

# Dual Language/Bridging Lessons

**Unidad 3:** Flexibilidad hasta 100:  
Multiplicación y división

Gran idea: flexibilidad numérica hasta 100  
para las cuatro operaciones

Conexión de contenido: Explorando  
cantidades cambiantes

Pregunta esencial: ¿Cómo se puede  
desarrollar la flexibilidad numérica hasta 100  
con datos de multiplicación y división para  
explorar cantidades cambiantes?

**Unit 3:** Flexibility to 100: Multiplication  
and Division

Big Idea: Number Flexibility to 100 for All  
Four Operations

Content Connection: Exploring Changing  
Quantities

Essential Question: How can you develop  
number flexibility to 100 with  
multiplication and division facts to explore  
changing quantities?

## Preguntas de enfoque por lección • Focus Questions by Lesson

Lección 1	<b>Comprender los grupos iguales</b> ¿Cómo se pueden representar grupos iguales como ecuaciones?
Lección 2	<b>Usar matrices para multiplicar</b> ¿Cómo se pueden representar matrices como ecuaciones?
Lección 3	<b>Comprender la propiedad conmutativa</b> ¿Cómo se pueden analizar de diferentes maneras matrices que utilizan los mismos números?
Lección 4	<b>Entender la distribución equitativa</b> ¿Cómo se pueden representar partes iguales como ecuaciones?
Lección 5	<b>Comprender la agrupación igualitaria</b> ¿Cómo se pueden representar grupos iguales como ecuaciones de división?

Lesson 1	<b>Understand Equal Groups</b> How can equal groups be represented as equations?
Lesson 2	<b>Use Arrays to Multiply</b> How can arrays be represented as equations?
Lesson 3	<b>Understand the Commutative Property</b> How can arrays that use the same numbers be analyzed in different ways?
Lesson 4	<b>Understand Equal Sharing</b> How can equal shares be represented as equations?
Lesson 5	<b>Understand Equal Grouping</b> How can equal groups be represented as division equations?

Lección 6	<b>Relacionar la multiplicación y la división</b> ¿Cómo se pueden utilizar las representaciones para explicar la relación entre la multiplicación y la división?
Lección 7	<b>Usar la multiplicación para dividir</b> ¿Cuáles son las diferentes formas de representar y resolver situaciones de grupos iguales?

Lesson 6	<b>Relate Multiplication and Division</b> How can representations be used to explain the relationship between multiplication and division?
Lesson 7	<b>Use Multiplication to Divide</b> What are different ways to represent and solve equal group situations?

## Explorar palabras • Explore Words

Las palabras de vocabulario de la unidad se pueden usar para ayudar a los estudiantes a transferir su conocimiento del contenido de un idioma al otro: del español al inglés o del inglés al español. Consulte las estrategias para *construir el lenguaje de las matemáticas* en la página 209 de la Edición para el docente. Se pueden encontrar estrategias adicionales en las páginas 8-11 de este Manual del estudiante multilingüe.

The unit vocabulary words can be used to help students transfer their content knowledge from one language to the other—from Spanish to English, or from English to Spanish. See the *Building the Language of Math* strategies on page 209 of the Teacher Edition. Additional strategies can be found on pages 8-11 of this Multilingual Learner Handbook.

## Cognados • Cognates

California Reveal Math	California Reveal Math
Dividendo	Dividend
División	Division
Divisor	Divisor
Grupos iguales	Equal Groups
Factor(es)	Factor(s)
Multiplicación	Multiplication
Producto	Product
Cociente	Quotient

## Representing Information

Throughout this unit, students will explain how to represent quantities to solve multiplication and division problems. Guiding students to explore forms of representation will help them connect it to academic applications.

First, use visuals to display two groups of animals, such as one group of two cats and one group of six dogs. Then prompt students to brainstorm a list of different ways to represent or show information about the two groups. If time allows, have students perform each of the activities as you proceed. For example, ask students questions such as How can we use...

