

PURDUE UNIVERSITY  
DEPARTMENTAL VITA

Date Prepared:  
January 14, 2010

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I. EDUCATION

- Ph.D. The University of Iowa 1970  
(Science Education: Geology, Chemistry)  
M.A. The University of Iowa 1966  
(Science Education: Geology, Chemistry)  
B.A. The University of Iowa 1964  
(Chemistry - Secondary Education)

II. PROFESSIONAL POSITIONS - TEACHING

Professor of Earth and Atmospheric Science Education (75% Department of Curriculum and Instruction, 25% Department of Earth and Atmospheric Sciences), Purdue University, 1980-present

Associate Professor of Education and Geosciences, Purdue University, 1974-80

Assistant Professor of Education, Purdue University, 1970-74

Student Teacher University Supervisor, The University of Iowa, 1967-70

Chemistry and Advanced Science Teacher, University High School, Grades 7-12, Iowa City, Iowa, 1967-70

Middle School (6-8) Science Teacher and K-8 Science Coordinator, Bettendorf Community School District, Bettendorf, Iowa, 1964-67

III. PROFESSIONAL POSITIONS - ADMINISTRATION

Interim Director, Purdue University, School Mathematics and Science Center, 1996-1998

Associate Dean, Purdue University, School of Education, 1989-1994

Director of Field Experiences, Purdue University, School of Education, 1989-1993

Chair, Elementary Education Program Committee, Purdue University, Department of Curriculum and Instruction, 1989-1995

Director of Undergraduate Studies and Field Experiences, Purdue University, Department of Education, 1982-1989

Chair, Elementary Education Section, Purdue University, Department of Education, 1985-1989

Interim Chair, Educational Computing and Instructional Development Section, Purdue University, Department of Education, 1983-85

#### IV. LICENSES, REGISTRATIONS AND CERTIFICATIONS

State of Iowa, Department of Public Instruction, Permanent Professional Teaching Certification, All Sciences, Awarded, 1968

#### V. CITATIONS IN BIOGRAPHICAL WORKS

- A. Leaders in Education, Fifth Edition, Jacques Cattell Press, Tempe, Arizona, 1974
- B. Dictionary of International Biography, Thirteenth Edition, International Biographical Centre, Cambridge, England, 1976-77; Thirtieth Edition, 2002-03; Thirty First Edition, 2004-05; Thirty Second Edition, 2005-06; Thirty Third Edition, 2006-07; Thirty-Fourth Edition, 2007-08; Thirty-Fifth Edition, 2009-10 .
- C. American Men and Women of Science, Fifteenth Edition, Jacques Cattell Press, Tempe, Arizona, 1982
- D. Who's Who in American Education, Second Edition, The National Reference Institute, Owings Mills, MD, 1989-90, 2003-04; Seventh Edition, 2006-07; Eighth Edition, 2007-08.
- E. Who's Who in Science Education Around the World, First Edition, International Council of Associations for Science Educators, Monash, Australia, 1991.
- F. Who's Who in Science and Engineering, Second Edition, Marquis Who's Who, Wilmett, IL, 1994-95; Third Edition, 1996-97; Ninth Edition, 2006-07; Tenth Edition 2008-09.
- G. Who's Who in the Midwest, Twenty-fourth Edition, Marquis Who's Who, Wilmett, IL, 1994-95; Twenty-fifth Edition, 1996-97; Twenty-sixth Edition, 1998-99.
- H. The International Directory of Distinguished Leadership, Fourth Edition, American Biographical Institute, Inc. Raleigh, NC, 1994-95; Sixth Edition, 1996-97.
- I. Who's Who Among America's Teachers, Third Edition, Educational Communications, Inc. Lake Forest IL, 1994; Fourth Edition, 1996, Fifth Edition, 1998, Sixth Edition, 2000, Seventh Edition, 2002; Eighth Edition, 2004-05; Ninth Edition, 2005-06.
- J. Men of Achievement, Sixteenth Edition, International Biographical Centre, Cambridge England, 1994; Seventeenth Edition, 1996.
- K. Who's Who In The World, Twelfth Edition, Marquis Who's Who, New Providence NJ, 1994; Thirteenth Edition, 1995, Seventeenth Edition, 2000, Twenty-fourth Edition, 2007.

- L. Who's Who In America, Forty-ninth Edition, Marquis Who's Who, New Providence NJ, 1995; Fifty-ninth Edition, 2005, Sixty-first Edition, 2007.
- M. Who's Who in Science and Engineering, Third Edition, Marquis Who's Who, New Providence NJ, 1996; Fourth Edition, 1998-99; Eighth Edition, 2005-06.
- N. Five Hundred Leaders of Influence, Sixth Edition, American Biographical Institute, Raleigh NC, 1997.
- O. Who's Who, Strathmore Directories Ltd., Westbury NY, 1997-98, 1998-99, 2000-01, 2002-03.
- P. Outstanding Americans, McLean VA, 1998.
- Q. Outstanding People of the 20<sup>th</sup> Century, International Biographical Centre, Cambridge, England, 1999-2000; Second Edition, 2001-02.
- R. 2000 Outstanding Intellectuals of the 20<sup>th</sup> Century, International Biographical Centre, Cambridge, England, 2000.
- S. 2000 Outstanding Scholars of the 20<sup>th</sup> Century, International Biographical Centre, Cambridge, England, 2000.
- T. Who's Who in the 21<sup>st</sup> Century, International Biographical Centre, Cambridge, England, 2001-02.
- U. Outstanding People of the 21<sup>st</sup> Century, International Biographical Centre, Cambridge, England, First Edition, 2002-03.
- V. America's Registry of Outstanding Professionals, Hewlett, NY, 2001-02.
- W. 2000 Outstanding Academics of the 21<sup>st</sup> Century, International Biographical Centre, Cambridge, England, 2001-02, 2004.
- X. Contemporary Who's Who, American Biographical Institute, Raleigh NC, 2003-04.
- Y. International Directory of Experts and Expertise, American Biographical Institute, Raleigh NC, 2006.
- Z. Who's Who in Education, AcademicKeys, <http://education.academickeys.com>, 2005-06.
- AA. International Profiles of Accomplished Leaders, American Biographical Institute, Raleigh NC, 2008-09.

## VI. AWARDS AND HONORS

- A. The University of Iowa Finkbine Dinner for Outstanding Men, 1964
- B. Fellowship Grant, Iowa State Education Association, 1968-69
- C. Iowa Testing Program Special Research Award, University of Iowa, 1969-70
- D. Outstanding Science Educator, Association for the Education of Teachers in Science, 1973

- E. Elected Fellow, Iowa Academy of Science, 1975
- F. Visiting Scholar, University of Texas, Science Education Center and Department of Geological Sciences, Austin, Texas, June 1, 1976 to December 31, 1976
- G. Elected Fellow, American Association for the Advancement of Science, Washington, D.C., 1980
- H. Crustal Evolution Education Project Citation, National Association of Geology Teachers, 1980
- I. Excellence in Teaching Award, School of Humanities, Social Sciences, and Education, Purdue University, 1982
- J. International Travel Grant, Purdue Research Foundation, Bat Sheva Seminar on Preservice and Inservice Education of Science Teachers, 1983
- K. Certificate of Merit, Indiana Department of Education, Energy Education Cadre, 1985
- L. International Travel Grant, Purdue Research Foundation, International Symposium on World Trends in Science and Technology Education, Kiel, Germany, 1987
- M. Outstanding Teacher Educator Award, Indiana Association of Colleges for Teacher Education, 1987
- N. Outstanding Teacher Award, Kappa Delta Pi, Eta Chapter, Purdue University, 1973, 1980, 1987, 1988, 1998
- O. Departmental Award for Educational Excellence, School of Humanities, Social Science, and Education, 1988
- P. International Travel Grant, Purdue Research Foundation, International Symposium on World Trends in Science and Technology Education, Manila, Philippines, 1989 (program canceled due to civil unrest)
- Q. Distinguished Teacher Educator Award, National Association of Teacher Educators, 1990
- R. Outstanding Undergraduate Teaching Award, Purdue University, 1990
- S. Academic Leadership Fellow, Committee on Institutional Cooperation (CIC), 1991-92 (one of four selected to represent Purdue University)
- T. Honorary charter member, Alpha Upsilon Alpha, Alpha Kappa Chapter, Honor society of the International Reading Association, Purdue University, 1992
- U. Department of Earth and Atmospheric Sciences, Outstanding Teacher Recognition, Fall, 1992; Spring, 1993; Fall, 1993; Fall 2001.
- V. School of Education Outstanding Service Award, 1992-93.
- W. International Travel Grant, Purdue Research Foundation, International Conference on Science Education in Developing Countries: From Theory to Practice, Jerusalem, Israel, 1993.

