

Supporting English Language Learners in the *Investigations* Classroom

Supporting English Language Learners is an important aspect of *Investigations'* approach to differentiation and its commitment to engaging the range of learners. The linguistic demands of math lessons present specific challenges for English Language Learners. While understanding and using academic vocabulary and the language of mathematics is a goal, it can also be an obstacle; knowing a term or using it in a sentence does not necessarily signify understanding.¹

English Language Learners, and all *Investigations* students, encounter the mathematics and the language associated with it within a language-rich context. Opportunities to listen to and interact with ideas and materials within the context of a mathematical community are central to every *Investigations* lesson. In addition, the professional development resources that focus on the mathematical content and on supporting students as they engage with the mathematical content are an integral part of this work.

Embedded within the *Investigations* curriculum units, the following two instructional features can help you support and engage English Language Learners.

Previewing Unit Content for English Language Learners, found at the beginning of each curriculum unit, identifies specific information about aspects of the math work to consider. This preview²

- highlights content and activities that have high language demands.
- points out where tools can facilitate students' comprehension and support language production.
- suggests games and activities to preview or pre-teach, and suggests concepts and skills to review.
- specifies vocabulary, everyday and mathematical, to preview or review prior to the lessons.

For more information about *Previewing Unit Content for English Language Learners*, see page 22.

Differentiation: Supporting the Range of Learners, found in most sessions in the curriculum units, includes suggestions for English Language Learners that are specific to individual activities. These targeted recommendations are built around eight specific instructional strategies designed to support English Language Learners. While individual suggestions focus on specific activities, the eight instructional strategies are intended to be a set of professional development resources that can be generalized to other activities and instructional situations.

These eight instructional strategies are as follows:

1. Model Thinking Aloud

When English Language Learners use English to articulate their thinking, they get an opportunity to practice using the language while you get an opportunity to identify gaps in their knowledge and provide instructional support.

When you model your process and articulate your thinking for students, they learn how to use the language effectively. When modeling thinking aloud, it is important to use visuals and gestures to reinforce understanding.



DIFFERENTIATION Supporting the Range of Learners

ENGLISH LANGUAGE LEARNERS Model Thinking Aloud Play a couple of rounds with students. Model taking a turn. For example, use gestures to reinforce your words: **The game piece is on [28]. I want to capture the chip on [48]. I have [+ 20, - 5, - 10, + 15, + 5]. Which card or cards can I use? I can use the [+ 20] card because [28 + 20 = 48]. Are there other cards I could use?** As students take turns, have them reason aloud as they act out each step. If they need additional support, ask questions to guide them. For example: **What number is the game piece on? What chip do you want to capture? What cards do you have? Which card or cards can you use to get to [48]?**

[An example of an ELL Note for the instructional strategy *Model Thinking Aloud* for the game *Capture 5* in Grade 2]

¹ Bresser, Melanese, Sphar, "Supporting English Language Learners in Math Class," *Math Solutions*, 2009.

² Dr. James Cummins, Adapted from *The Pearson EFF Framework and "English Language Learners in the Math Classroom," Investigations in Number, Data, and Space, Differentiation and Intervention Guide*, 2011.