

Strategies for Integrating Language and Literacy in Mathematics Instruction

<p style="text-align: center;">Promote Academic Discourse</p> <ul style="list-style-type: none">• Model mathematics discourse patterns such as recounting, explaining, justifying and making conjectures.• Ask students to communicate their ideas and thinking about mathematics concepts and reasoning• Provide students with feedback on their use of academic language• Revoice or restate student contributions using mathematics discourse patterns• Ask students questions that are intended to stimulate mathematical thinking and reasoning• Encourage students to respond directly to each other's contributions and ideas• Ask students to restate, affirm and/or critique others' ideas.	<p style="text-align: center;">Support Literacy Development</p> <ul style="list-style-type: none">• Assign tasks that involve literacy skills (e.g., reading, writing, measuring, using instruments and tools, recording observations, making tables and charts, interpreting or drawing diagrams)• Explain expectations of literacy tasks and provide clear instruction about how to successfully accomplish the tasks• Provide students with feedback on their use of mathematics literacy practices• Provide vocabulary instruction on key terms and concepts• Use key mathematics terms throughout the lesson• Give students opportunities to use key words in writing or talk
<p style="text-align: center;">Scaffold Language and Content</p> <ul style="list-style-type: none">• Modify talk (e.g., repetition, wait time, proper enunciation, rate of speech, rephrasing, L1 use) that facilitates student understanding of instruction and content• Pay explicit attention to language issues that might be confusing or difficult (e.g., multiple-meaning words, figurative language, idioms, and grammatical structures)• Provide supports such as sentence frames, word walls, glossaries, graphic organizers, outlines, and reading guides• Utilize visual representations, physical manipulatives, models and realia• Use gestures, multimedia resources, demonstrations and kinesthetic movements	<p style="text-align: center;">Contextualize Learning</p> <ul style="list-style-type: none">• Anticipate and elicit students' experiences from home, community or other out-of-school related to the mathematics topic being studied• Make public students' prior knowledge and thinking about the mathematics topic• Connect mathematics topics to local physical, geographic, or ecological environment or conditions• Link mathematics topics to issues and challenges faced locally, statewide or nationally and/or ones that students have personal experience with• Engage students in problem and project-based learning tasks and assignments