

The Process of English Language Learning and What to Expect

Adapted from *Teaching Mathematics to English Language Learners*, coauthored by Dr. Gladis Kersaint

Below are the five principles for creating effective second language acquisition-rich learning environments based on evidence-based practice. (Erben, Castaneda, and Ban, 2008)

Principle 1

Give English Learners (ELs) many opportunities to read, write, listen to, and discuss a variety of oral and written English and mathematics texts.

Classroom practices that have been found to improve academic literacy development include:

- modeling reading comprehension through think-alouds
- giving explicit strategy instruction in context
- providing instruction to help students read and write mathematics
- providing mathematics assignments that require students to read and write
- providing more opportunities for ELs to use the language of mathematics as they process new information

Principle 2

Draw attention to patterns of English and mathematics language structure.

- ELs need explicit exposure and instruction related to the language structures of English (both grammar and vocabulary use) and mathematics.

Principle 3

Give ELs classroom time to use their English productively while learning mathematics.

- When ELs are engaged in talk, they make communication modifications that help language become more comprehensible.

Principle 4

Give ELs opportunities to adjust and correct their English while learning mathematics.

- Use revoicing to demonstrate language use.
- Request clarification.
- Provide metalinguistic clues.
- Provide repetition.

Principle 5

Construct activities that maximize opportunities for ELs to interact with others in English.

- Engagement during instruction is the key to academic success; vary the types of instructional tasks.
- Provide students with sentence frames and questions that provide opportunities for rich and rigorous discussions with English-speaking peers.

English Learners: Differentiated Instruction

For ELs, use the Differentiated Instruction charts in the Teacher’s Guide to plan and prepare for specific activities in every session. Differentiation is appropriately aligned to levels of English language proficiency and the language domains of listening, speaking, reading, and writing.



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DIFFERENTIATION ENGLISH LEARNERS		Use with Session 1 Connect It
ELD.PI.3.8 Analyzing language choices, ELD.PI.3.10b Writing		
Emerging: Reading/Writing	Expanding: Reading/Writing	Bridging: Reading/Writing
Support students to respond to Connect It problem 1. Review the Try It problem as a class. Support students in understanding the phrase <i>other than</i> by asking: <i>When I ask what you would like for lunch, other than a sandwich, what do I mean?</i> Have students work with partners to draw a model of the problem. Have them use words and phrases in English or their home language to explain their models to their partner. Provide work time, then have students explain in writing. Provide sentence frames to support students: • $\frac{1}{2}$ names the part of the moussaka _____. • Another fraction that names the part is _____. • I know because _____.	Support students to respond to Connect It problem 1. Have partners review Try It. Encourage students to explain the meaning of the phrase <i>other than</i> . If needed, suggest that phrases such as <i>as well as</i> or <i>in addition to</i> have similar meanings. Have partners draw a model of the problem. Encourage them to use phrases and short sentences to label and explain models, and home language to support communication. Support students to explain in writing using: • $\frac{1}{2}$ names _____. • Another fraction that names the part is _____. • Since _____ of the moussaka has parsley, that means _____ parts have parsley.	Support students to respond to Connect It problem 1. Encourage them to review the Try It problem and discuss with partners. Invite students to discuss in their home language to explore the meaning of <i>other than</i> . Have partners draw a model and label of the problem and explain their models. Provide work time, then have students explain in writing. Encourage students to use <i>other than</i> in their explanations. If needed, provide sentence frames: • A fraction other than _____ is _____. • This fraction is _____ because _____. Have partners compare solutions with other partners. Encourage them to evaluate ideas and provide feedback.

Academic Language

Language Expectations for English Learners

This chart shows what English learners can do in connection with a math standard addressed in this unit.

 **6.NS.1** Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem.

LANGUAGE DOMAINS	EMERGING	EXPANDING	BRIDGING
LISTENING	Match oral descriptions of quotients of fractions to their visual and numerical representations using bar models, number lines, and equations.	Categorize numbers as dividends, divisors, or quotients, based on oral descriptions of quotients of fractions using bar models, number lines, and equations.	Categorize numbers as dividends, divisors, or quotients, based on oral explanations of quotients of fractions using bar models, number lines, and equations.
SPEAKING	Identify a strategy to find the quotient of fractions by showing the model or diagram they used, and then justify the strategy in partner discussion in English and/or their home language.	Describe a strategy to find the quotient of fractions using a model or diagram, and then justify the strategy in partner discussion in English and/or their home language.	Justify a strategy to find the quotient of fractions using a model or diagram in partner discussion.
READING	With visual and teacher support, locate important quantities in word problems and demonstrate understanding of their relationships using a bar model and an equation.	Demonstrate understanding of word problems involving fractions by paraphrasing the problem with a partner and then representing it using bar models or equations.	Demonstrate understanding of word problems by using a bar model and an equation to represent the problem.
WRITING	Compare strategies for finding a quotient of fractions by using models to show different strategies and then labeling the similarities and differences with teacher support.	Compare strategies for finding a quotient of fractions by using models to show different strategies and then labeling the similarities and differences with a partner.	Compare strategies for finding a quotient of fractions by using sentence starters to describe each strategy and then explain the similarities and differences.

Build Academic Language for All Students: Explain

This chart is an example of how to help students progress from everyday to academic language. Use with the Academic Language Focus and Formative Assessment Resources. 🐘

LESSON 7 EXAMPLE PROGRESSION

LANGUAGE OBJECTIVE: Explain how to multiply decimals with the standard algorithm using lesson vocabulary.

Sample Everyday Language

I just put the two numbers on top of each other to find the answer. I counted the spaces after the decimal and that's how I knew where to put the decimal in my answer.

Academic Language Targets

- Use verbs related to solving algorithms, such as regroup, multiply, add, and line up.
- Use math terms to accurately describe solutions, such as place value, decimal points, and factors.
- Accurately identify value of decimals.
- Correctly read decimals and algorithms when talking about solution strategies.

Guidance by Session

1–2: Introduce and reinforce target terms using EL Differentiation.

Practice and highlight clear explanations which use correct verb tenses during Connect It problem 2.

3–4: Use EL Differentiation and Develop Academic Language to reinforce accurate reading of decimals.

Expect students to use academic language when responding to S3 Connect It problem 2. Affirm strong use of language.

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UNIT 2 Connect Language Development and Mathematics Decimals and Fractions

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