

Get your students synthesizing various subtraction strategies as they work with a partner to solve word problems. This lesson can be used alone or with the lesson plan **Show Me the Money! Two-Digit Subtraction**.

## Objectives

Objectives

## Academic

Students will be able to show different ways to subtract multiples of 10.

## Language

Students will be able to make sense of subtraction story problems and describe steps to solve them using visuals, manipulatives, and partner support.

## Materials and preparation

- Class set of the [Stamp Subtraction](#) worksheet
- [Vocabulary Cards](#) (optional)
- Teacher copy of the [Teach Background Knowledge Template](#)
- Teacher copy of the [Write Student-Facing Language Objectives Reference](#)

## Vocabulary

TIER 2

**number line:** a straight line with numbers marked on it

**horizontal equation:** a math sentence written from side to side that uses an equals sign

**vertical equation:** a math sentence written from top to bottom that uses an equals sign

## Attachments

- Stamp Subtraction (PDF)
- Vocabulary Cards: Subtraction Strategies (PDF)
- Teach Background Knowledge Template (PDF)
- Write Student-Facing Language Objectives Reference (PDF)

## Math language routine

Three Reads

## Introduction (5 minutes)

- Ask students to give you a thumbs up if they have ever bought a stamp, and comment that your friend Susana loves to collect stamps from all over the world. Show students examples of different stamps. Build background knowledge about how stamps are used to send mail, but can also be collected.
- Tell students the following story problem: "Susana got \$30 from her grandma for her birthday. Susana spends \$20 on stamps for her collection. How much money does Susana have left?"

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- Prompt students with questions about the context of the problem. For example, "How much money does Susana get for her birthday?" and "What words in the problem tell us which math operation we need to solve the problem?" Write what students know about the problem on the board.
- Ask students to retell the problem in their own words to a partner.

### Explicit Instruction/Teacher modeling (5 minutes)

- Ask students to share ways to solve the problem. Students should say that they need to subtract, and then share a subtraction strategy.
- Record possible strategies on the board. Introduce different strategies as students suggest them or after students have stopped volunteering ideas.
- Draw a picture to model the problem. Draw three rectangles with \$10 inside each one. Cross off two of the rectangles.
- Sketch a horizontal line with tick marks of multiples of 10 from 10 to 30. Start at 30, and model drawing two jumps backwards to 10.
- Show students how to use the hundreds chart to count backwards to 10.
- Ask students how knowing that  $3 - 2 = 1$  helps them solve  $30 - 20$ . Review that there are three tens in 30, and two tens in 20. Three tens minus two tens equals one 10. The numbers in the two equations are the same, but the units are different.
- Model writing a **horizontal equation** to solve the problem. Tell students that this type of equation is written from left to right. Have students gesture with arm in a horizontal position.
- Repeat the procedure with a **vertical equation**. Point out the the equal sign is written differently, but both equations show the same problem.

### Guided Practice (10 minutes)

- Distribute the Stamps Subtraction worksheet to each student. Read the first problem together with the students: "Susana got 50 stamps for her birthday. Susana put 20 stamps away in her stamp book. How many more stamps still need to be put away?"
- Tell students to turn and talk to a partner about what is known about the problem, not how to solve it. Record what is known about the problem on the board.
- Next, ask students to turn and talk to a partner about how they would solve the problem. Choose student volunteers to suggest specific strategies (e.g., sketching a number line or writing an equation).
- Direct students to solve the problem independently, using one of the suggested strategies. Encourage students to show their work in a way that would help another student understand how they solved the problem.

### Group work time (10 minutes)

- Direct students to solve the other two problems in small groups.
- As students work, circulate and prompt students to restate the problem in their own words.
- Prompt students to verbalize their thinking and show subtraction strategies with drawings and equations. Provide the sentence frame, "I solved the problem by \_\_\_\_."
- As students finish, ask if they can show the solution using a different subtraction strategy.

### Additional EL adaptations

#### Beginning

- Read and solve the problems together in a teacher-led small group.
- Translate problems to the home language (L1), or partner student with a bilingual peer if possible.

#### Advanced

- Ask students to write subtraction word problems for classmates to solve.
- Prompt students to restate problems and strategies for solving them in their own words.

### **Assessment (5 minutes)**

- Circulate as students work on the problems. Notice whether students are using the same strategy for each problem, or using different strategies to solve different problems.
- Check that students are counting by tens rather than ones to solve the problems. Reteach subtracting multiples of 10 to students who count by ones to solve the problems.
- Choose student volunteers to restate the situation in problem #3 (how many more stamps Susana has than Greg) in their own words. Students may try adding to solve the problem because of the word "more." Note any misunderstandings, and address them during the closing section.

### **Review and closing (5 minutes)**

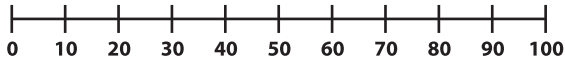
- Prompt students to describe the strategies that they used to solve the problems using the sentence frame, "I solved the problem by \_\_\_\_."
- Ask students how skip counting could be used to find the answer more quickly than counting by ones.