- X. Distinguished Major Professor Award, National Association of Teacher Educators, Los Angeles, CA, 1993.
- Y. Point of Excellence Award, Kappa Delta Pi International, Eta Chapter, W. Lafayette, IN, 1993.
- Z. Council for Elementary Science International, Distinguished Service Recognition, 1993.
- AA. Alpha Upsilon Alpha, Reading Literacy Honorary, Purdue University, 1993-present.
- BB. Frederick L. Hovde Outstanding Faculty Fellow Award, Purdue University, 1994.
- CC. Residence Hall Council Faculty Fellow Award of Excellence, Purdue University, 1994.
- DD. Phi Kappa Phi Honor Society, Purdue University Chapter, 1994.
- EE. Kappa Delta Pi International Honor Society, Charter Member, North Central Indiana Chapter, Lafayette IN, 1994.
- FF. Impact on Learners Faculty Teaching Award, Department of Curriculum and Instruction, Purdue University, 1994.
- GG. Faculty Teaching Award, School of Education, Purdue University, 1995.
- HH. Purdue University Teaching Academy, Teaching Fellow, 1997-present.
- II. Hoosier Association of Science Teachers, Recognition Award for Service on the Board of Directors, 1998.
- JJ. Book of Great Teachers, Inaugural Group, Purdue University, 1999.
- KK. International Travel Grant, Purdue Research Foundation, International Conference on Geoscience Education, Sydney, Australia, 2000.
- LL. Achieving Chapter Excellence International Award, Kappa Delta Pi International Honor Society in Education, Orlando, FL, 2001.
- MM. Mortar Board National Senior Honor Society, Barbara Cook Chapter, Honorary Member, 2002-03.
- NN. International Travel Grant, Purdue Research Foundation, International Organization for Science and Technology Education Symposium, Foz do Iguacu, Brazil, 2002.
- OO. Greater Lafayette Chamber of Commerce Hero, May, 2002, November, 2003, February 2004.
- PP. International Travel Grant, Purdue Research Foundation, 32<sup>nd</sup> International Geological Congress, Florence, Italy, 2004.
- QQ. Outstanding Counselor Recognition, Kappa Delta Pi International Honor Society in Education, Orlando FL, 2005.
- RR. Outstanding Professor Award for 2007, Purdue Panhellenic Association, November 27, 2007.

- SS. Department of Earth and Atmospheric Sciences, Special Merit Award for Grantsmanship, 2007-08.
- TT. International Travel Grant, Purdue Research Foundation, 33<sup>rd</sup> International Geological Congress, Oslo, Norway, 2008.
- UU. International Travel Grant, Purdue Research Foundation, Seventh International Conference on the Book, Edinburgh, Scotland, United Kingdom, 2009.

## VII. PROFESSIONAL ORGANIZATIONS

- A. American Association for the Advancement of Science
  - Electorate Nominating Committee, 1980-84
  - Chair, Electorate Nominating Committee, 1983-84
- B. Association for Science Teacher Education
  - Chair, State Membership, 1975-80
  - National Program Committee, 1977
  - Financial Advisory Committee, 1982-85
  - Science Education in the Rural United States Yearbook Review Committee, 1994-96
  - Certification and Accreditation in Science Education Committee, 1996-98
  - Associate Editor, Journal of Science Teacher Education, 2008-2013
- C. Association for Supervision and Curriculum Development
- D. Association of Teacher Educators
  - National Research Committee, 1987-1994
  - Secretary, National Research Committee, 1987-89
  - Distinguished Dissertation Awards Subcommittee, 1987-1994
  - Chair, 1991-1994
  - Research Paper Review Subcommittee, 1992-1994
- E. Association of Teacher Educators-Indiana Unit
  - Co-chair, Fall Program, 1986
  - Fall Program Committee, 1986-90, 1993-94
  - Executive Committee, 1987-91
- F. Council for Elementary Science International
  - Board of Directors, 1990-93
  - Vision Committee for the 21st Century, 1994-98
- G. Hoosier Association of Science Teachers
  - Chair, Nominations and Elections Committee, 1980-81
  - Member, Convention Committee, 1994-95; 1995-96
  - Chair, Earth/Space Science Convention Program Subcommittee, 1994-95; 1995-96
  - Board of Directors, 1994-97
  - District IV Representative, 1997-98
- H. Indiana Academy of Science
  - Co-chair, Elementary Science Division, Science Education Section, 1971
  - Chair, Elementary Science Division, Science Education Section, 1972
  - Chair, Science Education Section, 1973
  - Youth Activities Committee, 1988

Science Education Advisory Committee, 1995-98  
 Science Education Symposium Committee, 1998-99

- I. Iowa Academy of Science
- J. Iowa Science Teachers
- K. Kappa Delta Pi
  - Search Advisory Committee for Director of Publications  
 and Director of Field Services, 1992
  - Reviewer, Kappa Delta Pi Record, 1996
  - Building Review Committee, Chair, 1997-99
  - Building for the Future Campaign Steering Committee, 1999-2002
  - Oriente Scholarship Awards Committee, 2000-02
  - Celebration of Teaching Awards Committee, 2000-01
  - Web Site Ad-Hoc Committee, 2003-2005
  - Distinguished Dissertation Award Committee, 2003-09; Chair, 2005-09
- L. National Association of Geoscience Teachers
  - Planning Committee, East Central Section, 1982
  - Reviewer, Journal of Geoscience Education, 2004
  - Reviewer, Journal of Geoscience Education, 2009
- M. National Association for Research in Science Teaching
  - Associate Editor, Journal of Research in Science Teaching, 1993-99
  - Editorial Board, Journal of Research in Science Teaching,  
 1978-81, 1988-1992, 2007-2010
  - Research Grant Activities Committee, 1979-80
  - Proposal Reviewer, 2002 National Meeting, 2001-02; 2003 National Meeting, 2002-  
 03, 2004 National Meeting, 2003-04; 2005 National Meeting, 2004-05
  - Publications Advisory Committee, 2003-06
- N. National Earth Science Teachers Association
- O. National Science Teachers Association
  - Chair, State Membership, 1968
  - Committee on Research in Science Teaching, 1976
  - Awards and Recognition Committee, 1976
  - Advisory Board, The Science Teacher, 1982-85
  - Earth/Space Science Idea Bank Editor,  
The Science Teacher, 1985-1991
  - AGI/NSTA National Earth Science Test Committee,  
 1988-1991
  - International Committee, 1990-94; Chair 1992-93
  - Representative to NCATE National Board of Examiners,  
 1991-98
  - Board of Directors, 1994-97
  - Executive Committee, 1995-97
  - Task Force on Business and Industry Partnerships, 1995-96
  - Committee on Personnel Policies, Chair, 1995-96
  - Committee on Rebates to Affiliated Groups, Chair, 1995-96
  - New Teacher Luncheon San Antonio (TX), Chair, 1995
  - Division Director, College Level, 1994-97
  - Committee on College Science Teaching, Chair, 1994-97
  - Journal of College Science Teaching Advisory Board, 1994-97

