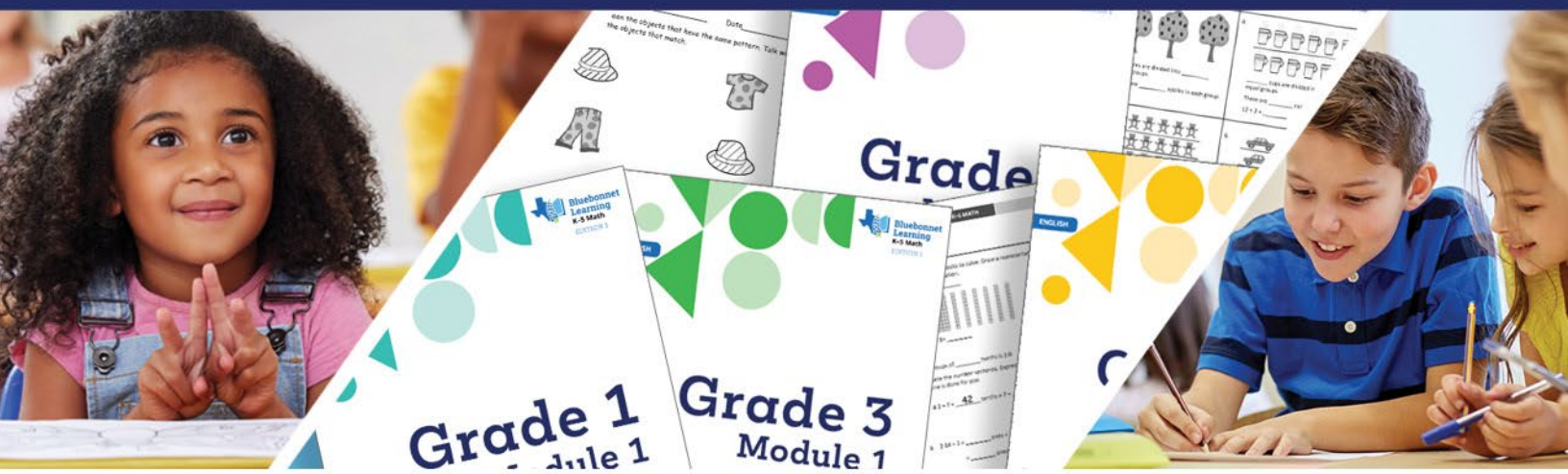
Specially Designed Instruction (SDI) Field User Guide for K–5 Math



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Bluebonnet Learning

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Purpose of This Guide

This guide is designed to support educators in providing **specially designed instruction (SDI)** for students receiving special education services when using Bluebonnet Learning K–5 Math, instructional materials aligned to the Texas Essential Knowledge and Skills (TEKS), as required through the Individuals with Disabilities Education Act (IDEA 2004).[1]

This guide includes the following components:

- A summary of the **three SDI components** with examples aligned to the Bluebonnet Learning K–5 Math high-quality instructional materials (HQIM).
- A comprehensive approach to **planning and implementing SDI** within a sample grade 3 lesson for students with an Individualized Education Program (IEP).

Relevant references to state and federal laws to ensure compliance and alignment with best practices are provided throughout. More details about each of the steps in incorporating SDI, including tools and resources, are available in the Specially Designed Instruction Guide in the Meaningful Access collection on Texas Sped Support.

[1] SDI is defined within the Individuals with Disabilities Education Act (IDEA) as adapting, as appropriate to the needs of an eligible child . . . the content, methodology, or delivery of instruction to address the unique needs of the child that result from the child's disability; and to ensure access of the child to the general curriculum, so that the child can meet the educational standards within the jurisdiction of the public agency that apply to all children [§300.39(b)(3))].

Evidence-Based Practices to Support All Learners

Bluebonnet Learning is HQIM that covers 100% of the TEKS and provides a full suite of resources, including scope and sequence, daily lesson plans, and student materials. All Bluebonnet Learning instructional materials are designed to be high-quality, suitable, and grade-level appropriate.

Additionally, Bluebonnet Learning K–5 Math lessons include margin notes titled Notes on Multiple Means of Expression, Representation, or Action and Expression. The margin notes offer **just-in-time scaffolds, accommodations, and suggestions for differentiation** to ensure access for all learners. While teachers are encouraged to use the embedded supports in the instructional materials, teachers must also ensure they provide all required SDI for students receiving special education supports and services.

Outside of IEP requirements, teachers are encouraged to implement Bluebonnet Learning lessons with fidelity before making any adaptations. This includes integrating evidence-based practices that support the learning of all students. Evidence-based practices can be embedded into Bluebonnet Learning K–5 Math lessons to help students become proficient in key concepts.

Accommodations and/or Modifications

Under the provisions of IDEA[2] and Every Student Succeeds Act (ESSA)[3], IEPs must identify specific accommodations and/or modifications to ensure students can access the general education curriculum. SDI is derived from the IEP goal(s) and may include and be supported by accommodations and/or modifications and services as documented on the IEP.

- **Accommodations** change **how** a student learns or demonstrates knowledge to provide the student with access to the general education curriculum. Accommodations reduce or even eliminate the effects of a student's disability on academic tasks but does not change learning expectations. Types of accommodations include presentation, response, timing/scheduling, setting, and linguistics.
- **Modifications** change **what** the student is expected to learn. This typically means the student will not master all grade-level content and may complete or be assessed on simplified or less complex tasks. When there are modifications to what the student is learning in the enrolled grade level curriculum, the Admission, Review, and Dismissal (ARD) committee must write an IEP goal for the student to address this modification.

The Understanding Accommodations and Modifications Guidance document provides additional guidance and examples.

[2] "Accommodations" are the necessary supports and modifications provided to a child with a disability to enable them to access the general education curriculum and participate meaningfully in school activities, including, for example, assistive technology, modified assignments, extended time, preferential seating, or adjustments to testing procedures—all of which should be outlined in the child's (IEP to ensure that they receive a "free appropriate public education" [20 U.S.C. 1401(3)].

[3] States and districts shall provide for the participation in assessments of all students the appropriate accommodations, such as interoperability with, and ability to use, assistive technology, for children with disabilities (ESSA Section 1111(b)(2)(B)(xiii)).

