



ESL STRATEGIES FOR TEACHING MATHEMATICS

- Allow students to verbalize/restate the steps to solve a given mathematical problem after you have demonstrated the problem-solving strategy or operation.
- Allow additional time for students to respond to an oral question or to turn in assignments.
- Teach from the concrete to the pictorial to the abstract.
- Give students fewer problems to solve during any given assignment.
- Use manipulatives in the classroom on a daily basis; for example: when first introducing a new concept or operation.
- As part of your daily instruction, use graphic organizers to introduce, reflect and reinforce mathematical concepts and vocabulary. Examples include concept circles, verbal and visual word association, Frayer Model, word mapping, etc.
- Maintain a mathematical word wall.
- Be cognizant that students have different learning styles, abilities and varying intelligence.
- Speak at a slower pace; students may be at different language levels.
- When using jargon and idioms, explain these to second-language students. Otherwise, they may take the messages literally and the messages may not make sense.
- Have students write in their math journals to reflect upon what they've learned recently or upon concepts that need to be clarified.
- Use calculators, computers and the Internet to supplement learning.
- Maintain a reference library of books and resources in the students' native language to aid in the translation of mathematical concepts, terms, etc.
- Be aware that other countries and cultures have different methods of solving mathematical problems.
- Identify the mathematics terminology that has a special meaning beyond everyday English. Examples include such words as "difference."

Resources:

The CALLA Handbook, Implementing the Cognitive Academic Language Learning Approach, by Anna Uhl Chamot and J. Michael O'Malley
A Mathematical Problem: How Do We Teach Mathematics to LEP Elementary Students? The Journal of Educational Issues of Language Minority Students, v13; p1-12, Spring 1994
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