Journal of College Science Teaching Reviewer, 1995- present  
Task Force on K-16 Coordination, 1994-95  
National Judging Committee, Toshiba/NSTA Explora Vision Awards, 1994-97  
Accreditation and Certification Subcommittee, 1994-97  
National Research Council K-12 Science Standards Review Committee, 1994-95  
Committee on Affiliate Organizations, 1994-95  
Program Committee, St. Louis National Convention, 1993-96  
Program Committee, Atlanta Area Convention, 1994-96  
Treasurer Evaluation Committee, Chair, 1996-97  
Contributing Editor, Dragonfly Journal, 1996-98  
Budget and Finance Committee, 1997-00  
Post Retirement Committee, 1999-00  
Proposal Reviewer, College Division, 2002 National Meeting, 2001-02  
Nominations, 2003-05

- P. Phi Delta Kappa  
Financial Audit Committee, 1988-2007
- Q. School Science and Mathematics Association  
Junior High Science Section, 1964-70  
Chair, State Membership, 1970  
Issues Committee, 1971  
Policy and Resolutions Committee, 1972  
Departmental Editor for School Science and  
Mathematics Journal, 1970-82  
Board of Directors, 1970-74  
Site Selection Committee, 1975-82  
Publications Committee, 1979-82  
Journal Guest Editor, 1980  
Reviewer for Journal, 1982-present  
Middle School Task Force, 1985-1991  
Finance Committee, 2000-03
- R. Teaching and Teacher Education International Journal Reviewer, 1991-present
- S. Journal of Computers in Mathematics and Science Teaching Reviewer, 1993-98
- T. Educational Researcher Reviewer, 1997-98
- U. Bulletin of the American Meteorological Society Reviewer, 1999-present
- V. American Geological Institute, National Advisory Board, Comprehensive Earth Systems  
Curriculum for Middle Schools, 2000-06
- W. Collegiate Science Educators of Indiana, 2000-present; Co-Chair, 2000-03
- X. Journal of Elementary Science Education Reviewer, 2000-present
- Y. 33<sup>rd</sup> International Geological Congress 2008, Geoscience Education Symposium Convener,  
Oslo, Norway, 2007-08.

#### VIII. EXCELLENCE IN LEARNING

- A. Courses taught:



1. EAS 102 Earth Science for Elementary Teachers (Two lecture and four lab sections)
  2. EDCI 608 Individualizing Instruction in the Elementary and Secondary Schools
  3. EDCI 609 Earth Science Teaching in the Elementary and Secondary Schools
  4. EDCI 695 Internship in Education
- B. Courses involving administrative or supervisory responsibility:
1. EDCI 498 Supervision of Teaching in Schools-Secondary (10 cr)
  2. EDCI 496 Student Teaching in the Elementary School (16 cr)

C. Contributions to course and curriculum development:

1. Developed the course and materials for EAS 102, EAS 191T, EDCI 591, EDCI 608, EDCI 609
2. Developed the Earth/Space Science Undergraduate and Graduate Teaching Programs
3. Developed the Department of Earth and Atmospheric Sciences Graduate Teaching Assistant Program for Improving Teaching
4. Chaired the School of Science Committee for the Improvement of Graduate Teaching Assistant Instruction
5. Infused technology into all courses taught including Blackboard 4.0 for EAS 102
6. Center for Instructional Excellence, Department of Instructional Development, College Teaching Workshop Course Visits, 1993-present
7. Office of Admissions, Independent Class Visit Program, 1995-present

D. Recognition received from students; impact on students

Faculty Fellow, Earhart Hall, 1970-72

Faculty Fellow, Owen Hall, 1977-present; Senior Faculty Fellow, 1979-present; University Residences Senior Faculty Fellow Advisory Committee, 2008-present

Former students (undergraduate and graduate) have received fifteen National Science Teacher Association Awards, one Sigma Xi (Purdue Chapter) Award, one National Association of Geology Teachers Award, one Indiana Teacher of the Year Runner-Up Award, two Verizon Teacher Recognition Awards, two Christa McAuliffe Fellowship Awards, one finalist for the NASA Teacher In Space Program, one NASA Laser Teacher Program, thirteen Presidential Award Winners in Mathematics and Science, one national award winner for the Outstanding Dissertation Award, one New Jersey Teacher of the Year, three Lilly Endowment Teacher Creativity Fellowships, USA Today Teacher of the Year Honorable Mention, KDP Foundation President's Scholarship, and Purdue College of Science Distinguished Alumni Award.

Faculty Advisor, Kappa Delta Pi, Eta Chapter, 1979-present (Recognized as one of the top 10 of 600 chapters with an Achieving Chapter Excellence Award, 1993-95, 1995-97, 1997-

99, 2000-01, 2002-03, 2003-05). Mentored undergraduate student officers to write grants for community service activities. We have received eight grants out of nine submitted totaling over \$12,550.00. Two were awarded in 2009.

Honorary Member, Tomahawk Sophomore Leadership Fraternity, Algonquin Chapter, Purdue University, 1986-present

Purdue Student Union Board, College Bowl Faculty Assistant, 1986-87, 1987-88

Omicron Delta Kappa Leadership Honorary, National Leadership Honor Society, The Century Circle, Purdue University, 1988-present

Men's Big Ten Intramural Lacrosse Faculty Advisor, 1994-96

Acacia Fraternity Faculty Advisor, Purdue University, 1994-99

Boiler Gold Rush Speaker, 1997-98, 1998-99, 2001-02

Mortar Board Senior Honor Society, Barbara Cook Chapter, 2002-present

## IX. EXCELLENCE IN DISCOVERY

### A. Refereed papers:

1. Krockover, Gerald H. (1965). Biology or chemistry - which should come first? Iowa Science Teacher, 3(4), 56-57.
2. Krockover, Gerald H. (1967). The development of critical thinking through science instruction. Proceedings Iowa Academy of Science, 72, 402-404.
3. Krockover, Gerald H.\* & McGill, James (1967). Creative biological investigations at Bettendorf Middle School. Iowa Science Teacher, 5(1), 197-198.
4. Krockover, Gerald H.\* & Schaefer, Don (1968). Improving elementary science instruction. School Science and Mathematics, 68(2), 117-122.
5. Krockover, Gerald H. & Schaefer, Don\* (1968). Summer physics program for elementary school teachers. The Science Teacher, 35(3), 18-19.
6. Krockover, Gerald H. (1968). Summer physics program for elementary teachers. AAAS Commission on Science Education News, 4(3), 3-5.
7. Krockover, Gerald H. & James, Robert K.\* (1968). I.V. bottles for dispensing solutions. Science Teachers' Workshop, 1, 5.
8. Krockover, Gerald H.\* & Troxel, Verne R. (1968). Studying crystal growth. Science Teachers' Workshop, 1, 16.
9. Krockover, Gerald H. (1968). Student fume hoods. Science Teachers' Workshop, 2, 1.
10. Krockover, Gerald H. & Yager, Robert E.\* (1968). An analysis of the outcomes of special summer programs for secondary students of high ability. Proceedings Iowa Academy of Science, 73, 354-360.