- a crayon to represent these animals? (Draw them.)
- counters to represent two cats and six dogs? (Form one row of two counters and one row of six counters.)
- words to represent this information? (two cats and six dogs)
- numbers to represent some of this information? (2 cats and 6 dogs)
- a math symbol to represent this information? (2 cats + 6 dogs)
- only math to represent this information? (2 + 6)

To wrap up, have students use sentence frames to interpret the following equations.

- $2 + 6 = 8$  (The equation...represents that there are...in all.)
- $2 \times 3 = 6$  (The equation...represents that there are...times as many...as there are....)

Select a question or set of questions to use for bridging content. Have students work in pairs or small groups to complete questions. A table of possible questions focused on representing information is presented below.

Lesson	Guided Practice Questions	Practice Questions
3-1	#3-4	#14-15
3-2	#3-6	#8-9,11-12
3-3	#3-6	#8-10
3-4	#5-6	#13
3-5	#3-7	#12-13
3-6	#1-2, 5-6	#7-8, 11-12
3-7	#5-6	#9-11

Have students use counters, cubes, or arrays to represent the problems. Students explain their model in Spanish, then English.

## Multilingual Learner Scaffolds

- Emerging** Reinforce key vocabulary by incorporating it into hands-on activities (e.g., drawing). For example, if students draw an array, point out details while asking questions. For example, Can you add numbers to your drawing of the array? or Can you write your equation to show that this factor...times this factor...equals the product?
- Expanding** To prepare students to discuss problem-solving, ask wh- questions that use key vocabulary. For example: Why is this an array? and What can you use multiplication to determine? If students make grammatical errors during this activity, recast the sentence using correct grammar and invite them to repeat.
- Bridging** Support students in giving detailed responses to mindset questions by making them more accessible. For example, How do you establish a positive relationship with a classmate when doing math? (Lesson 3-1) can become What are two ways classmates can help each other learn math?

## Representación de Información

A lo largo de esta unidad, los estudiantes explicarán cómo representar cantidades para resolver problemas de multiplicación y división. Guiar a los estudiantes a explorar formas de representación les ayudará a conectarla con aplicaciones académicas.

Primero, use imágenes para mostrar dos grupos de animales, como un grupo de dos gatos y un grupo de seis perros. Luego, pida a los estudiantes que hagan una lluvia de ideas con una lista de diferentes maneras de representar o mostrar la información de los dos grupos. Si el tiempo lo permite, haga que los estudiantes realicen cada una de las actividades a medida que avancen. Por ejemplo, haga preguntas a los estudiantes, tales como: ¿Cómo podemos usar...?

- un crayón para representar estos animales? (Dibujarlos.)
- fichas para representar dos gatos y seis perros? (Formar una fila de dos fichas y una fila de seis fichas.)
- palabras para representar esta información? (dos gatos y seis perros)
- números para representar parte de esta información? (2 gatos y 6 perros)
- un símbolo matemático para representar esta información? (2 gatos + 6 perros)
- solo matemáticas para representar esta información? (2 + 6)

Para cerrar, pida a los estudiantes que usen marcos de oraciones para interpretar las siguientes ecuaciones.

- $2 + 6 = 8$  (La ecuación... representa que hay... en total.)
- $2 \times 3 = 6$  (La ecuación... representa que hay... veces más... que...)

Seleccione una pregunta o un conjunto de preguntas para usar como puente de contenido. Pida a los estudiantes que trabajen en parejas o en grupos pequeños para completar las preguntas. A continuación, se presenta una tabla con posibles preguntas enfocadas en representar información.

Lección	Preguntas de Práctica Guiada	Preguntas de Práctica
3-1	#3-4	#14-15
3-2	#3-6	#8-9,11-12
3-3	#3-6	#8-10
3-4	#5-6	#13
3-5	#3-7	#12-13
3-6	#1-2, 5-6	#7-8, 11-12
3-7	#5-6	#9-11

Pida a los estudiantes que usen fichas, cubos o arreglos para representar los problemas. Los estudiantes explican su modelo en español, luego en inglés.

