English Language and Literacy Integration in Subject Areas (ELLISA) Project

Strategies for Integrating Language and Literacy in Science Instruction

Promote Academic Discourse

- Model science discourse patterns such as recounting, hypothesizing, and explaining
- Ask students to communicate their ideas and thinking about science concepts, especially claims, evidence and reasoning
- Provide students with feedback on their use of academic language
- Revoice or restate student contributions using science discourse patterns
- Ask students questions that are intended to stimulate scientific thinking and reasoning
- Encourage students to respond directly to each other's statements and claims
- Ask students to restate, affirm and/or critique others' assertions, claims, evidence and/or reasoning.

Support Science Literacy Development

- 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 science literacy practices
- Provide vocabulary instruction on key terms and concepts
- Use key science terms throughout the lesson
- Give students opportunities to use key words in writing or talk

Scaffold Language and Content

- Modify talk (e.g., repetition, wait time, proper enunciation, rate of speech, rephrasing, L1 use) that facilitates student understanding of instruction
- 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

Contextualize Learning

- Anticipate and elicit students' experiences from home, community or other out-of-school related to the science topic being studied
- Make public students' prior knowledge and thinking about the science topic
- Connect science topics to local physical, geographic, or ecological environment or conditions
- Link science 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