11. Krockover, Gerald H.\* & Glass, Lynn W. (1969). Adding process to your elementary science content unit. School Science and Mathematics, 69(4), 297-299.
12. Krockover, Gerald H. & Hoff, Darrel\* (1970). Can you calculate the sun's diameter? Science Teachers' Workshop, 2, 12.
13. Krockover, Gerald H. (1971). Correlation by use of insoluble residues. Journal of Geological Education, 10(1), 29-30.
14. Krockover, Gerald H. (1971). On my own--an individualized approach to science methods instruction. Journal of College Science Teaching, 1(2), 39.
15. Krockover, Gerald H. (1971). Are you ready for the third generation? Iowa Science Teachers' Journal, 8(4), 2.
16. Krockover, Gerald H. (1971). Soda straw investigations. Science Activities, 5(5), 24-25.
17. Krockover, Gerald H. (1971). Individualizing secondary school chemistry instruction. School Science and Mathematics, 71(6), 518-524.
18. Krockover, Gerald H.\* & Bobb, Diane (1972). Buzz boxes-an aid to individualizing instruction. Science Activities, 7(3), 26-29.
19. Krockover, Gerald H. (1972). Science marathon. Science Activities, 7(4), 26-28.
20. Krockover, Gerald H. (1973). Experimenting through advertising. Science and Children, 10(5), 28-29.
21. Krockover, Gerald H. (1973). Invitation to investigate. Science Activities, 8(5), 38-39.
22. Krockover, Gerald H. (1973). Pollution studies. Science and Children, 10(6), 27-32.
23. Krockover, Gerald H.\*, Gates, Richard, & Fulton, Harry (1973). An analysis of the teaching of science in the elementary schools at this point in time: 1971-72. School Science and Mathematics, 73(7), 585-590.
24. Krockover, Gerald H. (1973). Developing school administrators as agents of change for science curriculum implementation. Proceedings Indiana Academy of Science, 82, 391-394.
25. Krockover, Gerald H.\* & DeVito, Alfred\* (1974). Science/methods divided. School Science and Mathematics, 74(2), 117-119.
26. Krockover, Gerald H. (1974). The mini-patt approach to individualizing instruction. Iowa Science Teachers Journal, 11(2), 26-28.
27. Krockover, Gerald H.\* & Carter, Ann M. (1974). Class inclusion and conservation of weight: Implications for the elementary school. School Science and Mathematics, 74(4), 318-320.
28. Krockover, Gerald H.\* & Brown, Kay\* (1974). A reading preference test: Rationale, development, and implementation. Elementary English, 51(7), 1002-1004.

29. Krockover, Gerald H. (1975). Dialing down: The energy crisis. Science and Children, 13(2), 18-20.
30. Krockover, Gerald H.\* & Daniels, Jane Z. (1975). The geosciences today: An introductory seminar. Journal of College Science Teaching, 5(1), 50.
31. Krockover, Gerald H. (1975). Science education for the future: Tomorrow never comes. School Science and Mathematics, 75(7), 639-644.
32. Krockover, Gerald H.\* & Jaus, Harold H.\* (1975). Fostering communication and attitudinal development in science between elementary and secondary teachers and administrators. Proceedings Indiana Academy of Science, 84, 434-435.
33. Krockover, Gerald H. (1976). Career opportunities await qualified students in the geosciences. Iowa Science Teachers Journal, 13(1), 9-11.
34. Krockover, Gerald H.\* & Malcolm, Marshall D. (1976). The teacher's role in the development of a child's self-concept. Texas Science Teacher, 5(4), 4-7.
35. Krockover, Gerald H.\* & Odden, Thomas D.\* (1977). Remote sensing simulation activities. The Science Teacher, 44(4), 42-43.
36. Krockover, Gerald H.\* & Malcolm, Marshall D. (1977). The effects of the science curriculum improvement study on a child's self-concept. Journal of Research in Science Teaching, 14(4), 295-299.
37. Krockover, Gerald H. (1977). Developing earth science modules for the secondary school. Journal of Geological Education, 25(4), 115-117.
38. Krockover, Gerald H.\* & Jaus, Harold H.\* (1977). Getting together: A K-12 inservice program. The Science Teacher, 44(5), 35-36.
39. Krockover, Gerald H.\*, DeVito, Alfred, & Malcolm, Marshall D. (1977). Self-concept research: Implications for elementary science teachers. School Science and Mathematics, 77(8), 683-689.
40. Krockover, Gerald H.\* & DeVito, Alfred\* (1978). Communication between the science educator and the elementary classroom teacher: What is the state of the art? School Science and Mathematics, 78(2), 157-158.
41. Krockover, Gerald H.\* & Malcolm, Marshall D. (1978). The effects of the science curriculum improvement study upon a child's attitude toward science. School Science and Mathematics, 78(7), 575-584.
42. Krockover, Gerald H.\* & Crawley, Frank E.\* (1979). Immediate and delayed effects of training preservice secondary science teachers to ask questions on varying cognitive levels. Journal of Research in Science Teaching, 16(3), 243-248.
43. Krockover, Gerald H.\* & Crawley, Frank E.\* (1979). Attitudes of uninvolved students in classrooms of preservice secondary-science teachers: A modular approach. School Science and Mathematics, 79(4), 317-321.
44. Krockover, Gerald H.\* & Levandowski, Donald W. (1979). Orienteering: A new dimension in earth science education. Journal of Geological Education, 27(4), 154.

45. Krockover, Gerald H. (1979). Solving everyday problems by applying science and mathematics principles. School Science and Mathematics, 79(8), 607-612.
46. Krockover, Gerald H.\* & Hauck, Jeanette (1980). Training for docents: How to talk to visitors. History News, 35(3), 37-45.
47. Krockover, Gerald H. (1980). A model to improve science instruction by graduate teaching assistants. School Science and Mathematics, 80(4), 343-347.
48. Krockover, Gerald H.\*, Fulton, Harry F., & Gates, Richard W. (1980). An analysis of the teaching of science in the elementary school at this point in time. School Science and Mathematics, 80(8), 691-702.
49. Krockover, Gerald H.\* & Crawley, Frank E.\* (1980). Three domains of learning: Moving toward the basics in science education. World Trends in Science Education, Charles P. McFaden, Editor, Atlantic Institute of Education, Halifax, Nova Scotia, Canada, 181-186.
50. Krockover, Gerald H.\* & Follis, Helen D.\* (1982). Selecting activities in science and mathematics for gifted young children. School Science and Mathematics, 82(1), 57-64.
51. Krockover, Gerald H.\* & Sallam, Sallam S.\* (1982). The effects of inquiry geoscience instruction on the attitudes and creativity of junior high/middle school science teachers. School Science and Mathematics, 82(4), 279-283.
52. Krockover, Gerald H.\* & Battista, Michael T.\* (1982). A model for the computer education of preservice elementary teachers. The Journal of Computers in Mathematics and Science Teaching, 1(4), 14-17.
53. Krockover, Gerald H.\*, Steele, Kathleen J., & Battista, Michael T.\* (1982). The effect of microcomputer assisted instruction upon the computer literacy of high ability students. Gifted Child Quarterly, 26(4), 162-164.
54. Krockover, Gerald H.\* & Nelson, Richard C.\* (1983). Getting comfortable with computers. Elementary School Guidance & Counseling, 18(1), 13-20.
55. Krockover, Gerald H.\* & DeVito, Alfred.\* (1983). Gear to gather for the well-appointed science classroom. Science and Children, 20(4), 10-11. [Also published in The Science Teacher, 50(1) and Journal of College Science Teaching, 12(3)].
56. Krockover, Gerald H.\*, Steele, Kathleen J., & Battista, Michael T.\* (1983). The effect of microcomputer-assisted instruction on the computer literacy of fifth grade students. The Journal of Educational Research, 76(5), 298-301.
57. Krockover, Gerald H.\* & Battista, Michael T.\* (1984). The effects of computer use in science and mathematics education upon the computer literacy of preservice elementary teachers. Journal of Research in Science Teaching, 21(1), 39-46.
58. Krockover, Gerald H.\*, Steele, Kathleen J.\*, & Battista, Michael T.\* (1984). Using microcomputer-assisted mathematics instruction to develop computer literacy. School Science and Mathematics, 84(2), 119-124.
59. Krockover, Gerald H. (1984). Science? What About it? The Science Teacher, 51(2), 56.