Infusing SDI Into a Bluebonnet Learning K–5 Math Lesson

When planning for student success within the classroom, multiple steps will lead teachers to effectively incorporating specially designed instruction within a Bluebonnet Learning lesson, including planning for SDI, collaborating and implementing, and monitoring progress.

Planning for SDI

Bluebonnet Learning Internalization

Unit, module, and lesson internalization set the foundation for understanding coherence and progression, identifying TEKS and English Language Proficiency Standards (ELPS), determining knowledge and skills. This fully prepares teachers to deliver a clear lesson that has been adapted for the students in their classroom. Teachers utilize this process to adjust - incorporating scaffolding, differentiation, or additional customization to meet the needs of every learner in the classroom without compromising rigor. While these strategies may be used with all students, they only constitute SDI when they are individualized and directly aligned to a student's IEP goals.

Planning for SDI occurs during lesson internalization, where intentional planning is focused on providing access to and progress in grade level materials. This process prepares both the general education and special education teacher, ensuring that the SDI is implemented effectively within the lesson.

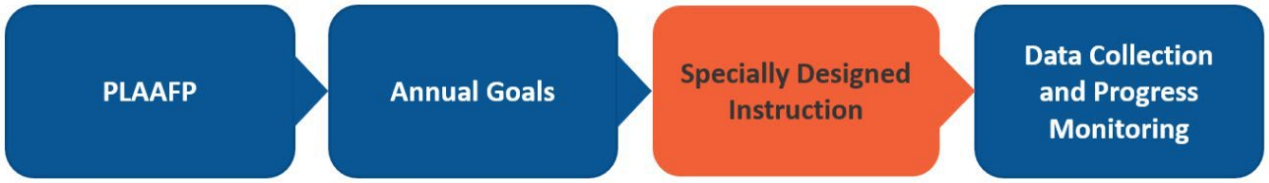
Bluebonnet Learning provides both a teacher and a coach internalization protocol. It is recommended that all teachers utilize the internalization protocols to be better equipped to provide SDI during lesson delivery.

IEP Alignment

For all students with IEPs, the ARD committee determines the SDI necessary to support progress toward IEP goals based on the students' Present Levels of Academic Achievement and Functional Performance (PLAAFP). These goals are aligned with the TEKS and the Bluebonnet Learning HQIM to ensure access to grade-level expectations.

The special education teacher aligns the IEP goals with lesson-based instructional strategies, intentionally considering the student's current performance levels, strengths, and areas of critical need. In planning instructional adaptations, teachers use formative assessments and other data sources to evaluate students' prior knowledge and readiness for grade-level content.

Additionally, analyzing student work and leveraging an understanding of the vertical alignment of foundational standards allows teachers to identify each student's instructional level and implement targeted strategies to effectively support their progress.



Components of SDI in Bluebonnet Learning K–5 Math

There are three components of instruction that may be adjusted as part of delivering SDI: **content**, **methodology**, or **delivery of instruction**. It is important that SDI is always based on the student's area(s) of critical need and provided as required in the IEP. The following are descriptions of the three components of SDI and examples of ways that Bluebonnet Learning K–5 Math lessons may be adjusted to implement each component.

Components of SDI

Content: What students are expected to learn, aligned with age and grade-level standards and expectations. Examples may include:

- Instruction in skills and/or tools needed to access, engage, and make progress in general education.
- Modifications to content (i.e., reducing or eliminating standards) can only be determined by an ARD committee.

Methodology: How the instruction is delivered – the instructional approach and research-based strategies teachers use during instruction. Examples may include:

- An instructional approach (e.g., inquiry model, direct instruction)
- Techniques (e.g., visual supports or note-taking guides) for implementing the instructional approach tailored to the students' needs

Delivery of Instruction: By whom, where, and when the instruction is delivered. Delivery refers to the method by which instruction is provided to meet the needs of individual students with disabilities. Examples may include:

- Instructional setting (e.g., general or special education)
- Grouping (e.g., small group, individual)
- Amount (e.g., frequency and duration)

Questions to Consider when Planning SDI

- How does the student's disability impact access to and progress in the general curriculum? (overall)
- What student strengths and abilities can be built upon to enhance progress in the general curriculum and towards the student's long-term goal? (overall)
- What is the student's current level of performance and long-term goal? (overall)
- What knowledge, skills, and strategies do students need to increase access to and progress in the general curriculum? (content)
    - What are the prerequisite concepts and skills? How are knowledge and access to the general curriculum built from the present levels of performance?
    - What instructional approaches and/or strategies have proven effective with fostering learning for this student? What methods are ineffective? (methodology)
- Are appropriate adaptations made to delivery, time, grouping, and practice throughout the lesson? (delivery)
- Are there sufficient opportunities for the student to engage, practice, and receive explicit feedback, both in grade level content and progress in their long-term goals? (delivery)

Collaborating and Implementing

Prior to implementation, the plan for SDI should be shared and discussed with the general education teacher and paraprofessional (if applicable) to ensure clarity around roles, responsibilities, and instructional adaptations to content, methodology, and/or delivery. Ongoing collaboration between special education and general education teachers is essential to ensure that SDI is implemented with fidelity and consistency across instructional settings.

Through regular communication, co-planning, and data sharing, educators can align supports, monitor student progress, and make timely instructional adjustments based on student data and needs. This collaborative approach promotes a more inclusive learning environment, strengthens access to grade-level content, and ensures that SDI is meaningfully integrated into daily instruction. Ultimately, effective collaboration maximizes the impact of SDI by leveraging the expertise of all team members to address the student's individual strengths and needs, supporting continued progress towards IEP goals.

To explore more about the role of generation education teachers, special education teachers, and paraprofessionals with implementing specially designed instruction, see page 5 of the Specially Designed Instruction Guide.

Monitoring Progress

Progress monitoring provides a structured, data-driven process for evaluating whether instructional strategies and supports ensure the student accesses and progresses in the general education curriculum. While there are checks for understanding (CFUs) and assessments embedded within the TEKS-aligned curriculum, progress monitoring is directly aligned to each student's IEP goals to monitor progress and inform instructional adjustments.

