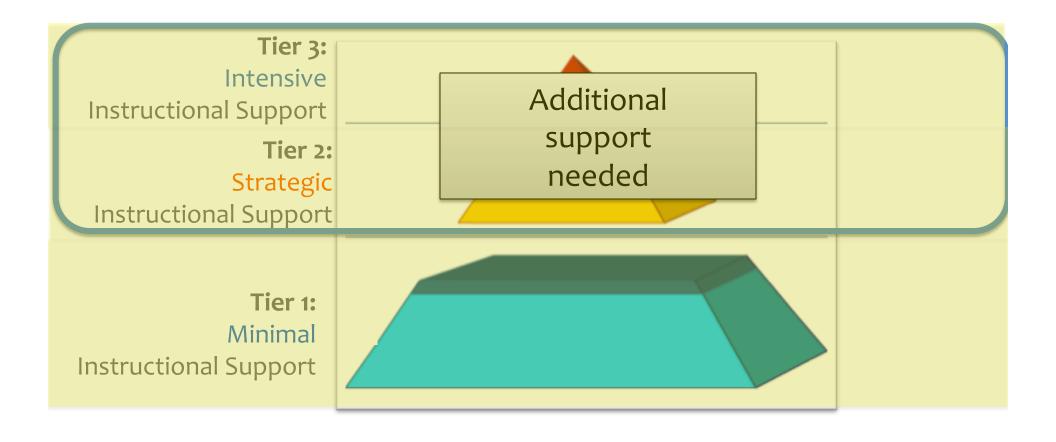
Identify

the degree of support needed













Texas Response to the Curriculum Focal Points

Grade level based

Blueprint

Item Writing

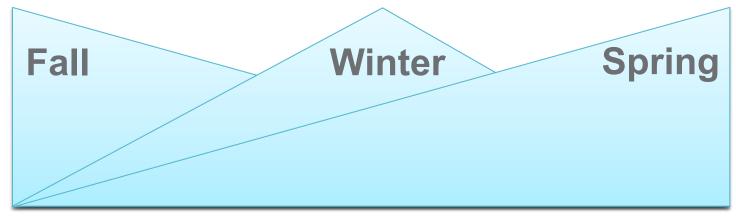
Item Validation

Form Creation

ESTAR & MSTAR Universal Screener







Foundational

Knowledge and skills students should bring with them from the previous grade level.

Bridging

Conceptual understanding needed to fully understand the target skill.

Target

Knowledge and skills students should be proficient in by the end of the grade level.





Universal Screener Reports

Welcome

Log Off]

ESTAR/MSTAR







Teacher

Home

Assign Assessments Resources

Using Universal Screener:

 Universal Screener Resources
 Print/Preview Universal Screener

 Universal Screener Reports

Using Diagnostic Assessment:

Universal Screener Reports

Class Summary Report

The Class Summary Report provides administrators and teachers the ability to analyze class performance on a particular assessment as represented in a histogram. Administrators have the ability to analyze performance for any grade and subject. Individual student performance is displayed below the histogram. Reports can be printed for the entire class and student performance by tiers.

Comparison Over Time

The Comparisons Over Time reports allow teachers and administrators to compare results from the Universal Screener over time (Fall, Winter, and Spring administrations of the Universal Screener). Comparisons can be generated for individual students, classes, or grades.

Comparison Across Classes

The Comparison Across Classes report allows teachers and administrators to compare results from the Universal Screener across classes for the same teacher for one administration of the Universal Screener (Fall, Winter, or Spring).

Print Class Pack

Print a Comparison Over Time report for each student in the class.

version: 1.2.1.1440

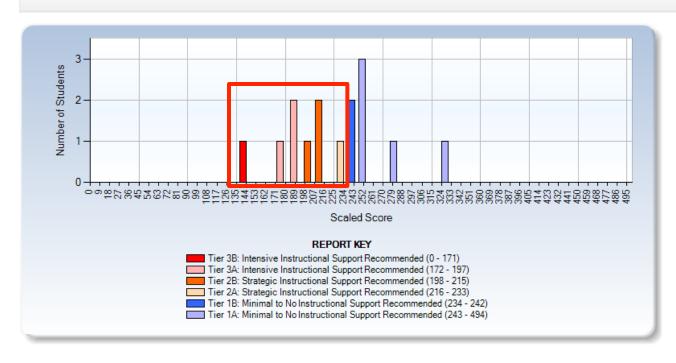




Universal Screener Class Summary Report

Class Performance Summary

Fall 2013 Grade 6 - Chantell Buzardgruss - MATH Grade 6 Period 1 Buzardgruss
The Class Performance Summary Report provides administrators and teachers the ability to analyze
class performance on a particular assessment as represented in a histogram. Administrators have the
ability to analyze performance for any grade and subject. Individual student performance is displayed
below the histogram. Reports can be printed for the entire class and student performance by tiers.