60. Krockover, Gerald H.\* & Christman, Robert (1984). About films. Journal of Geological Education, 32(2), 136-137.
61. Krockover, Gerald H.\* & Battista, Michael T.\* (1984). Microcomputer education of college faculty. Collegiate Microcomputer, 2, 97-62.
62. Krockover, Gerald H. (1985). The new basic in education: Sciencing. The Hoosier Science Teacher, 10(4), 101-108. [Reprinted in Progress, 36(6), 12-15.]
63. Krockover, Gerald H.\*, Hicks, Charles R.\*, & Wesley, Beth Eddinger\* (1985). Locus of control and acquisition of computer literacy. Journal of Computer-Based Instruction, 12(1), 12-16.
64. Krockover, Gerald H.\*, DeVito, Alfred, & Wesley, Beth Eddinger\* (1985). The effects of computer-assisted instruction and locus of control upon preservice elementary teachers' acquisition of the integrated science process skills. Journal of Research in Science Teaching, 22(8), 687-697.
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C. Non-refereed papers:

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3. Krockover, Gerald H. (1974). Change for the better with individualized instruction. Indiana ASCD Newsletter, 15(3), 1-3.
4. Krockover, Gerald H. (1975). Attention senses: Establishing a firm foundation in the basic skills of science. Teacher, 93(2), 102-104.

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6. Krockover, Gerald H. (1978). The energy book. Instructor, 88(3), 57-64.
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10. Krockover, Gerald H. and Mira, Mary Ann. (2001). To collaborate. Purdue Professional Development Schools Newsletter, 7, (2), 11-12.
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D. All other publications:

1. Textbooks:

- a. DeVito, Alfred\* & Krockover, Gerald H.\* (1976). Creative sciencing: A practical approach. Boston: Little, Brown.
- b. DeVito, Alfred\* & Krockover, Gerald H.\* (1976). Creative sciencing: Ideas and activities for teachers and children. Boston: Little, Brown.
- c. Krockover, Gerald H. (1977). Dialing down the energy crisis. In Leonard J. Garigliano and Beth Jo Knape (Eds.). Environmental education in the elementary school. Washington: National Science Teachers Association.
- d. Krockover, Gerald H. (1977). Pollution studies. In Leonard J. Garigliano and Beth Jo Knape (Eds.). Environmental education in the elementary school. Washington: National Science Teachers Association.
- e. DeVito, Alfred\* & Krockover, Gerald H.\* (1980). Creative sciencing: A practical approach. Second Edition. Boston: Little, Brown, 262 pp.
- f. DeVito, Alfred\* & Krockover, Gerald H.\* (1980). Creative sciencing: Ideas and activities for teachers and children. Second Edition. Glenview, Illinois: Scott Foresman and Company, 388 pp.
- g. DeVito, Alfred\* & Krockover, Gerald H.\* (1981). Activities handbook for energy education. Glenview, Illinois: Scott, Foresman and Company, Good Year Books, 173 pp.
- h. Krockover, Gerald H. (1981). Contributing editor, Activity sourcebook for earth science. Ohio State University, Columbus, Ohio: ERIC Clearinghouse for Science, Mathematics, and Environmental Education, 258 pp.

- i. Krockover, Gerald H.\* , Booth, Jeanette Hauck\* , & Woods, Paula R.\* (1982). Creative museum methods and educational techniques. Springfield: Charles C. Thomas, 155 pp.
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- k. Krockover, Gerald H.\* & DeVito, Alfred\* (1991). Creative sciencing: Ideas and activities for teachers and children. Third Edition. Glenview, Illinois: Harper Collins Publishers, 306 pp.
- l. Krockover, Gerald H. (1991). Why study earth science? In Karen Kaye Lind (editor). Water, Stones, and Fossil Bones. Washington: National Science Teachers Association, 160 pp.
- m. Krockover, Gerald H.\* , DeVito, Alfred\* , and Steele, Kathleen J.\* (1993). Creative Teaching: A Practical Approach. New York, NY: Harper Collins College Publishers, 290 pp.
- n. Krockover, Gerald H.\* , Adams, Paul,\* and Lehman, James D.\* (1996). Strategies for implementing computer technology in the science classroom. In Jack Rhoton and Patricia Bowers (Eds.). Issues in Science Education. Arlington, VA: National Science Teachers Association, 320 pp.
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In E. Siebert, M. Caprio, and C. Lyda (Eds.). Methods of Effective Teaching and Course Management for University and College Science Teachers. Dubuque, IA: Kendall/Hunt Publishing Co., 281 pp.
- p. Krockover, Gerald H.\* and DeVito, Alfred\* . (2000). The New Activities Handbook for Energy Education. Parsippany, NJ: Good Year Books Division of Pearson Learning Publishers, 260 pp.
- q. Krockover, Gerald H.\* and DeVito Alfred\* . (2001). Creative Sciencing: Experiments for Hands-on Learning. Parsippany, NJ: Good Year Books Division of Pearson Learning Publishers, 187 pp.
- r. Krockover, Gerald H. (2001). Chapter 1, From the field: changing student attitudes about science through inquiry-based learning. In College Pathways to the Science Education Standards, E. Siebert and W. McIntosh (Eds.). Arlington VA: NSTA Press, 3 pp.
- t. Krockover, Gerald H. (2002). Glencoe Earth Science. Columbus, OH: Glencoe/McGraw Hill Publishers. (Contributing Author).
- u. Krockover, Gerald H.\* and DeVito Alfred\* . (In Press). Making Wise Energy Choices. Good Year Books Publishers.

2. Guest Co-Editor:

Krockover, Gerald H. and Adams, Paul. (1998). Journal of Research in

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3. Monographs:

- a. Krockover, Gerald H. (1973). Individualizing elementary science methods instruction at Purdue University. In ERIC/SMEAC, In search of promising practices in science teacher education. Columbus, Ohio: ERIC Clearinghouse for Science, Mathematics, and Environmental Education.
- b. Krockover, Gerald H.\* & Jaus, Harold H.\* (1979). A comparative analysis of teacher attitudes in two National Science Foundation implementation programs. In Martha Piper and Kenneth Moore (Eds.). Attitudes toward science: Investigations. Columbus, Ohio: ERIC Clearinghouse for Science, Mathematics, and Environmental Education, 75-80.
- c. Krockover, Gerald H. (1980). Science and mathematics for the early adolescent. Editor special issue, School Science and Mathematics, 80(7).

4. Instructor's Manuals:

- a. DeVito, Alfred \* & Krockover, Gerald H.\* (1980). Creative sciencing: A practical approach instructor's manual. Second Edition. Boston: Little, Brown, 25 pp.
- b. DeVito, Alfred,\* Krockover, Gerald H.,\* and Steele, Kathleen J.\* (1993). Creative Teaching: A practical approach instructor's manual. New York: Harper Collins, 33 pp.

5. Book Reviews:

- a. Krockover, Gerald H. (1983). Encyclopedia for the TRS-80. School Science and Mathematics, 83(2), 159.
- b. Krockover, Gerald H. (1986). Wind, water, fire, and earth: Energy lessons for the physical sciences. National Science Teachers Association, 124 pp.
- c. Krockover, Gerald H.\* and Shepardson, Daniel P.\* (1996). National Science Education Standards. Bulletin of the American Meteorological Society, 77, (6), 1293-1294.

6. Video Tapes:

- a. Krockover, Gerald H., Smith, David R., Snow, John T., & Hampton, J. DeEtte (1988). Purdue Research Foundation, The Active Atmosphere, nine part video tape television series, Focus Media, Inc., 839 Stewart Avenue, Garden City, New York.
- b. Krockover, Gerald H. (1995). Indiana State University, Supervising Student Teachers; Jerry Summers, Director, Information Interactive Inc., Terre Haute Indiana.