As instruction progresses, teachers may need to adjust the type or intensity of SDI-based progress monitoring data. If changes to the IEP goals, accommodations, and/or modifications are warranted, this requires ARD committee action.

- If a student is **exceeding expected progress**, the student will master the goal sooner than the timeframe. The special education teacher can adjust instruction and supports to close the skill gap sooner.
- If a student is **not making adequate progress**, the student will not master the goal within the timeframe. The SDI may need to be adjusted in terms of **frequency**, **intensity**, or **instructional approach**.

Bluebonnet Learning K–5 Math Example

The following pages illustrate an SDI-infused lesson using a sample from Bluebonnet Learning K–5 Math (Bluebonnet Learning K–5 Math, Grade 3, Module 1, Properties of Multiplication and Division and Solving Problems with Units of 2-5 and 10. Specifically Topic A, Lesson 1, Understanding Equal Groups as Multiplication).

Within this example, teachers are introduced to Olivia and Ben. Their unique needs, abilities, goals, and SDI will guide the internalization and planning for the lesson. "While SDI complements other instructional strategies used with all students, it should still be distinct in that it is individualized and tied to IEP goals." (Friend and Barron, 2021)[4]

This section will also include evidence-based instructional strategies, accommodations, and modifications, demonstrating the similarities and differences between instructional strategies used with all students and ones used specifically to address the needs of individualized students.

Through the examples, **Teacher's Notes** are included to make the thinking, rationale and considerations behind the instructional decisions for SDI visible. These examples and considerations are not exhaustive; teachers should continue to adjust their approaches based on the specific context within each classroom. SDI is individualized and responsive; it evolves in conjunction with the student's strengths, needs, and progress toward IEP goals and grade-level standards.

Sample SDI Development Process for Olivia and Ben

Olivia | Impact of Disability (excerpt from PLAAFP)

Olivia has been identified as a student with a specific learning disability in mathematics calculation. Olivia's disability is significantly impacting her ability to apply prerequisite math computation skills to interact meaningfully with grade-level problem-solving operations.

[4] Barron, T., Friend, M., Dieker, L., & Kohnke, S. (2021). Co-teaching in uncertain times: Using technology to improve student learning and manage today's complex educational landscape.

It is indicated that Olivia is unable to add up to four two-digit numbers and subtract two-digit numbers using mental strategies and algorithms based on knowledge of place value and properties of operations. Additionally, Olivia is unable to recall basic facts to add and subtract within 20 with automaticity without teacher supports or when supplemental aids are present.

IEP Goal

In 36 instructional weeks, given manipulatives and a teacher-provided worked example illustrating the problem-solving process, the student will solve two-step addition and subtraction word problems within 1,000 with at least 80% accuracy on weekly curriculum-based probes across three consecutive data collection periods.

Specially Designed Instruction

Content: Olivia requires adjustment to content to reinforce prerequisite relationships of addition and subtraction while accessing grade-level content (i.e., targeted pre-teaching to review addition and subtraction strategies, targeted fact fluency).

Methodology: Olivia will receive explicit instruction in foundational addition and subtraction skills, including strategies for solving one-step and multi-step word problems within1,000. She will have access to manipulatives, visual models, worked examples, guided practice, and scaffolded problem-solving routines.

Delivery of Instruction

- **When:** Daily during designated math instruction time, with additional supports as needed to address the multiple mathematical calculation challenges identified
- **Where:** In a small group setting within the general education classroom
- **By whom:** Special education teacher or general education teacher

Progress Monitoring Plan

The special education teacher will provide Olivia with problems to solve daily and will record her proficiency for progress monitoring purposes. As Olivia's proficiency necessitates, the special education teacher will increase or decrease the scaffolding supporting Olivia's understanding. The special education teacher will document Olivia's scores on problem-solving assessments throughout the math period. Once each grading period, the general education teacher will average Olivia's math word problem assessments toward meeting her IEP goal.

Ben | Impact of Disability (excerpt from PLAAFP)

Ben has been identified as a student with other health impairment (OHI), related to his diagnosis of Attention-Deficit/Hyperactivity Disorder (ADHD). Ben is a dually identified student (receives special education services and is emergent bilingual) and participates in a dual language program with Intermediate language proficiency for listening skills and Beginner language proficiency for speaking skills on the Texas English Language Proficiency Assessment System (TELPAS).

Ben demonstrates strengths in learning with visual supports, structured routines, and hands-on, interactive learning activities. He enjoys engaging with peers in supported settings. Ben's difficulties with attention and his ongoing English language development impact his ability to independently sustain focus, initiate and complete tasks, and fully access grade 3 level TEKS.

Ben also demonstrates difficulty with organization, planning, and completing multi-step assignments. Additionally, he struggles with understanding complex directions, content-specific vocabulary, and expressing his ideas in complete sentences.

IEP Goal

By the next annual ARD committee meeting, given a visual task checklist, vocabulary reference card, and teacher modeling of directions, the student will independently complete assigned grade-level tasks with no more than two verbal prompts in 4 out of 5 opportunities across three consecutive weeks as measured by task completion data collected by the teacher.

Specially Designed Instruction

Content: Ben requires content adjustments, including pre-teaching of prerequisite mathematical vocabulary (using visual task list, examples, and simplified language).

Methodology: Ben will receive explicit instruction in attention, task initiation, and self-regulation strategies, including modeling, guided practice, and self-monitoring techniques. Instruction will incorporate linguistic supports such as vocabulary development, sentence stems, and language structures to support English language development. Academic tasks will be chunked into manageable steps and delivered using multimodal supports (e.g., visual, verbal, and written cues). Instruction will follow a gradual-release model, moving from teacher support to independent application, with frequent opportunities for guided practice and feedback.

Delivery of Instruction

- **When:** Daily during designated instruction time, with additional support as needed to address the attention and language challenges identified
- **Where:** In a small group setting within the general education classroom
- **By whom:** Special education teacher or general education teacher

Progress Monitoring Plan

The special education teacher will provide organization and attention support (e.g., visual task checklists, task checklists, timer, etc.) and linguistic supports (e.g., visual vocabulary, scaffolded language supports, etc.) where needed, monitoring effectiveness of materials.

