



Bilingual

First Grade

Intervention Manual



The Meadows Center
FOR PREVENTING EDUCATIONAL RISK
THE UNIVERSITY OF TEXAS AT AUSTIN
COLLEGE OF EDUCATION

Mathematics Institute for Learning Disabilities and Difficulties

www.meadowscenter.org

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Introduction

Welcome!

Welcome to the 3-Tier Mathematics Tier 2 Intervention project! We are excited that educators will implement Tier 2 intervention booster lessons this year. This introduction provides information to successfully deliver this instruction to students.

Purpose

The purpose of the 3 Tier Mathematics Tier 2 Intervention project is to provide kindergarten, first-grade, and second-grade educators with the intervention lessons, teacher masters, student materials, and progress-monitoring tools that are needed to conduct Tier 2 intervention with students who are identified as having mathematics difficulties.

Mathematical Concepts and Skills

The Tier 2 intervention mathematical content and skills align with the Texas Essential Knowledge and Skills (TEKS). To assist educators, the TEKS addressed are specified in each booster lesson.

The following concepts and skills are taught in the Tier 2 booster lessons as activities:

- Addition/Subtraction Combinations (ASC)
- Word Problem Solving (WPS)
- Number Sequences (NS)
- Relationships of 10 (R10)
- Magnitude Comparison (MC)

Scope and Sequence

First Grade

Skill	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11
Addition/subtraction combinations	Part-part-whole	+/- 1, +/- 0, n - n	+/- 2, +/- 3	Fact Families strategy	Doubles	Doubles + 1	Doubles + 1 and related	Doubles + 1 and related	Make 10, 10 + more	Make 10 + more and related	Review
Word problem solving	Part-part-whole	Part-part-whole	Joining problems, result unknown	Separating problems, result unknown	Compare problems, compare unknown	Separating and joining problems, result unknown	Separating and joining problems, result unknown with extraneous information	Compare problems, compare unknown	Compare problems, difference unknown	Separating and joining problems, change unknown	
Relationships of 10	0-50	0-50	0-50	0-50	0-50	50-99	50-99	50-99	50-99	0-99	0-99
Magnitude comparison	0-50	0-50	0-50	0-50	0-50	50-99	50-99	50-99	50-99	Fractions	0-99
Number sequences	0-50	0-50	0-50	0-50	0-50	50-99	50-99	50-99	50-99	0-99	0-99

Units

There are 11 units. Each unit lasts for 2 weeks. In each 2-week period (unit), there are 8 days of lessons. Each day includes a warm-up and 2 lessons. Fridays are reserved for progress monitoring, games, review, etc.; the following shows a recommended schedule for progress monitoring.

Unit 1	
<p>Monday: Day 1 Lesson 1: Addition/Subtraction Combinations Lesson 2: Word Problem Solving</p> <p>Tuesday: Day 2 Lesson 3: Relationships of 10 Lesson 4: Magnitude Comparison</p> <p>Wednesday: Day 3 Lesson 5: Addition/Subtraction Combinations Lesson 6: Word Problem Solving</p> <p>Thursday: Day 4 Lesson 7: Relationships of 10 Lesson 8: Number Sequences</p> <p>Friday Progress Monitoring: Aim Check Games, Review</p>	<p>Monday: Day 5 Lesson 9: Addition/Subtraction Combinations Lesson 10: Word Problem Solving</p> <p>Tuesday: Day 6 Lesson 11: Relationships of 10 Lesson 12: Magnitude Comparison</p> <p>Wednesday: Day 7 Lesson 13: Addition/Subtraction Combinations Lesson 14: Word Problem Solving</p> <p>Thursday: Day 8 Lesson 15: Relationships of 10 Lesson 16: Number Sequences</p> <p>Friday Progress Monitoring: Coming soon</p>

Warm-Ups

Before the first lesson of each day, there is a warm-up. There are 4 possible warm-up activities used in each unit: naming numbers, writing numbers from dictation, orally answering previously learned addition and subtraction facts, and writing the answers to previously learned addition and subtraction facts.

Booster Lessons

Each day of intervention includes 2 lessons. These lessons are designed to teach the 5 skills across the 8-day unit and to provide instruction at different levels to teach conceptual, procedural, and strategic knowledge. The first page of each lesson identifies the concept and skill being taught, the name of the lesson, the objective, the instructional content (range of numbers), the materials, the vocabulary, and the instructional time (total time, instruction time, and time for independent practice/progress monitoring).