7. Elementary Science Series:

- a. Krockover, Gerald H., Bryant, Napoleon A., Frank, Marjorie S., Lang, Mozell P., Valenta, Carol J., Van Deman, Barry A. (1995). ScienceAnytime K-6 Teacher Editions, Student Editions, Ancillaries, Equipment Packages, Instructional Technology Packages, Harcourt Brace and Company, Orlando FL.
  - b. Krockover, Gerald H., Bryant, Napoleon A., Frank, Marjorie, Lang, Mozell, Valenta, Carol, Van Deman, Barry. (2000). Science 2000 K-6 Teacher Editions, Student Editions, Ancillaries, Equipment Packages, Instructional Technology Packages, Harcourt Brace School Publishers, Orlando FL.
  - c. Krockover, Gerald H.\*, Frank, Marjorie\*, Lang, Mozell\*, Valenta, Carol\*, Van Deman, Barry. (2002). Science 2002 K-6 Teacher Editions, Student Editions, Ancillaries, Equipment Packages, Instructional Technology Packages, Harcourt School Publishers, Orlando FL. (2003 Editions for LA and TN).
  - d. Krockover, Gerald H.\*, Frank, Marjorie\*, Valenta, Carol\*, VanDeman, Barry\*, Bell, Michael J.\*, DiSpezio, Michael A.\*, McLeod, Joyce C.\*, and ten Brink, Barbara,\*. (2006). Science. K-6 Teacher Editions, Student Editions, Ancillaries, Equipment Packages, Instructional Technology Packages. Harcourt School Publishers, Orlando FL.
  - e. Krockover, Gerald H.\*, Frank, Marjorie\*, Valenta, Carol\*, VanDeman, Barry\*, Bell, Michael J.\*, DiSpezio, Michael A.\*, McLeod, Joyce C.\*, and ten Brink, Barbara,\*. (2007-08). Science. K-6 Teacher Editions, Student Editions, Ancillaries, Equipment Packages, Instructional Technology Packages. Harcourt School Publishers, Orlando FL. (CA and SC Editions).
  - f. Krockover, Gerald H.\*, Frank, Marjorie\*, Valenta, Carol\*, VanDeman, Barry\*, Bell, Michael J.\*, DiSpezio, Michael A.\*, McLeod, Joyce C.\*, and ten Brink, Barbara,\*. (2009). Science. K-6 Teacher Editions, Student Editions, Ancillaries, Equipment Packages, Instructional Technology Packages. Houghton Mifflin Harcourt School Publishers, Orlando FL.
  - g. Krockover, Gerald H.\*, et. al. (2010). Earth/Space Science Senior Reviewer, Science. K-6, Teacher Editions and Student Editions, Houghton Mifflin Harcourt School Publishers, Orlando FL.
8. Editorials:
- a. Krockover, Gerald H. and Shepardson, Daniel P. (1995). The missing links in gender equity research. Journal of Research in Science Teaching, 32(3), 223-224.
  - b. Krockover, Gerald H., Pekarek, Rebecca, and Shepardson, Daniel P. (1996). The research-practice gap in science education. Journal of Research in Science Teaching, 33(2), 111-113.
  - c. Krockover, Gerald H. and Adams, Paul. (1998). Getting there from here: The role of policy. Journal of Research in Science Teaching, 35 (7), 707-709.
  - d. Krockover, Gerald H., Kyle, William C.\*, et. al. (1999). Editorial team report to the NARST community. Journal of Research in Science Teaching, 36,(5), 515-519.

9. Reprinted Articles:

- a. "Getting comfortable with computers" reprinted in Elementary School Counseling in a Changing World edited by Edwin R. Gerler, Jr., Joseph C. Ciechalski, and Larry D. Parker, ERIC/CAPS Publications, Ann Arbor, MI, 1990, 398 pp.
- b. "A recipe for tree food" reprinted in Focus on Forests Saskatchewan, by the Forestry Branch, Saskatchewan Environment and Resource Management, Saskatoon, Saskatchewan, Canada, 1994.
- c. "Strategies for Implementing Computer Technology in the Classroom Table 1: Uses of Computers in the Science Classroom" reprinted in Science Instruction in the Middle and Secondary Schools, 4th Edition, by Chiapetta, Koballa, & Collette, Prentice Hall, 1997.

E. Invited Lectures Presented:

International meetings:

1. "The mini-preparation of audio-tutorial tapes for individualizing instruction." International Audio-Tutorial Congress Conference, San Francisco, California, November 8, 1974.
2. "Creative sciencing in the elementary school" (with Alfred DeVito), Joint International Science Educators Conference (NSTA-STAM), Winnipeg, Manitoba, Canada, October 20, 1977.
3. "A college earth science course for preservice elementary teachers utilizing a minicourse format," Joint International Science Educators Conference (NSTA-STAM), Winnipeg, Manitoba, Canada, October 21, 1977.
4. "Three domains of learning: A modular project for training secondary science teachers" (with Frank E. Crawley). Joint International Science Educators Conference (NSTA-STAM), Winnipeg, Manitoba, Canada, October 22, 1977.
5. "Creative sciencing ideas and activities for teachers and children in grades K-6" (with Alfred DeVito) and "Three domains of learning for college science educators" (with Frank E. Crawley), Science Council of the Alberta Teachers Association and National Science Teachers Association of the United States Joint International Science Educators Conference, Banff, Alberta, Canada, October 7-8, 1978.
6. "Three domains of learning: Moving toward the basic in science education" (with Frank E. Crawley), International Symposium on World Trends in Science Education, Halifax, Nova Scotia, Canada, August 22, 1979.
7. "Creative sciencing" (with Alfred DeVito) and "Creative problem-solving activities for teachers and children," Joint International Conference, University of Manitoba, Winnipeg, Manitoba, Canada, October 16, 1980.
8. "Creative problem-solving science activities for junior high/middle school students," Manitoba Department of Education Conference, Brandon, Manitoba, Canada, May 5, 1981 Winnipeg, Manitoba, Canada, May 7, 1981.



9. "Creative sciencing activities for teachers and children" (with Alfred DeVito), Manitoba Department of Education Conference, Brandon, Manitoba, Canada, May 6, 1981 Winnipeg, Manitoba, Canada, May 8, 1981.
10. "Creative problem-solving activities for teachers and children" and "Improving secondary school science instruction utilizing the National Diffusion Network." National Science Teachers Association and British Columbia Science Teachers Association Joint International Conference, Vancouver, British Columbia, December 3-4, 1981.
11. "The effects of computer use in science and mathematics education upon the computer literacy of preservice elementary teachers," Bat Sheva International Seminar on Preservice and Inservice Education of Science Teachers, Weizmann Institute of Science, Rehovot, Israel, January 3, 1983.
12. "Creative sciencing for teachers in grades K-8," Manitoba Department of Education Conference, Winnipeg, Manitoba, Canada, May 21, 1985.
13. "Integrating science through energy education," International Symposium on World Trends in Science and Technology Education, Kiel, Federal Republic of Germany, August 7, 1987.
14. "Atmospheric science education program for teachers: Bridging the gap between science and technology for education," International Symposium on World Trends in Science and Technology Education, Manila, Philippines, December 13, 1989 (Conference canceled due to civil unrest).
15. "Atmospheric science education program for teachers: Developing partnerships between schools, colleges, and governmental agencies," United States of America/Union of Sovorn Socialist Republics Joint Science Education Conference, Moscow, USSR, August 1, 1991.
16. "Atmospheric science education program for teachers: A model for fostering teacher development," International Conference on Science Education in Developing Countries: From Theory to Practice, Jerusalem, Israel, January 3-8, 1993.
17. "Project INSITE: Developing technology skills for teachers and students," International Symposium on Science and Technology Education, De Koningshof Veldhoven, The Netherlands, August 23-31, 1994.
18. "Using technology in a constructivist manner to enhance the science education curriculum," International Organization for Science and Technology Education, Edmonton, Alberta, Canada, August 19, 1996 (with D. Shepardson, M. Roth, M. Webb).
19. "Integrating the internet into an introductory college geoscience course for teachers," International Conference on Technology and Education, Oslo, Norway, August 11, 1997.
20. "Integrating websites into a college geoscience course for teachers," International Congress on Science and Technology Education, Santa Fe, NM, March 9, 1998.
21. "Improving undergraduate geoscience instruction through action based research teams," Third International Geoscience Education Conference, Sydney, Australia, January 20, 2000. (with D. Shepardson).