Materials and supports will be increased, decreased, or adjusted as necessitated by Ben's progress. The teacher will continuously monitor and document progress related to Ben's on-task behavior and completion of assignments using this data to inform next steps.

The special education teacher will document Ben's data through observation in relation to on-task behavior, completion of tasks, and frequency and types of prompts needed to support his engagement.

K–5 Math Grade 3, Module 1, Lesson 1

Fluency Practice: Group Counting

[Module 1: Teacher Edition: Bluebonnet Learning Grade 3 Math, Edition 1, Page 20]

Fluency Practice (5 minutes)

- Group Counting **3.4E** (5 minutes)

Group Counting (5 minutes)

Note: Basic skip counting skills from Grade 2 shift focus in this Grade 3 activity. Group counting lays a foundation for interpreting multiplication as repeated addition. When students count groups in this activity, they add and subtract groups of 2 when counting up and down.

T: Let's count to 20 forward and backward. Watch my fingers to know whether to count up or down. A closed hand means stop. (Show signals during the explanation.)

T: (Rhythmically point up until a change is desired. Show a closed hand; then point down.)

S: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1, 0.

T: Let's count to 20 forward and backward again. This time whisper every other number. Say the other numbers in a regular voice.

S: (Whisper) 1, (speak) 2, (whisper) 3, (speak) 4, (whisper) 5, (speak) 6, etc.

T: Let's count to 20 forward and backward again. This time, hum every other number instead of whispering. As you hum, think of the number.

S: (Hum), 2, (hum), 4, (hum), 6, etc.

T: Let's count to 20 forward and backward again. This time, think every other number instead of humming.

S: (Think), 2, (think), 4, (think), 6, etc.

T: What did we just count by? Turn and talk to your partner.

S: Twos.

T: Let's count by twos. (Direct students to count forward to and backward from 20, changing directions at times.)

NOTES ON FLUENCY PRACTICE:

Think of fluency as having three goals:

1. Maintenance (staying sharp on previously learned skills).
2. Preparation (targeted practice for the current lesson).
3. Anticipation (skills that ensure that students will be ready for the in-depth work of upcoming lessons).

NOTES ON FLUENCY PRACTICE:

Throughout the module, teachers are encouraged to make appropriate adjustments to fluency activities to account for varying student needs.

Evidence-Based Practices to Support All Learners

- **Scaffolding:** Use a numbers chart or number line, pointing to each number as the teacher counts to support students at the beginning of the fluency practice, removing the chart as the practice continues.
- **Engagement:** Incorporate movement with each counting adjustment (ex. “whisper” = cover mouth, “think” = touch head).

Student: Olivia	Student: Ben
Accommodations/Modifications: • Visual aids and supports **Specially Designed Instruction:** • Olivia will receive instructional supports of skip-counting strategies using a number chart and manipulatives to reinforce patterns and support her understanding of counting by groups. • Teach Olivia how to use visual supports (e.g., highlighted number lines) during the activity to follow along and participate with the group.	**Accommodations/Modifications:** • Preferential seating • Visual aids and supports **Specially Designed Instruction:** • Provide an interactive number line and teach Ben how to utilize it by moving the numbers as he is counting to support his attention to task.

Teacher’s Note

For Olivia, the teacher considered what visual and concrete tools were needed to help the student make sense of patterns. By explicitly teaching her how to use these tools, the goal is for Olivia to independently track her thinking and apply strategies.

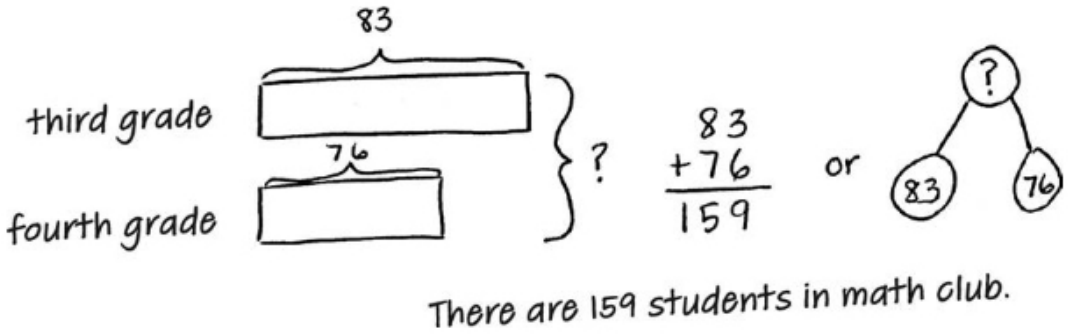
For Ben, the teacher chose an interactive number line to support his need for movement while also strengthening executive functioning skills of attention and task initiation. The teacher could have elected to use a number chart or counters, but went with a number line since recent observations from the general education teacher in the classroom indicate a number line works best for maintaining attention and increasing engagement with the content.

Application Problem

[Module 1: Teacher Edition: Bluebonnet Learning Grade 3 Math, Edition 1, Page 21]

Application Problem (10 minutes)

Math club is offered to all third and fourth graders. There are 83 third graders and 76 fourth graders in math club. How many total students are in math club?



There are 159 students in math club.

Note: Students may choose to use a strip diagram or a number bond to model the problem. They are also likely to solve today's Application Problem in less than 10 minutes. Ten minutes have been allotted to allow for review of the Read–Draw–Write (RDW) process for problem solving.

Directions on the Read–Draw–Write (RDW) process: Read the problem, draw and label, write an equation, and write a word sentence. The more students participate in reasoning through problems with a systematic approach, the more they internalize those behaviors and thought processes.

A more complete explanation can also be found in the Grade 3 Module 1 Overview.