## Apoyos para Estudiantes Multilingües

- Emergente** Refuerce el vocabulario clave incorporándolo en actividades prácticas (por ejemplo, dibujar). Por ejemplo, si los estudiantes dibujan un arreglo, señale los detalles mientras hace preguntas. Por ejemplo, ¿Puedes agregar números a tu dibujo del arreglo? o ¿Puedes escribir tu ecuación para mostrar que este factor... por este factor... es igual al producto?
- En Expansión** Para preparar a los estudiantes para discutir la resolución de problemas, haga preguntas con palabras interrogativas que usen vocabulario clave. Por ejemplo: ¿Por qué esto es un arreglo? y ¿Qué puedes usar la multiplicación para determinar? Si los estudiantes cometen errores gramaticales durante esta actividad, reformule la oración usando la gramática correcta e invítelos a repetir.
- En Transición** Apoye a los estudiantes para dar respuestas detalladas a preguntas de mentalidad haciéndolas más accesibles. Por ejemplo, ¿Cómo estableces una relación positiva con un compañero de clase al hacer matemáticas? (Lección 3-1) ¿Puede convertirse en: ¿Cuáles son dos maneras en que los compañeros de clase pueden ayudarse mutuamente a aprender matemáticas?

# Dual Language Connections

## Language Objectives

Students describe using multiplication to represent equal groups. (Lesson 3-1)
Students explain and relate the structure of arrays to multiplication. (Lesson 3-2)
Students demonstrate that the order of the factors does not change the product of the factors. (Lesson 3-3)
Students describe how they can use division to form equal groups. (Lesson 3-4)
Students use math terms and everyday vocabulary to articulate the number of equal groups represented by division. (Lesson 3-5)
Students analyze arrays and equal groups to explain how multiplication and division are related. (Lesson 3-6)
Students discuss how multiplication helps them represent and solve division problems. (Lesson 3-7)

## Communicate Your Understanding

Have students work with partners or in small groups to discuss the Essential question of the unit or the focus question for that lesson. Students can first discuss in Spanish, then rephrase or summarize in English.

## Transfer Learning from English to Spanish

Invite students to generate words, phrases, and sentences in English that express what they have learned about the Essential Question or lesson focus question. Record their ideas on the left side of an anchor chart like the one below. Then tell students they will now transfer what they learned from English to Spanish. Begin by having students work with partners or in small groups to come up with Spanish translations for each item in the left column. Record their translations in the right column of the chart, providing any Spanish terms that students are unable to translate.

How can equal groups be represented as equations?	¿Cómo se pueden representar grupos iguales como ecuaciones?
Equal groups – same number of items Repeated addition Number of groups x items in each group	Grupos iguales – mismo número de elementos Suma repetida Número de grupos x elementos en cada grupo

## Language and Math Sentence Frames for Unit 3

___ se puede escribir como ___ x ___	___ can be written as ___ times ___
___ dividido por ___ es igual a ___	Divided by ___ equals ___
Cuando el número cambia, el producto también cambia porque ___	When the number changes, the product also changes because ___

# Conexiones de Lenguaje Dual

## Objetivos de Lenguaje

Los estudiantes describen el uso de la multiplicación para representar grupos iguales. (Lección 3-1)
Los estudiantes explican y relacionan la estructura de los arreglos con la multiplicación. (Lección 3-2)
Los estudiantes demuestran que el orden de los factores no cambia el producto de los factores. (Lección 3-3)
Los estudiantes describen cómo pueden usar la división para formar grupos iguales. (Lección 3-4)
Los estudiantes usan términos matemáticos y vocabulario cotidiano para articular el número de grupos iguales representados por la división. (Lección 3-5)
Los estudiantes analizan arreglos y grupos iguales para explicar cómo la multiplicación y la división están relacionadas. (Lección 3-6)
Los estudiantes discuten cómo la multiplicación les ayuda a representar y resolver problemas de división. (Lección 3-7)

## Comunica tu Comprensión

Pida a los estudiantes que trabajen con compañeros o en grupos pequeños para discutir la pregunta esencial de la unidad o la pregunta de enfoque de esa lección. Los estudiantes pueden discutir primero en español y luego reformular o resumir en inglés.

