

## References

- Adams, B., Applegate, B., Cobern, W. W., Schuster, D., & Skjold, B. (2010). Experimental comparison of inquiry and direct instruction in science. *Research in Science & Technological Education*, 28(1), 81–96.
- Anderson, R. D. (2002). Reforming science teaching: What research says about inquiry. *Journal of Science Teacher Education*, 13(1), 1–12. Retrieved from [www.uhu.es/gaia-inm/invest\\_escolar/httpdocs/biblioteca\\_pdf/2\\_Anderson,R%5B1%5D.D.\(2002\)Inquiry.pdf](http://www.uhu.es/gaia-inm/invest_escolar/httpdocs/biblioteca_pdf/2_Anderson,R%5B1%5D.D.(2002)Inquiry.pdf)
- Annenberg Foundation. (2011). *Learning science through inquiry*. Retrieved from [www.learner.org/workshops/inquiry](http://www.learner.org/workshops/inquiry)
- Baker, W., Barstack, R., Clark, D., Hull, E., Goodman, B., Kook, J.,...Lang, M. (2008). Writing-to-learn in the inquiry science classroom: Effective strategies from middle school science and writing teachers. *The Clearing House*, 81(3), 105–108.
- Bass, J. E., Contant, T. L., & Carin, A. A. (2009). *Teaching science as inquiry* (11th ed.). Boston, MA: Pearson-Allyn & Bacon.
- Bell, R. L., Smetana, L., & Binns, I. (2005, October). Simplifying inquiry instruction. *The Science Teacher*, 30–33. Retrieved from [http://tccl.rit.albany.edu/knilt/images/archive/6/6f/20090424031839!Simplifying\\_inquiry\\_instruction.pdf](http://tccl.rit.albany.edu/knilt/images/archive/6/6f/20090424031839!Simplifying_inquiry_instruction.pdf)
- Bergman, D. J., & Olson, J. (2011). Got inquiry? A popular milk activity becomes an example of how teachers can transform traditional cookbook lessons into inquiry-based investigations. *Science and Children*, 48(7), 44.
- Beyer, B. K. (1987). *Practical strategies for the teaching of thinking*. Boston: Allyn & Bacon.
- Black, P., Harrison, C., Lee, C., Marshall, B., & Wiliam, D. (2003). *Assessment for learning: Putting it into practice*. Berkshire, England: Open University Press.
- Blumenfeld, P., Soloway, E., Marx, R., Krajcik, J., Guzdial, M., & Palincsar, A. (1991). Motivating project-based learning: Sustaining the doing, supporting the learning. *Educational Psychologist*, 26(3 & 4), 369–398.
- California State Board of Education. (2000). *Science content standards for California Public Schools*. Retrieved from [www.cde.ca.gov/be/st/ss/documents/sciencetnd.pdf](http://www.cde.ca.gov/be/st/ss/documents/sciencetnd.pdf)
- Campbell, B., & Fulton, L. (2003). *Science notebooks: Writing about inquiry*. Portsmouth, NH: Heinemann.
- Center for Implementing Technology in Education. (2009). *Online and on time: Supporting technology implementation for all students*. Retrieved from [www.cited.org](http://www.cited.org)

