

ZMATH 2010c.00203

Yore, Larry D.; Pimm, David; Tuan, Hsiao-Lin

The literacy component of mathematical and scientific literacy.

Int. J. Sci. Math. Educ. 5, No. 4, 559-589 (2007).

Summary: This opening article of the Special Issue makes an argument for parallel definitions of scientific literacy and mathematical literacy that have shared features: importance of general cognitive and metacognitive abilities and reasoning/thinking and discipline-specific language, habits-of-mind/emotional dispositions, and information communication technology strategies to prepare people for adult life and democratic citizenship. These frameworks provide potential insights into research and pedagogy. Furthermore, they provide guidelines for second-generation standards, curriculum development and assessment so as not to overlook or underemphasize the fundamental literacy component of mathematical and scientific literacy for all students, which can result in fuller participation in the public debate about science, mathematics, technology, society, and environment issues.

Classification: D30

Keywords: educational reform; mathematical literacy; scientific literacy

doi:10.1007/s10763-007-9089-4