## Transferencia del Aprendizaje del Inglés al Español

Invite a los estudiantes a generar palabras, frases y oraciones en inglés que expresen lo que han aprendido sobre la Pregunta Esencial o la pregunta de enfoque de la lección. Registre sus ideas en el lado izquierdo de una tabla de apoyo como la que se muestra a continuación. Luego, diga a los estudiantes que ahora transferirán lo que aprendieron en inglés al español. Comience pidiendo a los estudiantes que trabajen con compañeros o en grupos pequeños para crear traducciones al español para cada elemento en la columna izquierda. Registre sus traducciones en la columna derecha de la tabla, proporcionando cualquier término en español que los estudiantes no puedan traducir.

How can equal groups be represented as equations?	¿Cómo se pueden representar grupos iguales como ecuaciones?
Equal groups – same number of items Repeated addition Number of groups x items in each group	Grupos iguales – mismo número de elementos Suma repetida Número de grupos x elementos en cada grupo

## Marcos de Oraciones de Lenguaje y Matemáticas para la Unidad 3

___ se puede escribir como ___ x ___	___ can be written as ___ times ___
___ dividido por ___ es igual a ___	Divided by ___ equals ___
Cuando el número cambia, el producto también cambia porque ___	When the number changes, the product also changes because ___

## Written Communication

Have students write a short (one paragraph) response to the essential question *How can you develop number flexibility to 100 with multiplication and division facts to explore changing quantities?* (or choose a focus question from one of the lessons.) Use the Multilingual Learner Scaffolds listed below. Have students share with a partner or a small group and engage in a discussion.

*Remind students to use the bilingual anchor chart as a resource for vocabulary and ideas.*

## Multilingual Learner Scaffolds

- Emerging** Students can use visuals to help clarify their writing. The visuals should be labeled. Students may also write primarily in their home language and include key vocabulary words in English.
- Expanding** Students can write their main idea in English and then write clarifying and supporting sentences in their home language. Provide students with transition phrases in both languages to help connect ideas (e.g., because, in addition, in summary).
- Bridging** Students will write their response in English, but can brainstorm and do their prewriting in their home language. Remind students to use academic connectors (e.g., therefore, this shows, as a result).

## Reading

Students rotate through reading stations, each containing a mathematical scenario or problem context. Students read the scenario using the scaffold appropriate for their language level and record their analysis: (1) What information is provided? (2) What mathematical concepts or operations are suggested? (3) What strategy could be used to solve it? (4) How does this demonstrate mathematical reasoning or flexibility? Students share their analysis with a partner, comparing interpretations and solution approaches.

*Use the Multilingual Learner Scaffolds listed below. Remind students to use the bilingual anchor chart as a resource for vocabulary and ideas.*

## Multilingual Learner Scaffolds

- Emerging** Provide simplified scenarios with key mathematical terms and numbers highlighted or bolded, accompanied by visual supports such as diagrams, pictures, or a word bank with images. Pre-read the scenario aloud, modeling think-aloud strategies while pointing to visuals and key words. Have students echo-read or follow along. Provide color-coding tools for students to mark numbers (one color) and mathematical action words/concepts (another color). Use a structured graphic organizer with sentence frames for each analysis component, such as: "The numbers are \_\_," "This shows \_\_," "I can use \_\_." Students share their color-coded text and completed frames with a partner.

**Expanding** Provide complete scenarios using brief paragraphs, with key mathematical vocabulary and concepts bolded or underlined. Include a vocabulary reference guide with definitions and visuals. Have students read the scenario independently first, then read it aloud to a partner for feedback and clarification. Provide a graphic organizer that breaks down the analysis into guided steps with sentence starters, such as: "The scenario describes \_\_\_\_, "The mathematical relationship is \_\_\_\_, "A strategy I could use is \_\_\_\_ because \_\_\_\_, "This shows \_\_\_\_ thinking because \_\_\_\_." Students complete each section and discuss their reasoning with their partner before moving to the next station.

