

MATH SUPPORTS FOR ELS

Analyzing Math Skills for Language

Math does tend to have a language of its own as students learn to write and analyze equations, and teaching math typically uses a lot of modeling – a great strategy for EL students. However, the need to speak about math in English presents opportunities for Academic English practice for EL students. For instance, ELs often have difficulty understanding the syntax and following the story in **word problems**, in addition to understanding connections between words and operations. **Conceptual Skills** also are more difficult for EL students, particularly in probability and geometry, as well as skills that require students to prove math concepts typically are more difficult for EL students. EL students also need more support with math **vocabulary**, and newcomers may need support learning words for numbers, shapes, and materials. For a better understanding, [read this Guide to ELLs and Mathematics from Steinhardt.](#)

Translated Resources for Newcomers and SLIFE Students

[Bilingual Glossaries](#) (bit.ly/biligloss) – allowable on state tests and can help make vocabulary connections

The following websites provide math instruction in multiple languages:

- [Microsoft Math](#)
- [Khan Academy](#)
- [EngageNY](#)
- [Edraak](#) (Arabic only)

Modifications & Scaffolds

Newcomers

A balance of translated material and simplified English materials to learn new concepts, use of visuals, modeling, & review
Intermediate

Often need support for academic vocabulary and modeling for new concepts.

Long Term English Learners (LTELs)

Typically need support with reading.

Providing visuals to support text, modeling, and reading text aloud often help.

Assessment and Feedback

“Show What You Know” – The goal of accommodations on assessments for ELs is to lower the demands of producing or understanding English and identify gaps in content knowledge. Thus, the same modifications used to teach ELs are often useful in assessing.

Accommodations such as providing an alternate task for EL students, modeling completion of the task before asking the student to complete it, providing visuals to scaffold language, and more can be used on classroom tests.

Differentiated Feedback – just as different students have different needs for instruction and assessment, the way you give feedback might differ. For LTELs, verbal feedback may be best. Newcomers may prefer written feedback so they can translate it. Intermediate ELs may need you to model the correct way to see where they made a mistake.