Instructional Design Features: Steps for optimal student learning are incorporated into the intervention. A fun way to remember these steps is the mnemonic “Frozen Peas Make Great Ice Packs”: **F** (frame the lesson), **P** (preview), **M** (modeled practice), **G** (guided practice), **I** (independent practice), **C** (check for understanding), **E** (error correction), and **P** (progress monitoring). A brisk pace, quick transitions, and opportunities to engage students (e.g., oral responses, writing, choral responses) are recommended effective instructional practices.

Visual Representations: Content is represented 3 ways in the lessons: concretely, pictorially, and abstractly. These representations depict concepts in different ways to help students develop conceptual knowledge.

Teacher Talk: A suggested script is provided to use when implementing the lessons with students. This suggested script, or “teacher talk,” appears in the lessons in Spanish and in English **in this font**.

Side Bars: Side bars, or columns down the side of each lesson page, provide notes to teachers, student error-correction suggestions, and time boxes as instructional tips for teachers.

Appendices

The 5 appendices supplement the intervention lessons. Appendix A and Appendix E are in Spanish and in English. Please see the English Intervention for the other appendices.

- **Appendix A:** A glossary of terms used throughout the intervention.
- **Appendix B:** Games that educators can use with students.
- **Appendix C:** Additional activities that educators can use with students, categorized by skill and instructional content.
- **Appendix D:** Application-type problems.
- **Appendix E:** Tools for teachers, including Word Problem Solving rubrics and teaching strategies.

Instructional Groupings

In Tier 2 instruction, students should be grouped according to ability. Groups should include no more than 5 students. Scores from initial 3-Tier Mathematics assessments can help educators decide how to group students who qualify for Tier 2 intervention. It is common for students to progress at different rates during the year; therefore, educators may need to regroup students as the year progresses.

Instructional Time

Each day of instruction is estimated to take about 25 minutes, including warm-up, instruction, transition, and independent practice. Educators may take longer than 25 minutes when they are new to the intervention process, but as educators become more proficient, the amount of time typically decreases. To develop a smooth transition system, it is recommend that educators practice timing the activities and switching out the materials across the day’s activities. The total time for each lesson, along with the time for instruction and independent practice, is listed at the top of the first page of each lesson. Similarly, timer icons throughout each lesson remind educators of the time allotted for particular sections.

Materials

There are 3 types of materials: (1) hands-on materials that are used with many lessons, such as flash cards and relationships of 10 cards; (2) templates or charts (see appendices, hundreds charts); and (3) worksheets (see the Student Booklets and Teacher Master).

Teacher Master: The Teacher Master contains all of the Modeled Practice, Guided Practice, and Independent Practice sheets for each unit. There are 11 Teacher Master booklets in all, 1 for each unit. Pages that the students and teachers need are marked with an image of a pencil in the right margin. Pages that only the teacher needs do not have the pencil image. Answer keys for Word Problem Solving have an image of a key next to the banner. Refer to the materials section on the first page of each lesson for the necessary pages from the Teacher Master.

Student Booklet: The student booklets contain all of the Modeled Practice, Guided Practice, and Independent Practice sheets that students need in each unit. There are 11 Student Booklets in all, 1 for each unit. Educators are encouraged to print booklets for each student in the Tier 2 instructional group. Many educators staple the pages or use binder rings to make booklets for each unit.

Additional Materials: Educators must provide the following materials, which are not included in 3-Tier Mathematics Tier 2 Intervention products:

- Base ten blocks (flats, rods, units)
- Connecting cubes
- Counters (e.g., paper clips, small stones, pennies)
- Timer
- Wipe boards and dry-erase markers

Managing Materials: We recommend that educators identify a management system that enhances the ability to teach 2 activities a day, each of which may require different materials. Labeling each material helps to keep them organized and easily accessible during instruction. A storage container with materials and lessons for each day also facilitates smooth instruction.