**Bridging** Provide complex scenarios that include extra information not needed to solve the problem alongside the necessary data, incorporating academic mathematical vocabulary and multi-step reasoning. Have students read independently and annotate the text by: underlining essential information, crossing out irrelevant details, circling key vocabulary, and noting questions or connections in the margins. Students complete an open-response analysis identifying: the core mathematical problem, at least two different solution strategies, and an explanation of why multiple approaches are valid and how they demonstrate mathematical flexibility or connection between concepts. Students share their annotated text and written analysis with a partner, defending their reasoning and evaluating alternative approaches.

## Speaking

Students engage in structured one-on-one or small-group interviews in which they verbally explain their mathematical thinking, problem-solving process, or understanding of a concept. A partner, small group, or teacher asks guiding questions, and the student responds orally, elaborating on their reasoning. The interviewer may ask follow-up questions to deepen the explanation or clarify understanding.

*Use the Multilingual Learner Scaffolds listed below. Remind students to use the bilingual anchor chart as a resource for vocabulary and ideas.*

## Multilingual Learner Scaffolds

**Emerging** Provide students with visual supports (their work, manipulatives, diagrams) to reference during the interview. Give both the interviewer and respondent simple question and sentence frames: "What did you use?" / "I used \_\_\_\_." "Show me \_\_\_\_." / "This is \_\_\_\_." "What is the answer?" / "The answer is \_\_\_\_." Students respond with 1-2-word answers, short phrases, or simple sentences using sentence frames, supported by pointing and gestures. Interviewer asks 2-3 basic questions. Accept responses combining words, gestures, and visual references. Partners switch roles so each student practices both asking and answering.

**Expanding** Provide students with a list of interview questions and sentence frames for responses: "How did you solve this?" / "I solved it by \_\_\_\_." "Why did you choose that method?" / "I chose \_\_\_\_ because \_\_\_\_." "What does \_\_\_\_

mean?" / "It means \_\_\_\_." Students respond using complete sentences (3-5 sentences total), incorporating mathematical vocabulary from a word bank. Interviewer asks 3-4 questions, including at least one follow-up: "Can you explain that more?" or "What happened next?" Students may reference their work or visuals while speaking. Partners switch roles.

### **Bridging**

Provide students with open-ended interview questions that require detailed explanations: "Explain your complete problem-solving process." "Why does this method work?" "How would you solve this differently?" "What connections do you see?" Students provide detailed explanations, using precise mathematical vocabulary and academic language, and speak for 1-2 minutes per question. Responses should include reasoning, justification, and examples. Interviewer asks follow-up analytical questions: "Can you elaborate on \_\_\_\_?" "What if \_\_\_\_?" "How does this relate to \_\_\_\_?" Students think aloud, building on questions without relying on frames. Partners or small groups switch roles, with each student practicing extended mathematical discourse.

### **Listening**

Students practice listening comprehension by identifying how quantities, values, or relationships change as they listen to the teacher read a mathematical scenario or problem context. Students demonstrate understanding through written responses, note-taking, annotations, or strategic marking of key information. The teacher provides a list of mathematical signal words or concepts to listen for (e.g., change indicators, operation clues, relationship words). After listening, students compare their understanding with a partner by sharing their notes or annotations.

*Use the Multilingual Learner Scaffolds listed below. Remind students to use the bilingual anchor chart as a resource for vocabulary and ideas.*

### **Multilingual Learner Scaffolds**

#### **Emerging**

Read the scenario slowly, emphasizing key vocabulary with gestures (Total Physical Response) and visuals. Provide students with a printed copy of the scenario, and model for them by pointing, circling, or highlighting the main vocabulary as the text is read. Then ask them to point, circle, or highlight the main vocabulary as you read the text. Have them share their responses with a partner.

#### **Expanding**

Read the scenario at a moderate pace with clear enunciation and pauses. Provide students with a printed copy and preview 3-5 key signal words. As you read twice, students underline vocabulary, circle numbers, draw arrows for changes, and write brief margin notes. Afterward, they compare annotations with a partner.

#### **Bridging**

Read the scenario aloud using academic vocabulary and complex structures. Provide students with a blank or note-taking template for key information, relationships, and changes. Students annotate independently, noting quantities, operation indicators, academic vocabulary, and questions. After listening once or twice, partners explain their understanding and discuss how language conveys meaning.