- Chang, C., & Mao, S. (1999). Comparison of Taiwan science students' outcomes with inquiry-group versus traditional instruction. *The Journal of Educational Research*, pp. 92, 340–346.
- Corder, G., & Skyhuls, J. (2011). Shifting to an inquiry-based experience: Start small and experiment using this prescriptive method. *Science and Children*, 48(9), 60.
- Costa, A., & Kallick, B. (n.d.) Describing 16 Habits of Mind. Adapted from Costa, A., and Kallick, B. (2000). *Habits of Mind: A Developmental Series*. Alexandria, VA: Association for Supervision and Curriculum Development. Retrieved from: [www.instituteforhabitsofmind.com/resources/pdf/16HOM.pdf](http://www.instituteforhabitsofmind.com/resources/pdf/16HOM.pdf)
- Edwards, C. H. (1997, October). Promoting student inquiry. *The Science Teacher*, pp. 18, 20–21. Retrieved from [www.exploratorium.edu/IFI/resources/workshops/promoting.html](http://www.exploratorium.edu/IFI/resources/workshops/promoting.html)
- Exploratorium Institute for Inquiry. (1996). *A description of inquiry*. Retrieved from [www.exploratorium.edu/IFI/resources/inquirydesc.html#inquiry](http://www.exploratorium.edu/IFI/resources/inquirydesc.html#inquiry)
- Gallagher, J. J. (2007). *Teaching science for understanding: A practical guide for middle and high school teachers*. Upper Saddle River, NJ: Prentice-Hall.
- Gess-Newsome, J. (2002). The use and impact of explicit instruction about the nature of science and science inquiry in an elementary science methods course. *Science & Education*, 11, 55–67. Retrieved from [www.umd.umich.edu/casl/natsci/faculty/zitzewitz/curie/TeacherPrep/202.pdf](http://www.umd.umich.edu/casl/natsci/faculty/zitzewitz/curie/TeacherPrep/202.pdf)
- Gopen, G., & Swan, J. (1990, November-December). The science of scientific writing. *American Scientist*. Retrieved from [www.americanscientist.org/issues/pub/the-science-of-scientific-writing](http://www.americanscientist.org/issues/pub/the-science-of-scientific-writing)
- Graves, C. J. (2009, November). Elk habitat: A case study of scientific inquiry. *The Science Teacher*, 76, 25–29.
- Hackling, M., Smith, P., & Murcia, K. (2010). Talking science: Developing a discourse of inquiry. *Teaching Science*, 56(1), 17–21.
- Henderson, L., Klemes, J., & Eshet, Y. (2000). Just playing a game? Educational simulation software and cognitive outcomes. *Journal of Educational Computing Research*, 22(1), 105–129.
- Hume, A., & Coll, R. (2010). Authentic student inquiry: The mismatch between the intended curriculum and the student-experienced curriculum. *Research in Science & Technological Education*, 28(1), 43–62.
- Information Literacy Portal. (2012). *Information literacy*. Moscow, ID: University of Idaho. Retrieved from [www.webs.uidaho.edu/info\\_literacy](http://www.webs.uidaho.edu/info_literacy)
- Institute for the Advancement of Research in Education at AEL. (2003). *Graphic organizers: A review of scientifically based research*. Portland, OR: Inspiration Software. Retrieved from [http://cf.inspiration.com/download/pdf/SBR\\_summary.pdf](http://cf.inspiration.com/download/pdf/SBR_summary.pdf)

- Intel. (2011). *Intel ISEF middle school science fair: A guide for teachers*. Retrieved from [www.intel.com/about/corporateresponsibility/education/isef/middleschool](http://www.intel.com/about/corporateresponsibility/education/isef/middleschool)
- Langdon, D., McKittrick, G., Bede D., Khan, B., & Doms, M. (2011). *STEM: Good jobs now and for the future* (ESA Issue Brief No. 03-11). Retrieved from U.S. Department of Commerce, Economics and Statistics Administration Web site: [www.esa.doc.gov/sites/default/files/reports/documents/stemfinaljuly14\\_1.pdf](http://www.esa.doc.gov/sites/default/files/reports/documents/stemfinaljuly14_1.pdf)
- Liu, L., Lee, H., & Linn, M. C. (2010). Multifaceted assessment of inquiry-based science learning. *Educational Assessment*, 15, 69–86.
- Llewellyn, D., & Rajesh, H. (2011). Fostering argumentation skills: Doing what real scientists really do. *Science Scope*, 35(1), 22.
- Lord, T., & Orkwiszewski, T. (2006). Moving from didactic to inquiry-based instruction in a science laboratory. *The American Biology Teacher*, 68, 342–345.
- Lovett, R. R. (2010, December). NASA life discovery: New bacteria makes DNA with arsenic. *National Geographic*. Retrieved from: <http://news.nationalgeographic.com/news/2010/12/101202-nasa-announcement-arsenic-life-mono-lake-science-space>
- Martin, R., Sexton, C., Franklin, T., Gerlovich, J., & McElroy, D. (2009). *Teaching science for all children: An inquiry approach* (5th ed.). Boston, MA: Allyn & Bacon.
- Marzano, R. J. (1998). *A theory-based meta-analysis of research on instruction*. Aurora, CO: McREL. Retrieved from [www.mcrel.org/PDF/Instruction/5982RR\\_InstructionMeta\\_Analysis.pdf](http://www.mcrel.org/PDF/Instruction/5982RR_InstructionMeta_Analysis.pdf)
- Marzano, R. J. (2000). *Designing a new taxonomy of educational objectives*. Thousand Oaks, CA: Corwin Press.
- Melin, J., & Schiller, E. (2011). Whoooo knew? Assessment strategies for inquiry science. *Science and Children*, 48(9), 31.
- Mid-continent Research for Education and Learning. (2012). *Whelmer #6: Falling test tubes?* Retrieved from [www.mcrel.org/whelmers/whelm06.asp](http://www.mcrel.org/whelmers/whelm06.asp)
- Moyer, R. H., Hackett, J. K., & Everett, S. A. (2006). *Teaching science as investigations: Modeling inquiry through learning cycle lessons*. Upper Saddle River, NJ: Prentice-Hall.
- National Institutes of Health. (2005). *Doing science: The process of scientific inquiry* (NIH Curriculum Supplement Series—Grades 6–8). Retrieved from [http://science.education.nih.gov/supplements/nih6/inquiry/guide/guide\\_toc.htm](http://science.education.nih.gov/supplements/nih6/inquiry/guide/guide_toc.htm)
- National Research Council. (1996). *National science education standards*. Washington, DC: National Academy Press.

