Developing the Archdiocese Science Curriculum

A number of resources were used in developing the Archdiocese Science Curriculum. The goal in this process was to develop a science curriculum comparable with the best in the nation.

First, a selection of about 18 Archdiocese teachers from preschool through high school was convened to serve as teacher design teams. These teams began the work of identifying and organizing key concepts, learning standards, sample assessments, and connections for the Science Curriculum. Another group of about 16 teachers reviewed parts of this work (responders).

Second, the format from the Illinois Learning Standards for Science (ILS) was used to organize science benchmarks by ILS science goal and grade band. This makes-up the Science Standards Framework. Additional resources for the Science Standards Framework included the *National Science Educational Standards* (NAS, 1996), the *Benchmarks for Science Literacy* (AAAS, 1993; 2001), and a review of the ILS by the Fordham Foundation (Lerner, 1998).

Third, a selection of teachers, science educators, and scientists reviewed the Science Standards Framework either by sections of specialty, or in its entirety. This included 10 members of the BSCS staff. Two independent, external reviews were solicited to examine and corroborate the work of BSCS staff and Archdiocese teacher design committees.

Fourth, benchmarks from the Science Standards Framework were distributed by grade-level or by discipline (middle and high school) to develop the Grade-Level Alignment. This document aligns learning standards (outcomes) with sample assessments and connections to other subject areas. About 16 teachers from the Archdiocese contributed connections to learning standards in the Grade-Level Alignment.

References

- American Association for the Advancement of Science, 1993. Benchmarks for Science Literacy. Oxford University ress, New York, New York. 421 pps.
- American Association for the Advancement of Science, 2001. *Atlas of Science Literacy*. published by the American Association for the Advancement of Science and National Science Teachers Association, 165 pps.
- Bybee, R.W., Buchwald, C.E., Crissman, S., Heil, D.R., Kuerbis, P.J., Matsumoto, C., and McInerney, J.D., 1989. Science and Technology Education for the Elementary Years: Frameworks for Curriculum and Instruction. *The National Center for Improving Science Education*, 121 pps.
- Illinois Learning Standards for Science (ILS), 1997. Illinois State Board of Education.
- Lerner, L.S., 1998. State Science Standards An Appraisal of Science Standards from 36 States. The Fordham Report, V2, #4, 49 pps.
- Message to the Pontifical Academy of Sciences. L'Osservatore Romano, October, 1996.
- National Academy of Sciences, 1996. National Science Education Standards, National Academy of Sciences Press, Washington, D.C., 262 pps.
- National Science Board. 2004. *Science and Engineering Indicators* 2004. Two volumes. Arlington, VA: National Science Foundation (volume 1, NSB 04-1; volume 2, NSB 04-1A).
- Schmidt, W. H., McKnight, C., Houang, R., Wang, H., Wiley, D., Cogan, L., and Wolfe, R., 2001. Why schools matter: A cross-national comparison of curriculum and learning. San Francisco, CA: Jossey-Bass.
- Wiggins, G. and McTighe, 1998. *Understanding by Design*. Association for Supervision and Curriculum Development, Arlington, Virginia, 207 pps.