

Eric J. Pyle

Associate Professor of Geology
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Education

- Ph.D.**, Science Education - University of Georgia, 1995; emphasis on adolescent motivation/cognition for science and program evaluation. Dissertation: *Motivation, Action, and Social Cognitive Development in Informal Science Venues: Convergence with the Classroom*.
- M.S.**, Geology - Emory University, 1986; emphasis on igneous & metamorphic petrology
- B.S. cum laude**, Earth Science - University of North Carolina-Charlotte, 1983

Professional Experience

- I. James Madison University (1/05-present). Associate Professor of Geology – Geoscience Education.** Responsible for instruction in introductory geology courses, general science content courses in the JMU General Education program, and upper division courses in Planetary Geology. Also responsible for geology curriculum revisions and interactions with local and state education policy makers regarding geoscience education issues at the middle and secondary levels; ongoing interactions with local and regional teachers in Earth science.
- II. West Virginia University (8/95-12/04). Associate Professor of Science Education; Adjunct Associate Professor of Geology & Geography.** Responsible for instruction of Secondary Science Methods (C & I 444 and 644) and other graduate courses in science education; supervising student teachers in middle and high school science classrooms; coordinating projects with NSF-funded initiatives within the department and state; currently developing projects with adolescent motivation in science, public television, and increasing inservice teachers' capacities within science instruction; serving on department and college committees for faculty governance and accreditation. Principal Investigator, Co-Principal Investigator, and Project Director for NSF and NASA-funded projects. Department Chair: Dr. Elizabeth Dooley.
- III. University of Georgia (8/92-8/95) Research Assistant:** Member of the internal evaluation team for the Georgia Initiative in Mathematics and Science (GIMS). Responsible for development, distribution, and analysis of baseline and evaluative questionnaires for the Georgia Statewide Systemic Initiative (SSI); served as evaluation representative to various statewide meetings addressing GIMS issues; served as evaluation contact for several GIMS center directors; responsible in part for three annual reports of GIMS to NSF. Supervised by Michael J. Padilla, Principal Investigator.
- IV. University of North Carolina - Charlotte (5/82-8/83; 7/89-8/92) Instructor:** Responsible for teaching Introductory Geology lecture and laboratory classes; also responsible for teaching Earth History lecture class; Summer Ventures in Mathematics and Science, a summer enrichment program for rising high school juniors and seniors; Summer Scholars/Saturday Academy, an enrichment program for underserved middle school students, primarily female and minority children. Supervised by Drs. Josephine Wallace, Gail Gibson, and Phillip Johnson.
- V. Monroe City Schools (11/86-6/92) High School Teacher/Department Head:** responsible for teaching Earth science, physics, chemistry, computer math, technical math, algebra, and physical science; served on local textbook adoption committee; acted as student council advisor and assistant wrestling coach. Supervised by Dr. D. John Morris and Mr. Lloyd Ratliff.

Recent Publications

- Pyle, E. J. (in press). A Model of Inquiry for Teaching Earth Science. Accepted for publication in the *Electronic Journal of Science Education*, April, 2008.
- Pyle, E. J. (2008). Inquiry in the Earth sciences. In J. Luft, R. Bell, and J. Gess-Newsome (Eds), *Science as Inquiry in the Secondary Setting*. Arlington, VA: National Science Teachers Association.
- Whitmeyer, S. J., Fichter, L. S., and Pyle, E. J. (2007). New directions in Wilson cycle concepts: Supercontinent and tectonic rock cycles. *Geosphere*, 3(6), 511-526.
- Pyle, E. J. (2006). Inquiry in K-12 Earth science: A model for instructional organization, planning & delivery. Geological Society of America *Abstracts with Programs*, 38(7), p365.
- Whitmeyer, S. J., Pyle, E. J., & Fichter, L. S. (2006). 3D and 4D animations in geoscience education: Moving towards an interactive environment. Geological Society of America *Abstracts with Programs*, 38(7), p325.
- Whitmeyer, S.J., Pyle, E. J., and Fichter, L. S (2006). No rock is accidental: An interactive interface to enhance student understanding of tectonic systems and characteristic rock types. Poster presented at the 2006 GSA Penrose Conference, *Unlocking 3D Earth Systems – Harnessing New Digital Technologies to Revolutionize Multi-Scale Geologic Models*, 17-21 September 2006, Durham, UK.
- Gilmer, P. J., Pyle, E. J., & Richmond, G. (2005). *External panel review of the draft NAEP 2009 science framework*. National Assessment Governing Board. Washington DC: US Department of Education.