Universal Screener Class Summary Report

Tier 3B: Intensive Instructional Support Recommended
 Student Scaled Score Measurement Error
 Georgiana Rostgruss 141 32

Tier 2A: Strategic Instructional Support Recommended		
Student	Scaled Score	Measurement Error
Jeniffer Rayogruss	231	22

Tier 3A: Intensive Instructional Support Recommended		
Student	Scaled Score	Measurement Error
Hilario Giuffregruss	188	25
Oleta Noltinggruss	188	25
Brigida Rambertgruss	175	27

Tier 1B: Minimal to No Instructional Support Recommended		
Student	Scaled Score	Measurement Error
Clarissa Kastergrub	241	22
Sylvia Radleygrub	241	22

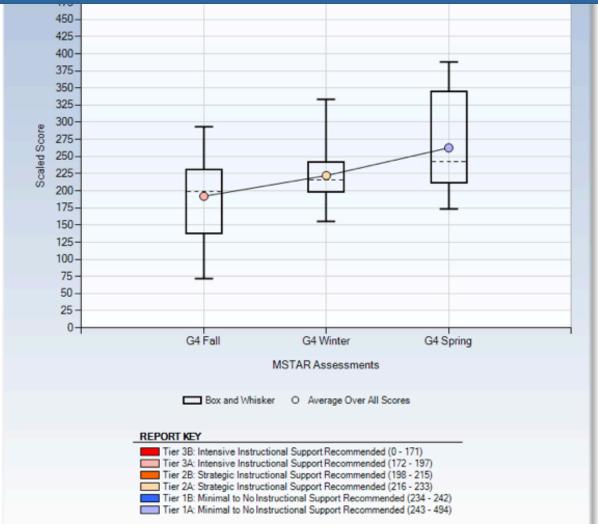
 Tier 2B: Strategic Ins 	tructional Support Rec	ommended
Student	Scaled Score	Measurement Erro
Luciana Plowmangruss	200	24
Carla Shearergruss	211	23
Luke Zaragosagrub	211	23

Tier 1A: Minimal to No Instructional Support Recommended		
Student	Scaled Score	Measurement Error
Chris Blygruss	327	27
Angelita Gilgruss	251	22
Allyn Evangelistagrub	251	22
Danial Mowbraygrub	251	22
Gerardo Senagrub	280	23





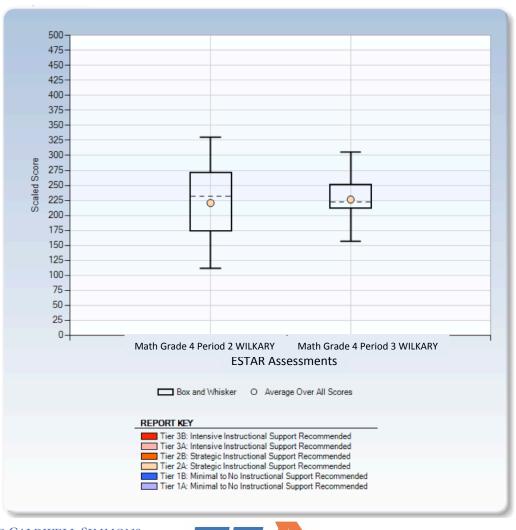
Universal Screener Comparison Over Time Report







Universal Screener Comparison Across Classes Report







- Gather various forms of qualitative and quantitative data to help you determine which ESTAR/MSTAR Diagnostic Assessment should be assigned.
- Use the ESTAR/MSTAR
 Diagnostic Decision Tree and
 Assessment Guide to select and
 assign an appropriate ESTAR/
 MSTAR Diagnostic Assessment.







