

## **Strategies for Integrating Language and Literacy in Mathematics Instruction**

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