

**Additional Examples of  
Possible Classroom Research Projects  
Preparing for Success in Algebra  
Los Angeles Unified School District  
Local District 6  
10/09**

**Teaching Mathematics to Newcomers**

Mr. Zelaya is concerned because four of his students have just arrived in his classroom from Mexico. He suspects that the students know a lot more about mathematics than the rest of his students, since they seem to be able to answer some of the problems involving difficult equations that he puts on the board. However, Mr. Zelaya is concerned about these students, because they seem bored and are not learning anything. He knows that with 43 students in the classroom and no instructional materials for students just beginning to learn English, he cannot include his beginning-level English learners effectively in instructional conversations about math concepts, group activities, or even assessments. He decides to talk to other mathematics teachers and ESL coaches and teachers who can offer him ideas and suggestions and to gather resources (in both Spanish and English) designed to teach newcomers to the United States the mathematics concepts he is teaching this year.

**The Language of Mathematics**

Ms. Jenkins knows that many of her high intermediate-level English learners are still experiencing difficulty understanding the English in mathematics problems. Even though she knows a lot about language and about the type of difficulties her students are likely to encounter in the problems, it always surprises her that many of the language issues that people have told her would cause difficulty for students are not the issues that actually cause her students difficulty. She decides she will ask several students to read some of the math problems to her and talk about the problems as they are reading them, explaining to her the language in the problems as they go. She decides to keep an ongoing record (diary) of all the mathematics problems the students discuss and the language issues that specific students (with a high intermediate-level of English proficiency) report cause them difficulty....

**Addressing Gaps in Mathematical Knowledge**

Ms. Adelia Torkelson is concerned because some of her English learners seem to catch on very fast to some concepts in chapter 5 of the textbook, but they seem to be taking way too long to understand others. She is pretty sure that the students might be missing some fundamental concepts needed to understand the essential standard she is supposed to teach next week, but she can't think of what those fundamental concepts might be. She decides to interview a group of students to ask questions related to the essential standard and then to follow up with some informal assessments of the students' knowledge. Then, she wants to investigate the instructional guidelines, the instructional materials, and other resources to find ways of effectively addressing students' gaps in mathematics knowledge.