Evidence-Based Practices to Support All Learners

- **Scaffolding**: Provide a review of the number bond and strip diagram, demonstrate with simple numbers how they are used
- **Multiple Means of Action and Expression**: Remind students that there are multiple ways to solve this problem, that they should use the one that they feel most comfortable

Student: Olivia	Student: Ben

Accommodations/Modifications:
• Visual aids and supports
• Small group instruction
 	
Specially Designed Instruction:
• Support Olivia in completing the exercise using the Three Reads Protocol: Olivia will read a math scenario three times with a different goal each time:
  ○ The first read is to understand the context.
  ○ The second reading is to understand mathematics.
  ○ The third reading is to elicit inquiry questions based on the scenario.
• In a small group, Olivia will receive explicit instruction on the RDW process, providing this demonstration prior to Olivia attempting to solve the Application Problem on her own.
	Accommodations/Modifications:
	• Visual aids and supports
	• Small group instruction
	
	Specially Designed Instruction:
	• In a small group, Ben will receive explicit instruction on the RDW process, breaking down the process into individual steps, allowing Ben to work through one step at a time with prompts as needed.
	• Provide sentence stem: "There are ___ students in math club."

Teacher's Note

For Olivia, the teacher considered how to design instruction to increase Olivia's access to solving grade-level word problems given her difficulty with computation. The three read protocol intentionally separates comprehension from computation; it provides Olivia with the opportunity to engage in mathematical reason before starting on calculations.

Further, the teacher thought about the best approach to supporting Olivia with the problem solving process. By using the RDW small-group instruction, the teacher modeled the steps, provided prompting and feedback, and supported Olivia with moving toward independence in solving one-step and multi-step word problems involving addition and subtraction within 1,000.

For Ben, the teacher employed the RDW process coupled with visual supports to reduce executive functioning demands and support engagement.

Prior to the lesson, the special education and general education teachers aligned on how the Three Reads Protocol and RDW will be used in the lesson and how they will collect data on Olivia's accuracy and independence in computation and problem solving and Ben's task initiation and completion, and use of academic language.

Concept Development

[Module 1: Teacher Edition: Bluebonnet Learning Grade 3 Math, Edition 1, Page 21-22]

Concept Development (35 minutes)

Materials: (S) 12 counters, personal white board

Problem 1: Skip count to find the total number of objects.

T: (Select 10 students to come to the front.) At the signal, say how many arms you each have. (Signal.)
S: 2 arms!
T: Since we each represent a group of 2 arms, let's skip count our volunteers by twos to find how many arms they have altogether. To keep track of our count, students will raise up their arms when we count them.
S: (Count 2, 4, 6, ... 20.)
T: How many raised arms do we have in all?
S: 20.
T: Arms down. How many twos did we count to find the total? Turn and whisper to your partner.
S: 10 twos.
T: What did you count to find the number of twos?
S: I counted the number of volunteers because each person has a group of two arms.
T: Skip count to find the total number of arms.
S: (Say 2, 4, 6, ...)
T: (As they count, write 2 + 2 + 2 +...)
T: Look at our addition sentence. Show thumbs up if you see the correct number of twos.
S: (Show thumbs up.)
T: (Under the addition sentence, write *10 twos*.) Clap 3 times if you agree that 10 groups of two is 20.
S: (Clap 3 times.)
T: (Write *10 groups of two is 20* under the other number sentences.)

Sample Teacher Board

2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 = 20
10 twos
10 groups of two is 20.

Problem 2: Understand the relationship between repeated addition, counting groups in unit form, and multiplication sentences.

Seat students at tables with personal white boards and 12 counters each.

T: You have 12 counters. Use your counters to make **equal groups** of two. How many counters will you put in each group? Show with your fingers.
S: (Hold up 2 fingers and make groups of two.)
T: How many equal groups of two did you make? Tell at the signal. (Signal.)
S: 6 groups.
T: 6 equal groups of how many counters?
S: 6 equal groups of 2 counters.
T: 6 equal groups of 2 counters equal how many counters altogether?
S: 12 counters.
T: Write an addition sentence to show your groups on your personal white board.
S: (Write 2 + 2 + 2 + 2 + 2 + 2 = 12.)
T: (Record the addition sentence on the board.) In unit form, how many twos did we add to make 12?
S: 6 twos.
T: (Record *6 twos = 12* under the addition sentence.) 6 × 2 is another way to write 2 + 2 + 2 + 2 + 2 + 2 or 6 twos. (Record *6 × 2 = 12* under *6 twos = 12* on the board.) These number sentences are all saying the same thing.

Sample Teacher Board

2 + 2 + 2 + 2 + 2 + 2 = 12
6 twos = 12
6 × 2 = 12

Concept Development (continued)

[Module 1: Teacher Edition: Bluebonnet Learning Grade 3 Math, Edition 1, Page 23]

T: Turn and talk to your partner. How do you think $6 \times 2 = 12$ relates to the other number sentences?

S: They all have twos in them, and the answer is 12. → I think the 6 shows how many twos there are. → You have to count two 6 times because there are 6 groups of them. That's how you get 6 times 2. → 6×2 might be a simpler way to write a long addition sentence.

T: Ways that are simpler and faster are efficient. When we have equal groups, **multiplication** is a more efficient way to find the total than repeated addition.

Repeat the process with 4 threes, 3 fours, and 2 sixes to get students comfortable with the relationship between repeated addition, counting groups in unit form, and multiplication sentences.

Problem 3: Write multiplication sentences from equal groups.

Draw or project the picture to the right.

T: These are equal groups. Turn and tell your partner why they are equal.

S: There is the same number of grey circles in each group. → All of the grey circles are the same size and shape, and there are 4 in each group.

T: Work with your partner to write a repeated addition and a multiplication sentence for this picture.

S: (Write $4 + 4 = 8$ and either $2 \times 4 = 8$ or $4 \times 2 = 8$.)

T: (Project or draw the following.) Look at my new drawing and the multiplication sentence I wrote to represent it. Check my work by writing an addition sentence and counting to find the total number of objects.

3 × 4 = 12

S: (Write $4 + 4 + 3 = 11$.)

T: Use your addition sentence as you talk to your partner about why you agree or disagree with my work.

S: I disagree because my addition sentence equals 11, not 12. → It's because that last group doesn't have 4 circles. → You can do multiplication when the groups are equal. → Here, the groups aren't equal, so the drawing doesn't show 3×4.

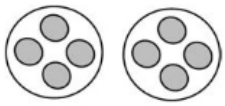
T: I hear most students disagreeing because my groups are not equal. True, to **multiply** you must have equal groups.

