Instruction with CPM for English Learners

Reading & Writing

Require that students read problems, either individually, with their partner, or their team. Check for understanding after all substantial reading passages.

Give explicit vocabulary instruction. Post vocabulary publicly, refer to the posting frequently, make connections between words in the display visually and encourage students to use the words frequently.

Link vocabulary to cognates. This reduces the number of words to learn by drawing on prior knowledge. Make comparisons to clarify meaning. For example, compare kilograms with pounds, and compare meters with yards.

Provide instruction in English. Use their native language to clarify and enhance key concepts and skills. Ask students if they know the word(s) in their native language and have them write and discuss these words with the rest of the class as a way to establish the meaning of English word(s).

Assign the text-rich problems. These are better for English language learners than algorithmic problems. Help students to use contextual clues, pictures, diagrams, and graphics to unlock problems.

Help students learn to represent problems in a visual form to build concrete understanding.

Require English language learners to write about their math learning in their own language. This organizes and clarifies what they have learned. The Learning Log problems provide this opportunity regularly.

Groups

Start with study partners and move into study teams when students feel secure and comfortable with their learning environment.

Arrange some teams so that students who speak primarily their first language are working with students who have stronger bilingual skills as well as with students who speak only English.

Emphasize the importance of students to talk and collaborate on problems.

Use pair sharing for practice exercises, where partners alternate. One student does the first problem while talking aloud about what s/he is doing and the other follows along with what the first is writing, stopping him/her if there is an error. Then they switch roles for the next problem. They do not have to speak the same language because they are following the written problem.
Instruction with CPM for English Learners

Instruction
Focus on the core problems in a lesson.

Make the connections from what they are learning to their prior mathematical learning.

Be careful about giving answers too quickly. Instead, use effective questioning techniques to challenge students to answer their own questions.

Scaffold instruction as much as possible. Use prepared resource pages and create additional ones for scaffolding as appropriate.

Turn some lessons into silent lessons where a brief presentation for the whole class is done without speaking, using only pantomime, drawings, gestures and a few written directions and examples. This completely levels the playing field for a day and helps language learners become equal players in completing the lesson.

Homework
Provide after-school tutoring, a supportive place to work on homework, and a place where they can come with questions.

Direct students and parents to the homework help website www.cpm.org