# VOCABULARY CARDS

## EL SUPPORT LESSON PLAN: SUBTRACTION STRATEGIES

number line



a straight line with numbers marked on it

horizontal equation

$$4 + 4 = 8$$

a math sentence written from side to side that uses an equal sign

vertical equation

$$\begin{array}{r} 3 \\ + 2 \\ \hline 5 \end{array}$$

a math sentence written from top to bottom that uses an equal sign

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



# Teach Background Knowledge

<p><b>Lesson Topic:</b> Choose a topic from the main content lesson that will help ELs understand the main content lesson. Your non-ELs will already have knowledge about this topic.</p>	
<p><b>Total Lesson Time:</b> (20 - 30 minutes)</p>	
<p><b>Student-Facing Language Objective:</b> Example: I can learn new vocabulary using pictures and sentence frames.</p>	
<p><b>Student ELP Level(s):</b> Consider each student's ELP level and their academic strengths when choosing scaffolds for the lesson.</p>	
<p><b>Potential Scaffolds:</b> Choose some of these material supports and instructional scaffolds based on each EL's individual strengths and needs.</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Groupings (pairs, small-groups, a teacher-led group)</li> <li><input type="checkbox"/> Word banks, word wall, and bilingual glossaries</li> <li><input type="checkbox"/> Sentence frames, sentence stems, and paragraph frames</li> <li><input type="checkbox"/> Home language materials</li> <li><input type="checkbox"/> Reduced linguistic load, repetition, rephrasing and modeling</li> <li><input type="checkbox"/> Practice new academic skills with familiar topics</li> </ul>
<p><b>Materials &amp; Resources List</b> List the materials you'll use in the lesson.</p>	
<p><b>Key Vocabulary Words (5-8 words)</b> List the words with student-friendly definitions in English. Provide definitions in student's home language when appropriate.</p>	

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<p><b>Introduction</b>  <i>Access EL's prior knowledge about the lesson topic with a brief comprehension check.</i></p> <p>Potential activities:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Creating captions for images</li> <li><input type="checkbox"/> Opinionnaires</li> <li><input type="checkbox"/> Carousel brainstorming</li> <li><input type="checkbox"/> Conversations with sentence starters</li> </ul>	
<p><b>Time estimate for Introduction</b>  (3 - 5 minutes)</p>	
<p><b>Explicit Instruction of Background Knowledge</b>  <i>Model a learning activity that embeds the teaching of academic language and background knowledge.</i></p> <p>Potential activities:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Lunch brunch discussion</li> <li><input type="checkbox"/> Teacher-created, adjusted text and questions</li> <li><input type="checkbox"/> Brief videos or visuals</li> <li><input type="checkbox"/> Text-based instruction</li> <li><input type="checkbox"/> Home-language connections</li> <li><input type="checkbox"/> Pre-teach a small number of vocabulary words</li> <li><input type="checkbox"/> Show real-world objects</li> <li><input type="checkbox"/> Complete word family or bilingual glossaries</li> <li><input type="checkbox"/> Word walls or word bank creation</li> </ul>	
<p><b>Time Estimate for Explicit Instruction</b>  (4 - 6 minutes)</p>	
<p><b>Guided Practice</b>  <i>Provide an opportunity for students (in pairs or small groups) to practice the skill or information taught during Explicit Instruction, offering appropriate scaffolds as needed.</i></p>	
<p><b>Time Estimate for Guided Practice</b>  (5 - 7 minutes)</p>	

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<p><b>Formative Assessment</b>  <i>Ask students to show comprehension of new background knowledge and associated skills through an oral or written task. Provide appropriate scaffolds dependent on their ELP level.</i></p> <p>Potential assessments:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Act out concepts</li> <li><input type="checkbox"/> Hands on tasks</li> <li><input type="checkbox"/> Drawings, models, or graphs</li> <li><input type="checkbox"/> Graphic organizer completion</li> <li><input type="checkbox"/> Captions of images</li> <li><input type="checkbox"/> Reading response or content area logs</li> <li><input type="checkbox"/> Retellings</li> <li><input type="checkbox"/> Role plays</li> <li><input type="checkbox"/> Audio or video recordings</li> <li><input type="checkbox"/> Oral interviews</li> </ul>	
<p><b>Time estimate for Assessment</b>  (5 - 7 minutes)</p>	
<p><b>Review and Closing</b>  <i>Refer to the student objective and relate information to future lessons. Allow students to share thoughts about whether they reached their objective and/or mention lingering questions. Provide sentence stems or frames for their discussion.</i></p>	
<p><b>Time estimate for Review and Closing</b>  (3 - 5 minutes)</p>	



# Write Student-Facing Language Objectives

## A student-facing language objective:

- begins with “I can...”
- is designed to raise students' self-awareness of and promote their language development.
- incorporates a language function, grammar structure, and supports or scaffolds.
- is easy to understand for students at all levels of English proficiency.

## A teacher-facing language objective:

- begins with “Students will be able to...”
- is designed to raise students' self-awareness of and promote their language development.
- incorporates a language function, grammar structure, and supports or scaffolds.
- is intended to guide the teacher’s lesson planning and instruction.

## Steps to convert a teacher-facing objective to a student-facing objective:

1. Replace “Students will be able to” with “I can.”
2. Simplify challenging words but maintain key vocabulary words you’ll address in the lesson.

Students will be able to describe a character with adjectives using graphic organizers.

*Language  
Function*

*Grammar  
Structure*

*Support/  
Scaffold*

I can talk about a character with adjectives using graphic organizers.

*Language  
Function*

*Grammar  
Structure*

*Support/  
Scaffold*

### Language Functions

locate	create	identify
show	describe	infer
sort	ask questions	interpret
tell	brainstorm	collect
contrast	classify	compare

### Grammar Structures

nouns	adverbs
modals	academic vocabulary
verb forms	adjectives
conjunctions	phrases
sentence structure	prepositions
pronouns	complex sentences
comparatives	

### Supports/Scaffolds

graphic organizers	sentence starters
teacher modeling	strategic grouping
word banks/walls	home language supports

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