NOTES ON MULTIPLE MEANS OF REPRESENTATION:

It may be necessary to explicitly connect *times* and the symbol ×. Have students analyze the model. "How many times do you see a group of two?" Have them count the groups, write the number sentence, and say the words together.

- 6 groups of two equal 12.
- 6 times 2 equals 12.

Consider posting a visual that includes the written form 6 times 2 equals 12 and the number sentence $6 \times 2 = 12$. Highlight the word times and the symbol × in the same color and the word equals and the symbol = in the same color. Refer to the visual to support students as needed, including some emergent bilingual students, in connecting the language and symbols when discussing multiplication sentences.



NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:

Some students may need more scaffolding to realize that multiplication cannot be used to find totals with groups that are not equal. Use the following questions to scaffold.

- Does the drawing show 3 fours?
- Does 3 times 4 represent this drawing?
- How might we redraw the picture to make it show 3×4?

Evidence-Based Practices to Support All Learners

- **Multiple Means of Representation:** provide connection between "times" and the symbol "x" through multiple representations for student understanding.
- **Multiple Means of Action and Expression:** ask additional questions to help students see that multiplication cannot be used to find totals with groups that are not equal.

Student: Olivia	Student: Ben

Accommodations/Modifications:
• Visual aids and supports
• Small group instruction
 	
Specially Designed Instruction:
• In a small group, provide Olivia with specific SDI for each problem:
  ○ Problem 1: Connect the count to a number chart.
  ○ Problems 2 and 3: Use counters to place them into small cups or cupcake liners to physically distinguish the groups from objects.
• Teach Olivia to use manipulatives and a number chart to support her.
	Accommodations/Modifications:
	• Visual aids and supports
	
	Specially Designed Instruction:
	• Using visuals, introduce academic vocabulary and cognates (equal groups, times, repeated addition, multiplication).
	• Teach Ben to use graphic organizers or manipulatives to support his engagement and attention to task.
	• Problem 3: Provide side-by-side visuals demonstrating equal groups and not equal groups using repeated language "These groups are equal because ____" and "These are not equal because ____."

Teacher's Note

For Concept Development, the teacher considered how SDI for each student will increase access, maintain rigor, and drive participation within the lesson.

Olivia benefited from small group instruction. It provides a slower pace, repeated teacher modeling, frequent prompting, and responsive feedback.

Ben is supported within the whole group setting through executive functioning supports to increase his attention and strengthen his use of academic language. Ben's SDI aligns to his IEP goal by providing grade-level, TEKS-aligned math tasks with appropriate supports so he can initiate and complete the task. Progress is monitored through teacher observation and completed work samples to document whether Ben remains on task with no more than two prompts.

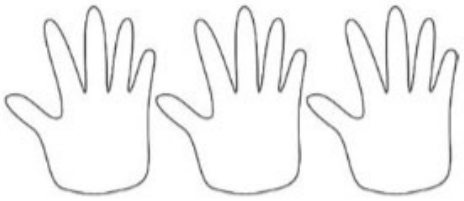
The special education teacher led the small group to provide explicit SDI focused on modeling and guided practice. The general education teacher led the whole group instruction while the paraprofessional implemented targeted supports for Ben (e.g., visuals, graphic organizers, and manipulatives).

While the special education teacher plans for SDI, the general education teacher and/or paraprofessional may implement these supports and collect data to monitor progress.

Problem Set

[Module 1: Teacher Edition: Bluebonnet Learning Grade 3 Math, Edition 1, Page 26]

1. Fill in the blanks to make true statements.



a. 3 groups of five = _____

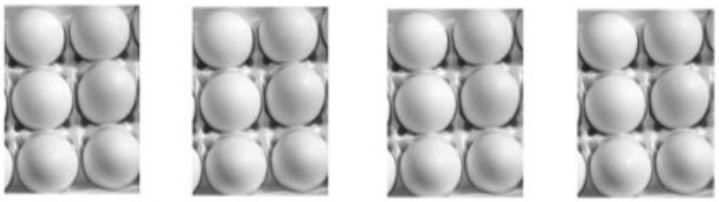
3 fives = _____

3 × 5 = _____

b. 3 + 3 + 3 + 3 + 3 = _____

5 groups of three = _____

5 × 3 = _____



c. 6 + 6 + 6 + 6 = _____

_____ groups of six = _____

4 × _____ = _____

d. 4 + ____ + ____ + ____ + ____ + ____ = _____

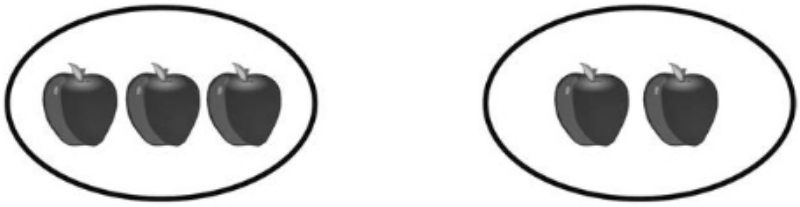
6 groups of _____ = _____

6 × _____ = _____

Problem Set (continued)

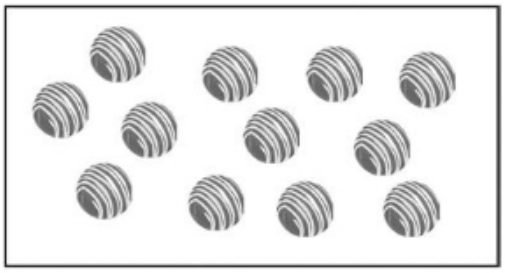
[Module 1: Teacher Edition: Bluebonnet Learning Grade 3 Math, Edition 1, Page 27]

2. The picture below shows 2 groups of apples. Does the picture show 2 × 3? Explain why or why not.



3. Draw a picture to show 2 × 3 = 6.

4. Caroline, Brian, and Marta share a box of chocolates. They each get the same amount. Circle the chocolates below to show 3 groups of 4. Then, write a repeated addition sentence and a multiplication sentence to represent the picture.