Learning Progressions

Developmental

Blueprint

Item Writing

Item Validation Form Creation

ESTAR & MSTAR Diagnostic Assessment





ESTAR Diagnostic Assessments

Understanding Addition and Subtraction of Whole Numbers (AS)

A - Foundations of Addition and Subtraction of Whole Numbers

B - Applications of Addition and Subtraction of Whole Numbers Understanding
Multiplication and
Division of Whole
Numbers (MD)

A - Foundations of Multiplication and Division of Whole Numbers

B - Applications of Multiplication and Division of Whole Numbers Fractions as Numbers (FR)

Fractions as Numbers





MSTAR Diagnostic Assessments

Rational Numbers (RN)

A – Understanding Fractions

B – Representations of Positive Rational Numbers

C – Applications of Positive Rational Numbers

Variables and Expressions (VE)

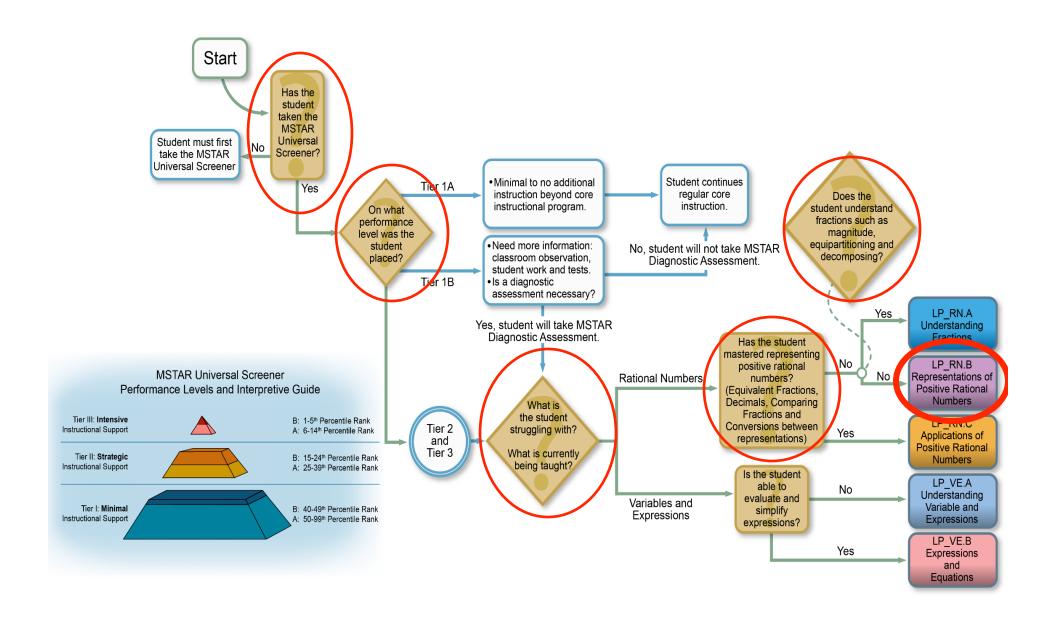
A – Understanding Variables

B – Expressions and Equations





MSTAR Diagnostic Decision Tree



MSTAR Assessment Guide

Assessment	Content / Assessment Focus
RN.A Understanding Fractions	 Understanding the magnitude of whole numbers and fractions Partitioning whole and different-sized shapes and combining partitioned parts Composing and decomposing fractions using addition and multiplication
RN.B Representations of Positive Rational Numbers	Representing and generating equivalent fractions Writing, comparing, and representing decimals Comparing fractions using visual models, by reasoning about the numerators and denominators, and by finding a common denominator Identifying and generating equivalent fractions and decimals
RN.C Applications of Positive Rational Numbers	 Understanding attributes of ratios and identifying equivalent ratios Identifying, applying, and extending unit rates Modeling and solving addition and subtraction problems with rational numbers Modeling and solving multiplication problems with rational numbers Modeling and solving division problems with rational numbers
VE.A Understanding Variables	Identifying, describing, and using variables as unknown quantities Evaluating single and multi-variable expressions Translating between verbal descriptions and symbolic representations of equations and expressions Simplifying expressions with whole number, rational, or unwritten coefficients
VE.B Expressions & Equations	 Understanding relationship between expressions Solving single variable equations using a variety of methods





"But I thought—"

- "I could use the score a student received on the Universal Screener as a grade."
- "I should give all of the Diagnostic
 Assessments to the students that were at-risk
 on the Universal Screener."
- "I should give my whole class the Universal Screener and picked one of the Diagnostic Assessments for all students to take."





Analyze

 Use the reports from the Diagnostic Assessment to determine an action plan based on the students' strengths and opportunities for growth.