Key for Grade 1 Bilingual Warm-Ups

TEKS links

Time involved

Unit number

Day in lesson
sequence

Warm-Up
title

Materials
provided
with
intervention
or
classroom
materials

TEKS links

Time involved

Unit number

Day in lesson
sequence

Warm-Up
title

Materials
provided
with
intervention
or
classroom
materials



Total Time: 2 minutes

Unit 2
Warm-Up

DAY
1



Warm-Up: Number Recognition

Directions: Hold up number cards and tell students to say each number with a quick oral response (within 3–4 seconds). If students say an incorrect number for a card, put it in a pile for extra practice. After students go through all the number cards, review the cards in the extra-practice pile and tell students to repeat the correct answers.



Time:

Set the timer for 2 minutes.
Allow enough time to go
over incorrect answers.

Materials: Number cards (0–50)



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Key for Grade 1 Bilingual Booster Lessons

Unit number

Lesson number

TEKS links

Time involved

Skill acronym

Activity title


Day in lesson sequence

Skill involved


Spanish vocabulary

Materials provided with intervention or classroom materials

Thumbnails of applicable Teacher Master pages and Student Booklet pages
 (Note: proportions of handout titles and images have been modified slightly here for ease in recognition)



TEKS
1.3A, 1.3B, 1.11A,
1.11B, 1.11C, 1.11D,
1.12B, 1.13



Total Time: 14 minutes
Instructional Time: 14 minutes
Independent Practice: 0 minutes

Unit 2
Booster Lesson 6
WPS

DAY 3

Part, Part, Put It Together Whole!

Word Problem Solving

Objective: The student will be able to use concrete objects to solve word problems with sums to twelve.

Word Problem Type: Combining, with result unknown

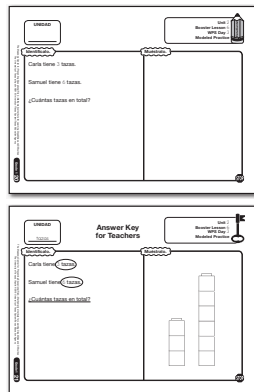
Vocabulary:

English
Add, in all, part, whole, strategy, altogether, important, information, identify, unit

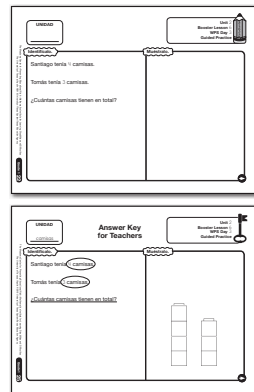
Spanish
Sumar, en total, parte, entero, estrategia, en total, importante, información, identificar, unidad

Materials: Teacher Master, pp. 20–27; connecting cubes (T&S; 2 colors, 12 of each)

Modeled Practice



Guided Practice



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Key for Grade 1 Bilingual Booster Lessons (cont.)

Unit number

Lesson number

Time involved

Unit 2, Lesson 6

**Time:**
Set the timer for 14 minutes. Spend the majority of the time on Guided Practice.

Preview

What is a word problem? (*a math problem that is presented as a story with both numbers and words*)

Today we will practice the **Identify It** strategy and solve word problems, using connecting cubes.

¿Qué es un cuento de matemáticas? (*un problema de matemáticas presentado como un cuento que contiene números y palabras*)

Hoy vamos a practicar la estrategia **Identifícalo** y resolver problemas utilizando cubos conectables.

Modeled Practice
(My Turn, Your Turn)

1 Distribute a Modeled Practice sheet to each student. Read the story aloud and point to each word as you read it. Tell students to follow along as best they can, even if they are unable to read the words.

English script

The **Identify It** strategy helps us find important information in word problems.

Step 1 of the **Identify It** strategy is to underline the question and find the important unit. A unit is what the problem is all about.

Step 2 of the **Identify It** strategy is to circle important words and numbers.

Read the story together. Ready? Read. “Kim has 3 cups. Sam has 6 cups. How many cups in all?”

Spanish script

La estrategia **Identifícalo** nos ayuda a encontrar información importante en problemas de matemáticas.

El paso 1 de la estrategia **Identifícalo** es subrayar la pregunta y encontrar la unidad importante. La unidad es de lo que trata el problema.

El paso 2 de la estrategia **Identifícalo** es circular palabras y números importantes.

Lean el cuento juntos. ¿Listos? Lean. “Carla tiene 3 tazas. Samuel tiene 6 tazas. ¿Cuántas tazas en total?”

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