- Pyle, E. J., Jarman, R., & McClune, B. (2005). The mediation of science learning through visualizations: A philosophical and psychological basis. Paper presented at the 2005 meeting of *National Association for Research in Science Teaching*, Dallas, TX.
- Jarman, R., McClune, B., & Pyle, E. J. (2005). Teaching about science-related images in the media: A professional development challenge. Paper presented at the 2005 meeting of *National Association for Research in Science Teaching*, Dallas, TX.
- Pyle, E. J. (2000, 2004) Case #2.2 - Night and day with Jason: Inclusion and science education. In T. R. Koballa, Jr., and D. Tippins (Eds.). *Casebook of Methods in Middle and Secondary Science Teaching.*, Merrill.
- Fetters, M., Pickard, D. M., & Pyle, E. (2003). Making science accessible: Strategies to meet the needs of a diverse student population. *Science Scope*, 26(3), 26-29.
- Ferber, M., Warner, T. A., Pyle, E. J., & Knight, T. (2003). Introducing middle school students to the spatial sciences through a community atlas project. *Geocharta International*, 18(1), 75-81.

Other Contributions

- Pyle, E. J., & Duggan-Haas, D. (2007). Professional Development for the Professional Developers: Aspects of Effective Teacher Professional Development Programs in the Earth Sciences. Technical session for 2007 Annual Meeting of the *Geological Society of America*, Denver, CO.
- Fichter, L.S. & Pyle, E.J. (2007). Wilson cycle and teachers guide. Instructional material marketed by *Science Kit and Boreal Laboratories*, Tonawanda, NY.
- Pyle, E.J. (2006). Candy igneous rocks simulation. Instructional material marketed by *Science Kit and Boreal Laboratories*, Tonawanda, NY.
- Pyle, E. J. (2005). Layered weather patterns investigations. Instructional material marketed by *Science Kit and Boreal Laboratories*, Tonawanda, NY.
- Project Leader, Teacher Content Development for *BAM.gov*, a web portal of the Centers for Disease Control & Prevention., 2001-2005.
- Misconceptions Consultant, Glencoe/McGraw-Hill *Earth Science*, 2001.
- Pyle, E. J. (2001). Review of *Molecules at an Exhibition: The Science of Everyday Life. Social Science & Medicine*, 2001.

Grants & Awards

- Virginia Earth Science Collaborative*, Co-Principal Investigator, and JMU Institutional Lead, a *No Child Left Behind*, Title II Part B – Math-Science Partnership grant. Further info can be found at <http://www.virginiaearthscience.info>. Subcontract Award: \$204,000 of \$928,000.
- TIGERS (Teams of Interdisciplinary Graduate fellows Engaged to Reinvigorate Students)*, a GK-12 Teaching Fellows project at WVU; Co-Principal Investigator and Project Director (\$1,460,000).
- Summer Integrative Mathematics & Science* (\$51,654) Improving Teacher Quality grants, WV Higher Education Policy Commission.
- Fulbright Senior Specialist – Croatia*. Council for International Exchange of Scholars (\$4,000, funded April 2002)
- WVU International Development Grant*. WVU International Programs (\$1,000, funded March 2002) (PI).
- Governor's School for Mathematics & Science* - (\$440,000) Greater Kanawha Valley Foundation, 2002-2004.
- WVU Foundation Outstanding Teacher Award*, WVU Foundation, 2002.
- Gustav Ohaus Innovations in Science Teaching, College*, National Science Teachers Association, Boston, MA, 1999.

Professional Activities

- President-Elect**, Virginia Association of Science Teachers, 2008-2009.
- Second Vice Chair**, Geoscience Education Division, Geological Society of America.
- Reviewer**, Virginia Standards of Learning Earth Science Test Annotation Guide, Virginia Department of Education
- Director**, West Virginia Governor's School for Mathematics & Science, 2002-2004.
- President**: West Virginia Science Teachers Association, 2003-2004.
- Associate Editor**: *Journal of Research in Science Teaching*; 2000-2005.
- JMU Institutional Review Board** – Representative, College of Science & Mathematics
- Professional Associations**: Sigma Xi, the Scientific Research Society
 National Association for Research in Science Teaching
 Virginia Association of Science Teaching
 National Association of Geosciences Teachers
 National Science Teachers Association
 Geological Society of America