Diagnostic Assessment Student Summary Report

Sarah Soto's ESTAR Diagnostic Results Student: Sarah Soto Teacher: Mrs. Rodriguez Assessment Date: 05-31-2015 AS.B Applications of Addition and Subtraction of Whole Numbers Not proficient **Proficient** Patterns in Place Value For Multi-digit Whole Numbers Addition and Subtraction of Multi-digit Whole Numbers **Understanding One-Step Problem Situations for Addition** and Subtraction of Multi-Digit Whole Numbers





Diagnostic Assessment Student Summary Report

Opportunities

The student does not understand:

- how to add or subtract 3-digit numbers using properties of numbers and operations. (AS.B 2.4)
- how to find an unknown value when given a contextual situation involving addition or subtraction of 2-digit numbers. (AS.B 3.2)
- how to find an unknown value when given a contextual situation involving addition or subtraction of 3-digit numbers. (AS.B 3.3)

Strengths

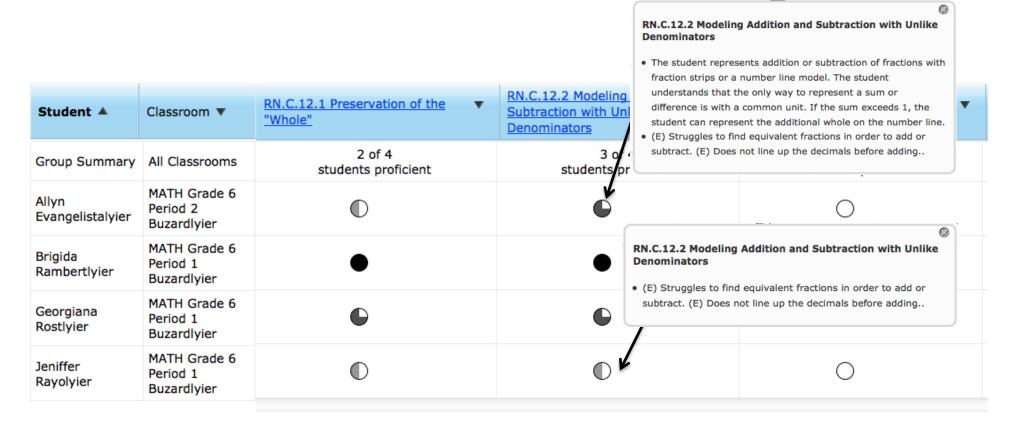
The student understands:

- how to interpret the mathematical language of sum/difference or model addition/subtraction of two multiples of 10 or a multiple of ten and a 2-digit number, up to 120, using place value models. (AS.B 1.1)
- how to interpret the mathematical language of sum/difference or model addition/subtraction of two multiples of 100 or a multiple of one and a 3-digit number, up to 1000, using place value models. (AS.B 1.2)
- how to interpret the mathematical language of sum/difference or model addition/subtraction of 2-digit numbers, using place value models or an open number line. (AS.B 2.1)
- add or subtract 2-digit numbers using properties of numbers and operations. (AS.B 2.2)
- how to interpret the mathematical language of sum/difference or model addition/subtraction of 3-digit numbers, using place value models or an open number line. (AS.B 2.3)
- how to identify an expression or equation representing a given contextual situation involving addition and subtraction of 2 and 3-digit numbers. (AS.B 3.1)





Diagnostic Assessment Student and Group Misconception Report

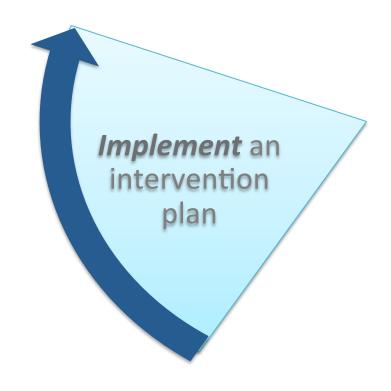






Implement

 Intervene using evidence based instructional strategies based on the students' strengths and opportunities for growth.