Evidence-Based Practices to Support All Learners

Consider explicit evidence-based practices in the Bluebonnet Learning lesson margins.

Student: Olivia	Student: Ben
Accommodations/Modifications: • Identify "could do" and "must do" problems to allow for guided practice and independent practice • Visual aids and supports • Small group instruction **Specially Designed Instruction:** • Olivia will receive explicit instruction and guided practice completing "could do" problems before independent completion of "must do" problems. • Provide Olivia with correctly completed examples and visual scaffolds (e.g., graphic organizers, number charts) to support independent problem-solving. • The teacher provides verbal cues and prompts to help Olivia apply learned strategies with the problem set.	**Accommodations/Modifications:** • Visual aids and supports **Specially Designed Instruction:** • Using visuals, review academic vocabulary and cognates (equal groups, times, repeated addition, multiplication). • Demonstrate what the expectation is (completion of "must do" problems) and what "on task" behavior looks like (eyes on work, pencil moving, etc.) • Chunk the problem set to allow for greater attention and completion rate. • Provide prompts and redirection to stay on task.

Teacher's Note

When planning for SDI, the teacher considered the look-fors for each student as they worked on the problem set independently. *What does progress toward this student's IEP goal look like within the TEKS-aligned task?*

For Olivia, the teacher thought about how to capture both Olivia's accuracy and independence with problem solving.

- What strategy does Olivia use?
- Does she need prompting to begin each chunk?
- Does she rely on visuals to recall the steps?

For Ben, the teacher was mindful of how he initiated and competed the problem set.

- Does Ben start work without delay?
- Do visuals support his engagement?
- How often does he need prompts/cues to attend to the task?

Student Debrief

[Module 1: Teacher Edition: Bluebonnet Learning Grade 3 Math, Edition 1, Page 24]

The Student Debrief is intended to invite reflection and active processing of the total lesson experience.

Student Debrief (10 minutes)

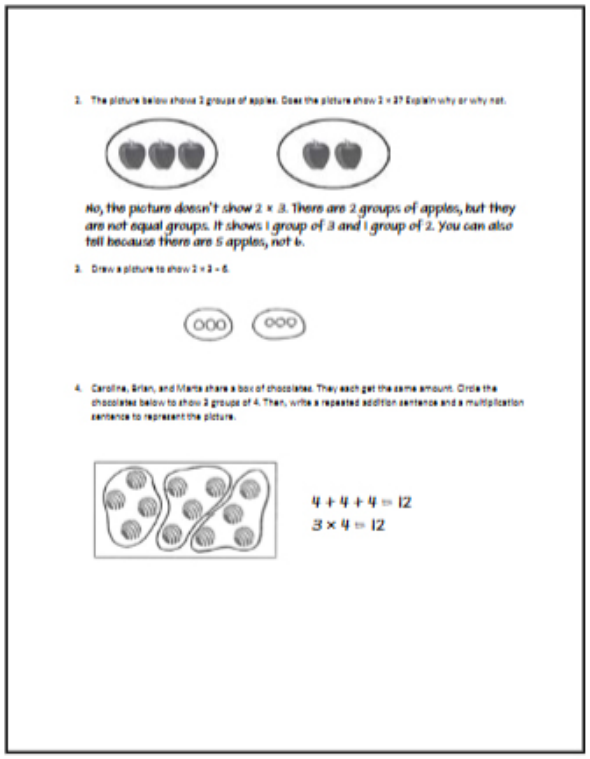
Lesson Objective: Understand *equal groups of* as multiplication.

The Student Debrief is intended to invite reflection and active processing of the total lesson experience.

Invite students to review their solutions for the Problem Set. They should check work by comparing answers with a partner. Look for misconceptions or misunderstandings that can be addressed in the Debrief. Guide students in a conversation to debrief the Problem Set and process the lesson.

Any combination of the questions below may be used to lead the discussion.

- On the first page, what did you notice about the answers to your problems?
- Discuss the relationship between repeated addition and the unit form *2 groups of three* or *3 groups of two,* depending on the drawing.
- Discuss the relationship between repeated addition, unit form, and the multiplication sentence 3 × 2 = 6.
- Review the new vocabulary presented in the lesson: **equal groups**, **multiplication**, and **multiply**.



Evidence-Based Practices to Support All Learners

- **Scaffolding:** Use a numbers chart or number line, pointing to each number as the teacher counts to support students at the beginning of the fluency practice, removing the chart as the practice continues.
- **Engagement:** Incorporate movement with each counting adjustment (ex. “whisper” = cover mouth, “think” = touch head).

Student: Olivia	Student: Ben

Accommodations/Modifications:
• Small group instruction
 	
Specially Designed Instruction:
• Provide small-group instruction to guide Olivia and any other students needing it in a conversation to debrief the Problem Set and process the lesson.
• Purposefully select a debrief question(s) to target misconceptions or misunderstandings based on Olivia’s and other students’ needs.
• Olivia will receive reteaching or clarification during the task if she demonstrates misunderstanding, ensuring she can access the content without changing the rigor.
	Accommodations/Modifications:
	• Visual aids and supports
	
	Specially Designed Instruction:
	• Implement structured turn-and-talk process, providing sentence stems:
	  ○ “I noticed _____”
	  ○ “Repeated addition is _____ because _____.”

Teacher’s Note

The teacher was mindful of how to increase each student’s participation and access to grade-level discussions with their peers. The teacher considered how students will be allowed time to think, talk, and listen.

For Olivia, a teacher-supported small group allowed for prompting, ensured questions are accessible, and provided adequate think time for Olivia to formulate her response.

For Ben, the sentence frames supported peer dialogue, and increased engagement. Ben’s SDI for this portion of the lesson, did not include small group instruction. The teacher was intentional about how to reduce language barriers and increase participation, which was achieved through embedded supports in the whole-group setting.

Exit Ticket

Module 1: Teacher Edition: Bluebonnet Learning Grade 3 Math, Edition 1, Page 25

After the Student Debrief, instruct students to complete the Exit Ticket. A review of their work will help with assessing students' understanding of the concepts that were presented in today's lesson and planning more effectively for future lessons. The questions may be read aloud to the students.