- National Research Council. (2000). *Inquiry and the national science education standards*. Washington, DC: National Academy Press.
- National Research Council. (2011). *A framework for K–12 science education practices, crosscutting concepts, and core ideas*. Washington, DC: National Academy Press.
- National Science Foundation. (2000). *Foundations, volume 2: Inquiry: Thoughts, views, and strategies for the K–5 classroom* (NSF Document No. 99148). Retrieved from [www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=nsf99148](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf99148)
- National Science Teachers Association. (2004). *NSTA position statement: Scientific inquiry*. Retrieved from [www.nsta.org/about/positions/inquiry.aspx](http://www.nsta.org/about/positions/inquiry.aspx)
- Northwest Regional Educational Laboratory (NWREL). (1997). *Inquiry strategies for science and mathematics learning*. Retrieved from [http://educationnorthwest.org/webfm\\_send/748](http://educationnorthwest.org/webfm_send/748)
- Novak, J. (1998). *Learning, creating, and using knowledge. Concept maps as facilitative tools in schools and in corporations*. London: Lawrence Erlbaum.
- Reforming Cookbook Labs. (2005, November-December). *Science Scope*, 16–20. Retrieved from [www.mun.ca/educ/undergrad/scied/files/reforming\\_cookbook\\_labs.pdf](http://www.mun.ca/educ/undergrad/scied/files/reforming_cookbook_labs.pdf)
- Ridley, D. S., Schutz, P. A., Glanz, R. S., & Weinstein, C. E. (1992). Self-regulated learning: The interactive influence of metacognitive awareness and goal-setting. *Journal of Experimental Education* 60(4), 293–306.
- Rutherford, J. F., & Ahlgren, A. (1991). *Science for all Americans*. New York, NY: Oxford University Press.
- Schwarz, C. V., & White, B. Y. (2005). Metamodeling knowledge: Developing students' understanding of scientific modeling. *Cognition and Instruction*, 23(2), 165–205.
- Swango, C. J., & Steward, S. B. (2002). *Help! I'm teaching middle school science*. Arlington, VA: National Science Teachers Association.
- Treiter, T., & Jones, M. J. (2003). Relationships between inquiry-based teaching and physical science standardized test scores. *School Science and Mathematics*, 103, 345–350.
- Trumbull, D., Scarano, G., & Bonney, R. (2006). Relations among two teachers' practices and beliefs, conceptualizations of the nature of science, and their implementation of student independent inquiry projects. *International Journal of Science Education*, 28, 1717.
- U.S. Environmental Protection Agency, Office of Water. (2004). *Tracking pollution: A hazardous whodunit I* (EPA Publication No. 816-F-04-022). Retrieved from [http://water.epa.gov/learn/kids/drinkingwater/upload/2005\\_03\\_10\\_kids\\_activity\\_grades\\_9-12\\_trackingpollution.pdf](http://water.epa.gov/learn/kids/drinkingwater/upload/2005_03_10_kids_activity_grades_9-12_trackingpollution.pdf)

- Virginia Mathematics and Science Coalition. (2010). *Scientific inquiry and the nature of science task force report*. Retrieved from [www.vamsc.org/whitepapers.html](http://www.vamsc.org/whitepapers.html)
- Von Secker, C. (2002). Effects of inquiry-based teacher practices on science excellence and equity. *Journal of Educational Research*, 95, 151–160.
- Watson, J. D., & Crick, F. H. C. (1953). Molecular structure of nucleic acids: A structure for deoxyribose nucleic acid. *Nature*, 171, 737–738.
- Yager, R. E. (1983). The importance of terminology in teaching K–12 science. *Journal of Research in Science Teaching*, 20(6), 577–588.
- Yager, R. E., & Akray, H. (2010). The advantages of an inquiry approach for science instruction in middle grades. *School Sciences Mathematics*, 110(1), 5–12.