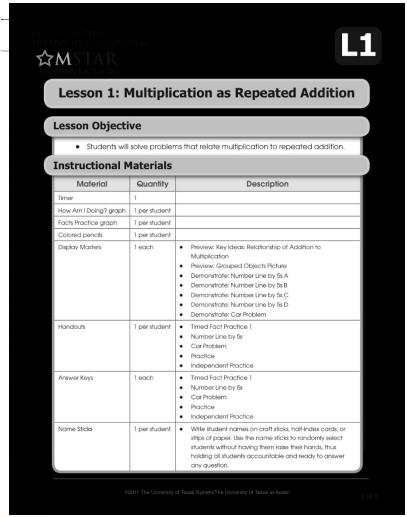




Resources for Implementation

Intervention Lessons

ESTAR Modules MSTAR Modules

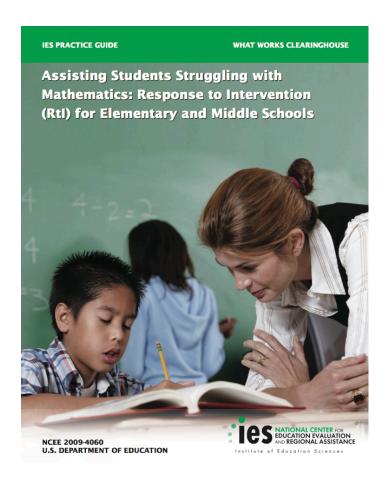






IES Practice Guide

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

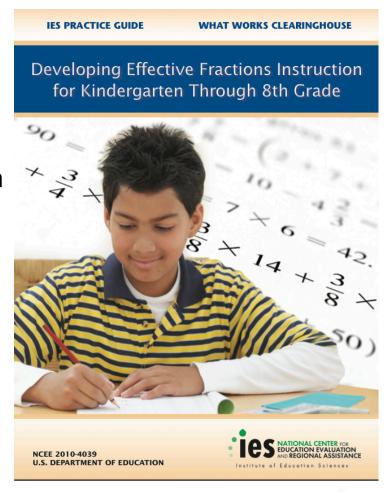






IES Practice Guide

Developing Effective Fractions Instruction for Kindergarten Through 8th Grade

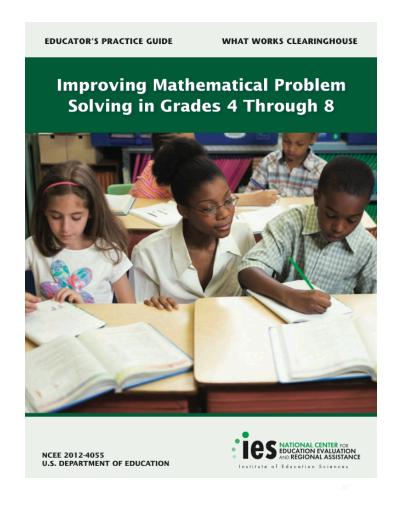






IES Practice Guide

Improving Mathematical Problem Solving in Grades 4 Through 8

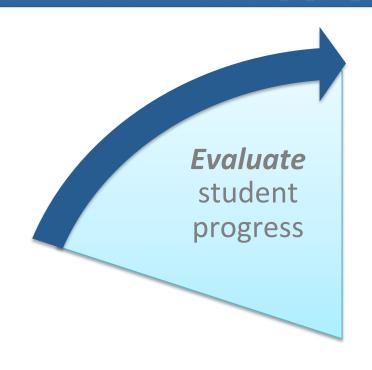






Evaluate

- Use progress monitoring to determine if your intervention is closing the gap.
- Continue the cycle to evaluate the efficacy of the supplemental instruction.







Data Use Cycle

Use progress monitoring to determine if your intervention is closing the gap.

Evaluate student progress

students that need additional support

Gather data

Identify

Use the results to determine who needs to take one of the Diagnostic Assessments.

Give the ESTAR/MSTAR Universal Screener

to all students in your classroom.

Intervene using evidence based instructional strategies. Implement an intervention plan

Analyze data and determine an intervention plan

to support
how you will
intervene

Use various types of
qualitative and quantitative
data to assign one of the

Diagnostic Assessments.

Use the reports from the Diagnostic Assessment to create an intervention plan.