1. The picture below shows 4 groups of 2 slices of watermelon. Fill in the blanks to make true repeated addition and multiplication sentences that represent the picture.

2 + ____ + ____ + ____ = _____

4 × _____ = _____

2. Draw a picture to show 3 + 3 + 3 = 9. Then, write a multiplication sentence to represent the picture.

Evidence-Based Practices to Support All Learners

Consider explicit evidence-based practices in the Bluebonnet lesson margins.

Student: Olivia	Student: Ben
Accommodations/Modifications: • Small group instruction • Extended time **Specially Designed Instruction:** • Provide guided prompting to help Olivia apply strategies learned during the lesson.	**Accommodations/Modifications:** • Small group instruction • Extended time **Specially Designed Instruction:** • Provide prompts and redirection to remain on task.

Teacher's Note

If extended time is listed in the student's IEP, it must be provided.

This is also a great opportunity for the teacher to capture progress data on how the how the extra time is utilized by the student.

For example: Is Olivia moving through the problem solving steps and requiring additional time on computation? Or is Olivia struggling with using the embedded SDI strategies to work through the problem-solving steps?

Examples of SDI

Additional SDI examples aligned to Bluebonnet Learning K–5 Math are included below.

Please note that this is not an exhaustive list and should only be implemented if it aligns with the student's present level, IEP goals, strengths, and needs.

SDI Examples Aligned to Bluebonnet Learning K–5 Math

Content

- Teachers review and integrate prior learning or prerequisite skills and concepts.
- Teachers adjust the number set in math tasks to a more manageable range based on the student's current level of understanding.
- Teachers sequence instruction to build concepts incrementally, using vertical alignment to connect prior and current grade-level standards.

Methodology

Explicit Instruction:

- Provide clear and concise instruction with immediate feedback for the task or the process.
- Model using concrete manipulatives and match to the representational and abstract representations.

Differentiated Instruction:

- Tailor instruction based on students' proficiency levels, preferences, and readiness.
- Use flexible grouping, varied materials, and scaffolding supports to meet individual needs.

Delivery of Instruction

- Instruction is provided in the general education setting using a co-teach approach, with both a general education teacher and a special education teacher delivering instruction.
- Instruction is delivered in a small group setting to provide targeted support aligned with IEP goals.
- Just-in-Time supports are embedded within Bluebonnet Learning K–5 Math. Lessons include opportunities for remediation or enrichment based on student need.

Using Progress Monitoring to Adjust SDI

As teachers conduct ongoing progress monitoring to assess Olivia's and Ben's progress toward their IEP goals, they may adjust the SDI accordingly. Teachers can adjust any of the three components of SDI.

Olivia

- **If data shows that Olivia is making strong progress**, the SDI may be gradually reduced or revised to provide more rigorous instruction.
- **If data shows that she is not making adequate progress**, the SDI may be intensified, and additional accommodations or modifications may be considered through the **ARD committee process**.

To further support Olivia's application of mathematical computations, teachers might:

- Provide more frequent explicit instruction on problem-solving processes.
- Use one-on-one checks for understanding.
- Scaffold instruction by starting with simpler problems (e.g., single-step computations) and gradually increasing complexity as proficiency improves.

Olivia currently uses two accommodations: visual aids (e.g., number charts) and manipulatives. The ARD committee can help determine whether she should continue with this support or if adjustments are needed. Teachers will continue to monitor Olivia's progress to ensure she is on track to meet her IEP goal.

Ben

- **If data shows that Ben is making strong progress**, the SDI may be gradually reduced to support increased independence with task initiation and assignment completion.
- **If data shows that he is not making adequate progress**, the SDI may be revised by increasing the frequency of prompts, adjusting task chunking, or providing additional linguistic support.

To further support Ben's task initiation and assignment completion, teachers might:

- Provide Ben with a first-step visual cue card to help him get started on the task.
- Provide more frequent check-ins during independent work time.
- Use a visual checklist to support assignment completion of multi-step assignments.

Teachers will continue to monitor Ben's progress to ensure he is on track to meet his IEP goal.

Conclusion

This guide is part of the Meaningful Access collection offered by TEA. It applies the content from the Specially Designed Instruction Guide. The full collection of resources can be accessed at Specially Designed Instruction Guide | Texas SPED Support.

Glossary

Accommodations

Changes in presentation, response, timing/scheduling or setting that reduce or even eliminate the effects of student's disability on academic tasks but do not change learning expectations.

Admission, Review, and Dismissal (ARD) Committee

A group that includes parents and school personnel who make decisions about a student's eligibility, Individualized Education Program (IEP), services, accommodations, modifications, and placement for special education supports.

Differentiation

A process used to recognize the varying background knowledge, readiness, language, learning preferences, and interests of a student. The intent of differentiated instruction is to maximize each student's growth and individual success.

Direct Instruction

A structured, evidence-based teaching method focused on explicit, systematic instruction to improve student outcomes.

Explicit Instruction

A teaching method that uses clear objectives, teacher modeling, and student practice to promote student learning.

High-Quality Instructional Materials (HQIM)

Materials aligned to academic standards, are content-rich with clear learning outcomes, reflect evidence-based practices, and provide a full suite of teacher and student materials.

Present Levels of Academic Achievement and Functional Performance (PLAAFP)

A statement in the IEP describes the student's current academic and functional strengths, needs, and the impact of the disability on access to and progress in the general education curriculum.

Math Foundation Skills

The basic building blocks of mathematics, including arithmetic operations, number understanding, and geometric concepts.

Modifications

Alterations to practices or materials that change what the student is expected to be proficient.

Pre-teaching

Introducing key concepts and skills before a lesson to help students access grade level content.

Read-Draw-Write (RDW)

A problem-solving process where students read the problem, draw or represent the situation, and write an equation, statement, or explanation to support mathematical reasoning.

Texas English Language Proficiency Assessment System (TELPAS)

An annual assessment for students who have been identified as emergent bilingual students. TELPAS assesses English language proficiency in four language domains—listening, speaking, reading, and writing.

Three Reads Protocol

A math routine in which students read a problem three times, each with a different purpose: first to understand the context, second to identify the quantities, and third to determine what needs to be solved.

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