

Endnotes

The following is a partial list of works that were consulted in the preparation of the mathematics, science, and contextual frameworks. Although not cited, additional curriculum materials provided by a number of TIMSS 1999 countries were also consulted.

Mathematics

- Beaton, A., Mullis, I.V.S., Martin, M.O., Gonzalez, E.J., Kelly, D.L., and Smith, T.A. (1996), *Mathematics Achievement in the Middle School Years: IEA's Third International Mathematics and Science Study*, Chestnut Hill, MA: Boston College.
- Confrey, J. (1990), "A Review of the Research on Student Conceptions in Mathematics, Science, and Programming," in C.B. Cazden (ed.), *Review of Research in Education 16*, Washington DC: American Educational Research Association.
- Hiebert, J. and Carpenter, T.P. (1992), "Learning and Teaching with Understanding," in D.A. Grouws (ed.), *Handbook of Research on Mathematics Teaching and Learning*, New York, NY: MacMillan Publishing Company.
- Howard, P.J. (2000), *The Owner's Manual for the Brain: Everyday Applications of Mind-Brain Research* (2nd edition), Austin, TX: Bard Press.
- Kulm, G. (ed.) (1990), *Assessing Higher Order Thinking in Mathematics*, Washington, DC: American Association for the Advancement of Science.
- Ministry of Education (1992), *Mathematics in the New Zealand Curriculum*, Wellington, New Zealand: Learning Media.
- Mullis, I.V.S., Martin, M.O., Gonzalez, E.J., Gregory, K.D., Garden, R.A., O'Connor, K.M., Chrostowski, S.J., and Smith, T.A. (2000), *TIMSS 1999 International Mathematics Report: Findings from IEA's Repeat of the Third International Mathematics and Science Study at the Eighth Grade*, Chestnut Hill, MA: Boston College.
- Mullis, I.V.S., Martin, M.O., Gonzalez, E.J., O'Connor, K.M., Chrostowski, S.J., Gregory, K.D., Garden, R.A., and Smith, T.A. (2001), *Mathematics Benchmarking Report, TIMSS 1999 – Eighth Grade: Achievement for U.S. States and Districts in an International Context*, Chestnut Hill, MA: Boston College.
- NAEP Mathematics Assessment Project (1996), *Mathematics Framework for the 1996 National Assessment of Educational Progress*, Washington DC: U.S. Government Printing Office.
- National Council of Teachers of Mathematics (2000), *Principles and Standards for School Mathematics*, Reston, VA: NCTM.
- Nickersen, R.S. (1988), "On Improving Thinking through Instruction," in E.Z. Rothkopf (ed.), *Review of Research in Education 15*, Washington, DC: American Educational Research Association.

OECD Programme for International Student Assessment (1999), *Measuring Student Knowledge and Skills: A New Framework for Assessment*, Paris, France: Organisation for Economic Co-operation and Development.

Putnam, R.T., Lampert, M., and Peterson, P.L. (1990), "Alternative Perspectives on Knowing Mathematics in Elementary Schools," in C.B. Cazden (ed.), *Review of Research in Education 16*, Washington, DC: American Educational Research Association.

Robitaille, D.F., McKnight, C.C., Schmidt, W.H., Britton, E., Raizen, S., and Nicol, C. (1993), *TIMSS Monograph No 1: Curriculum Frameworks for Mathematics and Science*, Vancouver, BC: Pacific Educational Press.

Science

American Association for the Advancement of Science (1993), *Benchmarks for Science Literacy*, Oxford, England: Oxford University Press.

Beaton, A., Martin, M.O., Mullis, I.V.S., Gonzalez, E.J., Smith, T.A., and Kelly, D.L. (1996), *Science Achievement in the Middle School Years: IEA's Third International Mathematics and Science Study*, Chestnut Hill, MA: Boston College.

Champagne, A.B., Kouba, V.L., and Hurley, M. (2000), "Assessing Inquiry," in J. Minstrell and E.H. Van Zee (eds.), *Inquiring into Inquiry Learning and Teaching in Science* (pp. 447-470), Washington, DC: American Association for the Advancement of Science.

International Association for the Evaluation of Educational Achievement (1992), *The IEA Study of Science III, Changes in Science Education and Achievement: 1970 to 1984*, J.P. Keeves (ed.), Oxford, England: Pergamon Press.

Martin M.O., Mullis, I.V.S., Gonzalez, E.J., Gregory, K.D., Smith, T.A., Chrostowski, S.J., Garden, R.A., and O'Connor, K.M. (2000), *TIMSS 1999 International Science Report: Findings from IEA's Repeat of the Third International Mathematics and Science Study at the Eighth Grade*, Chestnut Hill, MA: Boston College.