Tier 1 Instruction

ESTAR Academies

MSTAR Academies

ESTAR/MSTAR Assessments

ESTAR/MSTAR Universal Screeners

Diagnostic Assessments

Learning
Progressions

Tier II Instruction

Coming Soon

ESTAR Implementation Tools

Coming Soon

MSTAR Implementation Tools





Continuous improvement

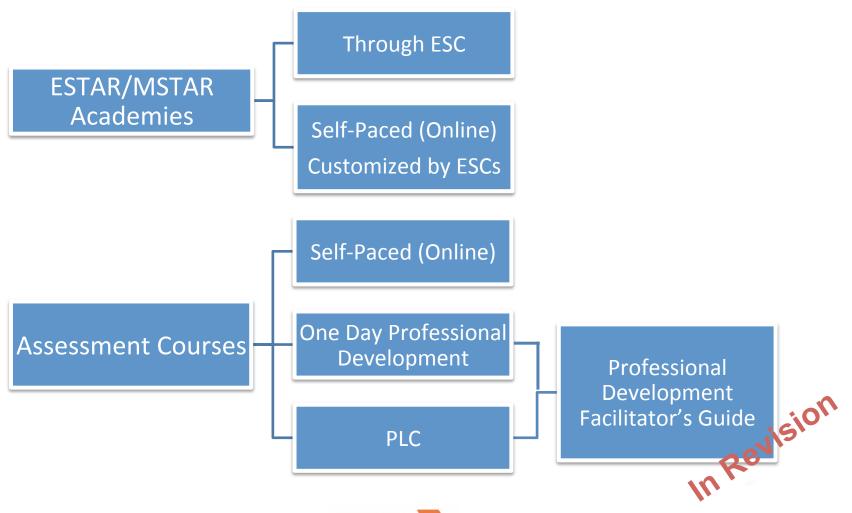
Understanding reports

Flexibility

Personalized Professional Development Plan District decision making

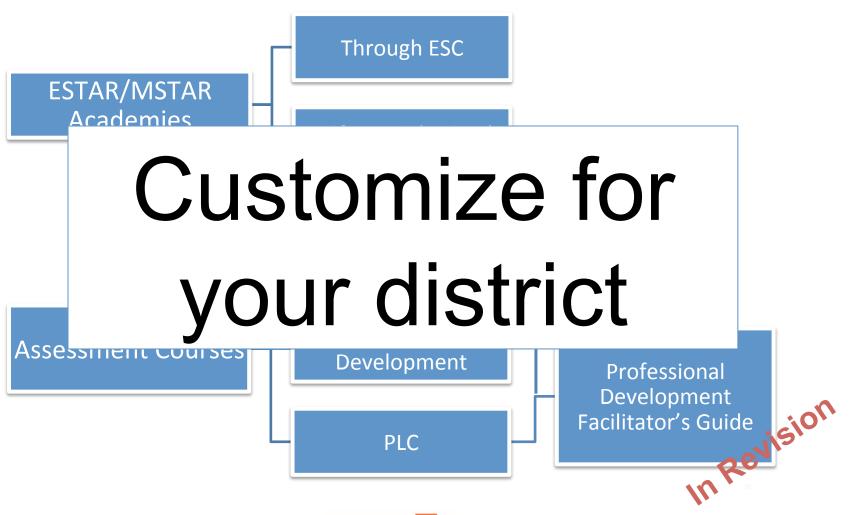
















ESTAR/MSTAR







Teacher

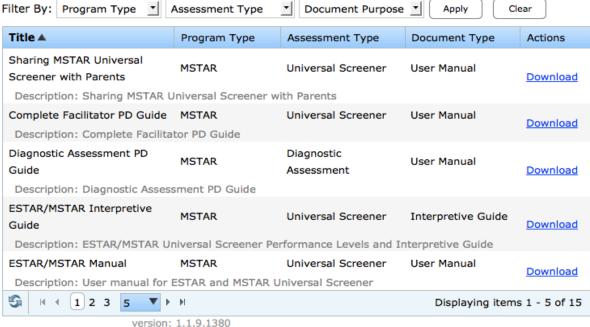
Home

Assign Assessments

Resources

Using Universal Screener:

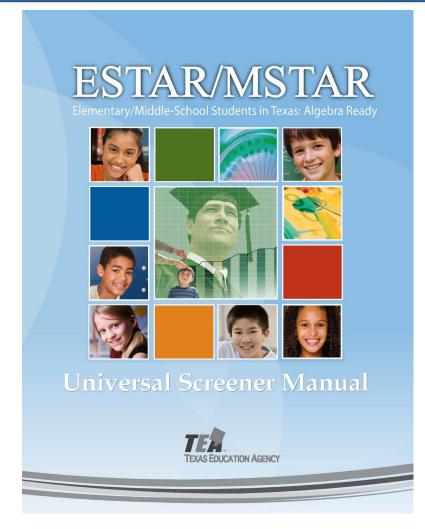
Resources







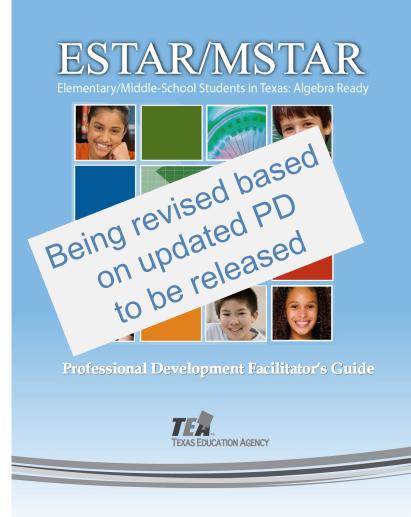
Universal Screener Manual





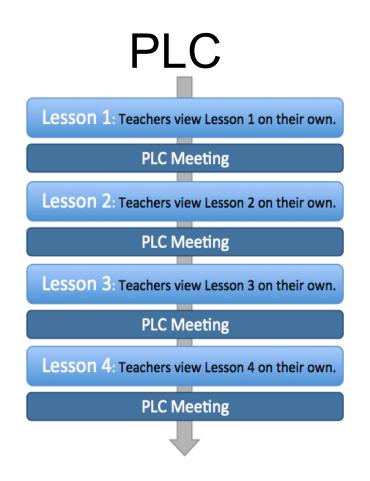


Professional Development Facilitator Guide









One Day PD

Lesson 1

- View Lesson 1 together
- Participate in lesson activity

Lesson 2

- View Lesson 2 together
- Participate in lesson activity

Lesson 3

- View Lesson 3 together
- Participate in lesson activity

Lesson 4

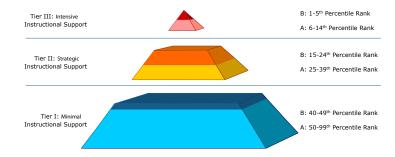
- View Lesson 4 together
- Participate in lesson activity





ESTAR/MSTAR Interpretive Guide

ESTAR/MSTAR Universal Screener Performance Levels and Interpretive Guide

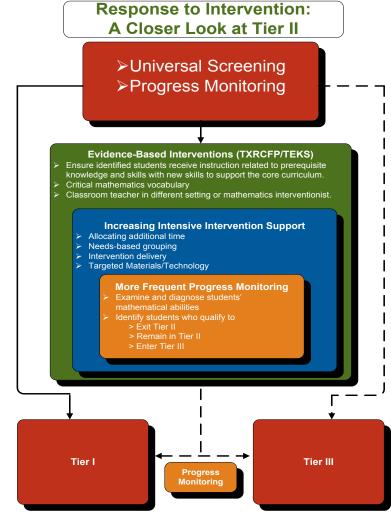


Performance Level	Instructional Need	Level Label	Range of Performance	Level of Additional Instructional Support
Tier III	Intensive Instructional Support	В	1-5 th Percentile Rank	Student needs urgent and intensive interventions that are highly specified to his/her individual needs. Additional instructional 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	В	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	В	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.
		А	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.





RTI Tier 2 Model



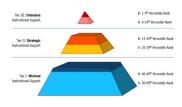




Sharing MSTAR Universal Screener with Parents

Sharing ESTAR and MSTAR Universal Screener Information with Parents

Sharing information with parents is an important step in the Response to Intervention (RtI) process. Parents are better informed about their student's progress toward algebra-readiness and, therefore, can play an active role in helping their student be successful. Before sharing information with parents, review the ESTAR and MSTAR Universal Screener reports. The



Project Share course, ESTAR and MSTAR Universal Screener Overview, can serve as a good resource for understanding how to interpret these reports.

Why did my child take the ESTAR or MSTAR Universal Screener?

To begin this conversation, take a moment to describe the RtI approach to instructional decision-making. It is reassuring for parents to understand that RtI is relevant to every student. It is both important and beneficial to identify how each

student is performing in relation to the levels of risk identified in the RtI pyramid. Explain each tier and the type of instructional support needed to help students be successful.

Provide parents with a copy of the RtI pyramid and the ESTAR and MSTAR Universal Screener Performance Levels and Interpretive Guide so that they may refer to them throughout the school year. At each level within the RtI framework, evidence-based instruction is provided to help students reach proficiency in algebra-



readiness content. All students can benefit from the RtI approach.

What is the purpose of this assessment system?

Since many mathematics assessments focus on content from all mathematical strands, it is important to explain how and why the ESTAR and MSTAR assessments focus on algebra-readiness knowledge and skills. e purpose and types of decisions that can be made from each assessment should also be explained. The ESTAR and MSTAR Universal Screeners are designed to be the first step in the RtI process. All students take a universal screener to help teachers and administrators make two instructional decisions. First, results from the ESTAR and MSTAR Universal

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Sharing MSTAR Diagnostic Assessment Information with Parents

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helping their student be successful. Before sharing information with parents, review the ESTAR and MSTAR Diagnostic Assessment reports. The Project Share course, MSTAR Diagnostic Overview, can serve as a good resource for understanding how to interpret these reports.



Why did our child take the ESTAR or MSTAR Diagnostic Assessment?

