

## Project 2061

### Resources for Science and Mathematics Literacy: Assessment

#### SUMMARY

**Need.** Assessment influences every level of the education system and is one of the most crucial catalysts for change in science and mathematics curriculum and instruction. At the same time, national and state standards and benchmarks for student learning are driving reform efforts in schools and school districts nationwide. Many states have developed their own high-stakes mathematics and science assessments, but teachers, administrators, and others who choose, assemble, or develop assessments have little to guide them in judging how well tests are aligned with national or state standards. Educators need a clear set of criteria for alignment and a reliable tool for making judgments about the content and quality of assessments to help them make informed decisions about standards-based assessments.

**Objectives.** Project 2061 proposes to support science and mathematics educators in aligning assessments with standards and benchmarks. The objectives for the work are:

1. Produce criteria and an analysis procedure for judging alignment of assessment tasks to specific learning goals.
2. Produce case studies of using the criteria to revise existing tasks and create new ones.
3. Make these tools available to educators in a useful and appealing form.

**Methods.** Over the course of the proposed three years of work, Project 2061 will refine a procedure that can be used to analyze and describe the alignment of assessment tasks and standardized tests with mathematics and science benchmarks and standards. On the basis of this work, Project 2061 will collaborate with ten 2-person teams of educators to develop guidelines for modifying promising assessment tasks that already exist – and creating new ones – to improve their alignment with specific literacy goals in science and mathematics. Case-study reports will be written on the construction and success of about 40 exemplary revised tasks and about ten *de novo* tasks, including the stages by which they were developed and the issues and difficulties that arose in the work. These tasks themselves will begin a collection of well-described assessment tasks that will support science and mathematics educators in selecting, improving, creating, and using standards-based assessments.

**Products.** The chief product will be a book, *Resources for Science and Mathematics Literacy: Assessment*, that will include the alignment-analysis procedure, case studies and guidelines for task improvement, a collection of analyzed and exemplary tasks, case-study discussion of the stages, issues, and difficulties that arose in the work. The book contents will also be made available as a Web-connected CD-ROM.

**Evaluation.** The success of product development will be gauged by users' judgment of their quality and usefulness, then by the extent of their actual use in aligning assessment to goals.

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