22. "Using action-based research teams and technology to foster constructivist approaches to reform undergraduate college science teaching," International Organization for Science and Technology Education, Special Session, X Symposium of the International Organization for Science and Technology, Foz do Ignacu, Parana, Brazil, August 1, 2002.
23. "Using action-based research teams to foster constructivist approaches to reform undergraduate college earth science teaching," International Geoscience Education Organization, Calgary, Alberta, Canada, August 13, 2003. (with D. Shepardson).
24. "Using action-based research teams to foster constructivist approaches to reform undergraduate college earth science teaching," 32<sup>nd</sup> International Geological Congress, Florence, Italy, August 28, 2004.
24. "Using action-based research teams to foster constructivist approaches to reform undergraduate college earth system science teaching," Earth System Processes 2 International Conference, Calgary, Alberta, Canada, August 9, 2005. (with D. Shepardson).
25. "Using Action Based Research Teams to Foster Constructivist Approaches to Reform Undergraduate College Earth System Science Teaching," 33<sup>rd</sup> International Geological Congress, Oslo Norway, August 13, 2008. (with D. Shepardson).
26. "Using Action Based Research Teams as Educational Resources for Learning."

Seventh

International Conference on the Book, University of Edinburgh, Edinburgh, Scotland, students understanding of biology concepts," Hawaii International Conference on Education, Honolulu HI, January 7, 2010. (with S. Neroorkar). Accepted.

National Meetings:

1. "Creative biological investigations at Bettendorf Middle School," National Science Teachers Association Annual Meeting, Washington, D.C., 1967.
2. "Improving elementary science instruction," National Science Teachers Association Annual Meeting, Detroit, Michigan, 1968.
3. "Issues in science and mathematics education," School Science and Mathematics Annual Meeting, Chicago, Illinois, 1970.
4. "Individualizing secondary school science instruction," National Science Teachers Association Annual Meeting, Cincinnati, Ohio, 1970.
5. "Individualizing elementary science methods instruction," National Science Teachers Association Annual Meeting, Washington, D.C., 1971.
6. "Teaching science in the elementary school: A time analysis," National Science Teacher Association, New York, New York, April 9, 1972.
7. "The mini-patt approach to individualizing instruction," National Science Teachers Association, Detroit, Michigan, March 31, 1973.
8. "Science education for the future," Association for the Education of Teachers in Science Annual Meeting, Chicago, Illinois, March 15, 1974.

9. "Science is not content: If not, what is it?" National Science Teachers Association Annual Meeting, Chicago, Illinois, March 18, 1974.
10. "Don't fight the reading program - join it," National Science Teachers Association Annual Meeting, Council for Elementary Science International, Los Angeles, California, March 20, 1975.
11. "Harnessing the resources of creative teaching without textbooks," National Science Teachers Association Annual Meeting, Los Angeles, California, March 23, 1975.
12. "Creative science ideas for teachers and children" and "The status of ISCS and ESCP for the Indiana State Science Adoption," National Science Teachers Association, Central Area Convention, Indianapolis, Indiana, October 24, 1975.
13. "Inservice education: Alternative means and modes for the development of a K-12 science program," Association for the Education of Teachers in Science, Philadelphia, Pennsylvania, March 19, 1976.
14. "Creative sciencing: An invitation to inquire" (with Alfred DeVito), National Science Teachers Association, Philadelphia, Pennsylvania, March 22, 1976.
15. "A comparative analysis of teacher attitudes in two National Science Foundation instructional improvement implementation programs" (with Harold H. Jaus), National Association for Research in Science Teaching, San Francisco, California, April 24, 1976.
16. "The effects of the science curriculum improvement study on a child's self-concept and attitude toward science" (with M. D. Malcolm), National Association for Research in Science Teaching, San Francisco, California, April 24, 1976.
17. "Guidelines and sources for the inclusion of energy education ideas and activities into the K-12 curriculum," National Science Teachers Association, Cincinnati, Ohio, March 27, 1977.
18. "Utilizing science education inquiry techniques in the training of docents," American Association for State and Local History National Seminar, Indianapolis, Indiana, January 18, 1978.
19. "Developing an awareness for the cognitive, affective, and psychomotor domains through the science education methods course" (with Frank E. Crawley), Association for the Education of Teachers in Science Annual Meeting, Washington, D.C., April 7, 1978.
20. "Individualizing reading instruction through science," National Science Teachers Association Western Area Meeting, Anaheim, California, November 18, 1978.
21. "Prescriptive techniques for planning student activities through the science methods course" (with Frank E. Crawley), Association for the Education of Teachers in Science Annual Meeting, Georgia World Congress Center, Atlanta, Georgia, March 24, 1979.
22. "Teaching science in the elementary school at this point in time: 1978-79" (with Richard W. Gates), National Science Teachers Association Annual Meeting, Georgia World Congress Center, Atlanta, Georgia, March 24, 1979.

23. "Prescriptive techniques for planning student activities through the science methods course" (with Frank E. Crawley), School Science and Mathematics Association Annual Meeting, Kansas City, Missouri, November 1, 1979.
24. "Individualizing instruction in reading through science," School Science and Mathematics Association Annual Meeting, Kansas City, Missouri, November 2, 1979.
25. "Strategies for infusing energy education materials into the existing curriculum," U.S. Department of Energy, Energy Education Conference for State Agency Personnel, St. Louis, Missouri, January 19, 1981.
26. "The development and implementation of metric education video tapes for pre and inservice teachers (grades K-8)," National Metric Education Conference, Miami Beach, Florida, September 23, 1981.
27. "A model for the computer education of preservice elementary teachers" (with Michael T. Battista), Association of Teacher Educators Annual Meeting, Orlando, Florida, February 1, 1983.
28. "Science activities for teachers and children," National Science Teachers Association Annual Meeting, Dallas, Texas, April 8, 1983.
29. "Creative problem-solving science activities for teachers of gifted students," National Science Teachers Association, San Diego, California, November 19, 1983.
30. "Needed: Federal involvement in education," Association of Teacher Educators-Indiana Unit, Spring Meeting, French Lick, Indiana, March 24, 1984.
31. "Creative problem-solving activities for teachers of gifted students," National Science Teachers Association Annual Meeting, Boston, Massachusetts, April 8, 1984.
32. "Creative problem-solving activities for teachers of gifted students," National Science Teachers Association Annual Meeting, Cincinnati, Ohio, April 20, 1985.
33. "Teaching science in the elementary school at this point in time" (with Richard W. Gates and Robert B. Wiedermann), National Science Teachers Association Annual Meeting, San Francisco, California, March 27, 1986.
34. "Creative problem-solving activities for middle school teachers of gifted students," National Science Teachers Association Annual Meeting, San Francisco, California, March 28, 1986.
35. "An analysis of fifth and sixth grade students' acquisition of the inventing process" (with Christine Kuehn), National Association for Research in Science Teaching Annual Meeting, San Francisco, California, March 30, 1986.
36. "Engineering education: A role model for teacher education programs," Undergraduate Teacher Education Symposium, Vanderbilt University, Nashville, Tennessee, October 17, 1986.
37. "Teacher education majors: A quality analysis," Association of Teacher Educators Annual Meeting, Houston, Texas, February 17, 1987.