Martin, M.O., Mullis, I.V.S., Gonzalez, E.J., O'Connor, K.M., Chrostowski, S.J. Gregory, K.D., Smith, T.A., and Garden, R.A. (2001), *Science Benchmarking Report, TIMSS 1999 – Eighth Grade: Achievement for U.S. States and Districts in an International Context*, Chestnut Hill, MA: Boston College.

- NAEP Science Consensus Project (1996), *Science Framework for the 1996 National Assessment of Educational Progress*, Washington, DC: National Assessment Governing Board, U.S. Department of Education.
- NAEP Science Consensus Project (1994), *Science Assessment and Exercise Specifications for the 1994 National Assessment of Educational Progress*, Washington, DC: National Assessment Governing Board, U.S. Department of Education.
- National Center on Education and the Economy (1995), *New Standards: Performance Standards in English Language Arts, Mathematics, Science, Applied Learning, Volume 2, Middle School*, Pittsburgh, PA: University of Pittsburgh.
- National Research Council (1995), *National Science Education Standards*, Washington, DC: National Academy Press.
- National Research Council (2000), *Inquiry and the National Science Education Standards: A Guide for Teaching and Learning*, Washington, DC: National Academy Press.
- National Science Foundation (1995), *Innovating and Evaluating Science Education: NSF Evaluation Forums 1992-94*, Arlington, VA: National Science Foundation.
- National Science Teachers Association (1997), *Pathways to the Science Standards: Guidelines for Moving the Vision into Practice* (elementary school edition), Arlington, VA: NSTA Press.
- National Science Teachers Association (1998), *Pathways to the Science Standards: Guidelines for Moving the Vision into Practice* (middle school edition), Arlington, VA: NSTA Press.
- Orpwood, G. and Garden, R.A. (1999), *TIMSS Monograph No 4: Assessing Mathematics and Science Literacy*, Vancouver, BC: Pacific Educational Press.
- Robitaille, D.F., McKnight, C.C., Schmidt, W.H., Britton, E., Raizen, S., and Nicol, C. (1993), *TIMSS Monograph No 1: Curriculum Frameworks for Mathematics and Science*, Vancouver, BC: Pacific Educational Press.
- Schmidt, W.H., Raizen, S.A., Britton, E.D., Bianchi, L.J., and Wolfe, R.G. (1997), *Many Visions, Many Aims, Volume 2: A Cross-National Investigation of Curricular Intentions in School Science*, Dordrecht, The Netherlands: Kluwer Academic Publishers.

Contextual

- Fraser, B.J. and Walberg, H.J. (1991), *Educational Environments: Evaluation, Antecedents and Consequences*, New York, NY: Pergamon Press.
- Grasha, A. (1996), *Teaching with Style*, Pittsburgh, PA: Alliance Publishers.
- Little, J.W. (1993), "Teachers' Professional Development in a Climate of Educational Reform," *Educational Evaluation and Policy Analysis*, 15(2), 129-51, Washington, DC: American Educational Research Association.
- Lorsbac, A.W. and Jinks, J.L. (1999), "Self-Efficacy Theory and Learning Environment Research," *Learning Environments Research*, 2, 157-167 Boston, MA: Kluwer Academic Publishers.
- Martin, M.O., Mullis, I.V.S., Gonzalez, E.J., Gregory, K.D., Smith, T.A., Chrostowski, S.J., Garden, R.A., and O'Connor, K.M. (2000), *TIMSS 1999 International Science Report: Findings from IEA's Repeat of the Third International Mathematics and Science Study at the Eighth Grade*, Chestnut Hill, MA: Boston College.
- Martin, M.O., Mullis, I.V.S., Gregory, K.D., Hoyle, C., and Shen, C. (2000), *Effective Schools in Science and Mathematics*, Chestnut Hill, MA: Boston College.
- Mayer, D.P., Mullens, J.E., and Moore, M.T. (2000), *Monitoring School Quality: An Indicators Report*, NCES 2001-030, Washington, DC: National Center for Education Statistics.
- Moskowitz, J. and Stephens, M. (eds.) (1997), *From Students of Teaching to Teachers of Students: Teacher Induction Around the Pacific Rim*, Washington, DC: U.S. Department of Education.
- Mullis, I.V.S., Martin M.O., Gonzalez, E.J., Gregory, K.D., Garden, R.A., O'Connor, K.M., Chrostowski, S.J., and Smith, T.A. (2000), *TIMSS 1999 International Mathematics Report: Findings from IEA's Repeat of the Third International Mathematics and Science Study at the Eighth Grade*, Chestnut Hill, MA: Boston College.