To begin this conversation, take a moment to describe the RtI approach to instructional decision-making. It is reassuring for parents to understand that RtI is relevant to every student. It is both important and beneficial to identify how each

student is performing in relation to the levels of risk in the RtI pyramid. Explain each tier and the type of instructional support needed to help students be successful.

Provide parents with a copy of the RtI pyramid and the ESTAR and MSTAR Universal Screener Performance Levels and Interpretive Guide so that they may refer to them throughout the school year. At each level within the RtI framework, evidence-based instruction is provided to help students reach mathematical proficiency in algebra-readiness



content. All students can benefit from an RtI approach.

What is the purpose of the assessment system?

Since many mathematics assessments focus on content from all mathematical strands, it is important to explain how and why the ESTAR and MSTAR assessments focus on algebra-readiness knowledge and skills. The purpose and types of decisions that can be made from the ESTAR and MSTAR Diagnostic

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Universal Screener FAQ's

ESTAR/MSTAR Universal Screener Frequently Asked Questions

Is professional development available for the ESTAR/MSTAR Universal Screener?

A professional development course is available on Project Share.

This course provides a brief overview of the ESTAR/MSTAR Universal Screener and describes how to interpret the results obtained after administering the ESTAR/MSTAR Universal Screener. The ESTAR/MSTAR Universal Screener is part of a formative assessment system administered to all students in grades 2-8. The content of the ESTAR/MSTAR Universal Screener is based on al-

The pure revision to include on the revision to

CAR/MSTAR Universal Screener will be used to make inferences about students' readiness دے for algebra, considerable care was used in creating the test blueprint. The test blueprint was created using a systematic and iterative process that included multiple perspectives including mathematicians, mathematics educators, and Texas educators. First, a team of mathematicians, mathematics educators, and Texas educators identified the skills needed for algebra-readiness from the Texas Response to Curriculum Focal Points in three knowledge representations (Target, Bridging, and Foundational). Second, nationally renowned mathematicians and mathematics educators independently reviewed the test blueprint for mathematical precision and accuracy, importance to algebra, and coherence within and across grades. Third, input from the independent reviewers was integrated and reconciled to create the final test blueprint. Fourth, and finally, the number of items for each grade was determined and included a strategic balance of content and knowledge representations.





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Parents Guide to Interpreting the **Diagnostic Assessments**

Parent's Guide to Interpreting the Diagnostic Summary Report

Dear Parent/Guardian,

The Diagnostic Summary Report provides an overview of your student's performance on a Middle School Students in Texas Algebra Ready (MSTAR) Diagnostic Assessment. This report provides valuable insight into your student's strengths and opportunities in a specific algebra-readiness content domain.

What is a Diagnostic Summary Report?

Your student was identified as being at risk for not meeting standards in algebra and was given a diagnostic assessment to determine where, precisely, your student is struggling based on consistent errors and misconceptions. This report provides an overview of how your student performed on the assessment given.

What information does the report contain?

The report describes your student's performance on the assessed algebrareadiness area. It also includes opportunities and strengths based on your student's answer choices.

What do I do with this information?

This information should help you understand areas in which your student is being successful and areas in which your student is struggling. Your student's teacher will look at classroom assignments, quizzes, and other assessments to work with you on determining what supplemental support can help your child be prepared for success in algebra.

Questions about this report should first be directed to your student's teacher(s).



Section B displays the sublevels that were assessed within the

Section C symbolizes your student's performance in each sublevel from "Not Proficient" to "Proficient" in a graphical representation.

Section D provides more detailed information about opportunities and strengths for your student. These may be used by your student's teacher to determine if supplemental instruction is

A NOTE ABOUT THIS INFORMATION: One test can only provide limited information. You should confirm your student's strengths and weaknesses by reviewing performance on classroom assignments and other tests.

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Accessing the ESTAR/MSTAR System

http://mstar.epsilen.com

mathtx@esc13.net

1-855-462-8489

http://tea.texas.gov/
Curriculum and Instructional Programs/
Subject Areas/Mathematics/Mathematics/





Additional Sessions

MSTAR Universal Screener	Wednesday 1:00	342AD
ESTAR Universal Screener	Thursday 10:00	283AB
MSTAR Diagnostic Assessment	Friday 8:30	381BC
ESTAR Diagnostic Assessment	Friday 10:00	381BC
RtI Website and App	Friday 1:00	381BC
Assessment Item Development	Thursday 1:00 Friday 8:30	350DE





Research in Mathematics Education

www.smu.edu/RME

Email: RME@smu.edu



SMU Research in Mathematics Education- RME

Contact TEA: curriculum@tea.texas.gov