38. "Atmospheric science education program for teachers" (with David R. Smith), National Science Foundation, Directorate for Science in Engineering Education and Directorate for Atmospheric Sciences, Washington, D.C., March 25, 1987.
39. "Computer utilization by student teachers in elementary science classrooms" (with Richard W. Gates and Robert B. Wiedermann), National Science Teachers Association Annual Meeting, Washington, D.C., March 28, 1987.
40. "Creative problem-solving science activities for middle school teachers of gifted students," National Science Teachers Association Annual Meeting, Washington, D.C., March 28, 1987.
41. "Student teachers using computers in elementary science classrooms" (with Richard W. Gates and Robert B. Wiedermann), National Science Teachers Association Annual Meeting, Washington, D.C., March 28, 1987.
42. "Issues in science education," Exeter III Conference for State Science Supervisors, Phillips Exeter Academy, Exeter, New Hampshire, June 26, 1987.
43. "Creative problem-solving ideas for elementary students," National Science Teachers Association Meeting, San Antonio, Texas, November 19, 1987.
44. "Creative sciencing ideas and activities for teachers and children," National Science Teachers Association Meeting, San Antonio, Texas, November 20, 1987.
45. "Atmospheric science education program for teachers: A model for education," Association of Teacher Educators, San Diego, California, February 15, 1988.
46. "Countdown for science: Sixty minutes of exciting activities," National Science Teachers Association Annual Meeting, St. Louis, Missouri, April 9, 1988.
47. "What we know and what we need to know about teacher education," Association of Teacher Educators Annual Meeting, St. Louis, Missouri, February 20, 1989.
48. "Presenting the new NSTA/AGI Earth Science Test," National Science Teachers Association Annual Meeting, Seattle, Washington, April 7, 1989.
49. "Countdown for science: Sixty minutes of exciting activities," National Science Teachers Association Annual Meeting, Seattle, Washington, April 8, 1989.
50. "Atmospheric sciences education program at Purdue University: A model for weather studies in the pre-college science curriculum," Second International Conference on School and Popular Meteorological and Oceanographic Education, Crystal City, Virginia, July 12-16, 1989 (with D. R. Smith, J. T. Snow, and M. E. Akridge).
51. "The active atmosphere: A video tape series for meteorological studies for primary and secondary school science programs," Second International Conference on School and Popular Meteorological and Oceanographic Education, Crystal City, Virginia, July 12-16, 1989 (with D. R. Smith, J. T. Snow, and M. E. Akridge).
52. "Presenting the New NSTA-AGI National Earth Science Test," National Science Teacher Association annual meeting, Atlanta, Georgia, April 5, 1990 (with F. Zuerner, A. Verdon, Jr.).

53. "Sixty Minutes of Exciting Science Activities," National Science Teachers Association annual meeting, Atlanta, Georgia, April 6, 1990.
54. "Science Education for the 21st Century," California State Educators Breakfast, Harcourt Brace Jovanovich, Inc., National Science Teacher Association annual meeting, Houston, Texas, March 28, 1991.
55. "Sixty Minutes of Exciting Science Activities," National Science Teachers Association annual meeting, Houston, Texas, March 29, 1991.
56. "Science Education Reflections: Russia in Perspective," National Science Teachers Association Annual Meeting, International Council of Associations for Science Education Luncheon Speaker, Boston, Massachusetts, March 27, 1992.
57. "Summer Escape: An Interdisciplinary Approach to Research and Investigation," National Science Teachers Association Annual Meeting, Boston, Massachusetts, March 28, 1992 (with J. Calaway).
58. "Developing Telecommunications Skills for Teachers and Students," Canadian Association of Science Teachers Association Annual Meeting, Kansas City, Missouri, April 3, 1993.
59. "Improving Candidates' and Teachers' Perceptions and Beliefs: A Response," Association of Teacher Educators Annual Meeting, Atlanta, GA, February 14, 1994.
60. "Strategies for Integrating Computer Technology into Science Classrooms," National Science Teachers Association Annual Meeting, Anaheim, CA, March 30, 1994 (with D. Shepardson and W. Kyle).
61. "ScienceAnytime: The New Elementary Science Program for the 21st Century," National Science Teachers Association Annual Meeting, Anaheim, CA, March 31, 1994 (with N. Bryant, M. Lang, C. Valenta, B. Van Deman).
62. "Salish First-Year Mathematics and Science Teacher Project, National Science Teachers Association Annual Meeting, Philadelphia, PA, March 25, 1995 (with Robert James, Mark Twiest, Patricia Simmons).
63. "Partnership with Schools in Preparing Science Teachers," National Science Teachers Association Annual Meeting, Philadelphia PA, March 25, 1995 (with M. Twiest, D. Waggett, C. Peterson).
64. "Preliminary Results and Design Issues for the Salish Project," National Association for Research in Science Teaching Annual Meeting, San Francisco CA, April 23, 1995 (with R. James, R. Yager, H. Brunkhorst, P. Simmons, M. Twiest, J. Gallagher, T. Marshall-Bradley, S. McGlamery, B. Spector).
65. "The Salish Project: Science Teacher Education," National Science Teachers Association Annual Meeting, St. Louis MO, March 29, 1996 (with R. Yager, P. Simmons, J. Gallagher).
66. "Infusing the Benchmarks Systems Theme Into the K-16 Curriculum," National Science Teachers Association Annual Meeting, St. Louis MO, March 29, 1996 (with T. Clark, B. Clark, L. Fruen, L. Froschauer).

67. "Beginning Secondary Science Teaching: The Purdue Salish Project," National Science Teachers Association Annual Meeting, St. Louis MO, March 30, 1996 (with P. Adams, K. Terry, J. Nohl, P. Pussey).
68. "Earth Processes Ideas and Activities for Middle School Teachers," National Science Teachers Association Annual Meeting, St. Louis, MO, March 30, 1996 (with 30 middle school teachers in the EPIcenter Project).
69. "Beginning Science Teacher Cognition and Its Origins in the Preservice Secondary Science Teacher Program," National Association for Research in Science Teaching Annual Meeting, St. Louis MO, April 1, 1996 (with P. Adams).
70. "Science Teaching and Expectations for the 21st Century," National Science Foundation Principals' Institute for Science and Mathematics for Urban Systemic Change, Graduate School of Education, Harvard University, August 5, 1996 (with L. Froschauer).
71. "Stimulating Professional Development Through the Use of Interviews and an Observation Rubric," National Association for Research in Science Teaching, Oak Brook IL, March 22, 1997 (with P. Adams).
72. "Creative Ideas and Activities for Reforming Your Elementary Science Program," National Science Teachers Association, New Orleans LA, April 3, 1997 (with K. Blackwell, D. Rust, L. Waldrup).
73. "Earth Processes Ideas and Activities for Middle School Teachers," National Science Teachers Association, New Orleans LA, April 3, 1997 (with L. Braile, S. Braile and 24 classroom teachers).
74. "Sixty Minutes of Science," National Science Teachers Association, New Orleans LA, April 5, 1997 (with C. Valenta and B. Van Deman).
75. "Developing Business/Industry Partnerships," National Science Teachers Association, New Orleans LA, April 5, 1997 (with L. Duhon and R. Miller-Bougere).
76. "Technology: The Under Utilized Window of Opportunity," Kappa Delta Pi International Honor Society, St. Louis MO, November 7, 1997 (with N. Merhill, D. Kinney, M. Paine, and A. Jackson).
77. "Earth processes ideas and activities for middle school teachers," National Science Teachers Association Annual Meeting, Las Vegas NV, April 16, 1998 (with 18 teachers and over 800 attendees).
78. "An earth processes share-a-thon for middle school teachers," National Science Teachers Association Annual Meeting, Las Vegas NV, April 16, 1998 (with 18 teachers and over 800 attendees).
79. "Improving the preparation of K-12 teachers through reform of the undergraduate science content experience (A NARST Presentation)," National Science Teachers Association, Las Vegas NV, April 17, 1998 (with D. Eichinger, D. Shepardson, and R. Rivers).
80. "Project INSITE: Teacher developed projects fusing communications technologies and project-based science," National Science Teachers Association, Las Vegas NV, April 17, 1998 (with M. Averill and M. Rush).

81. "Archaeology for everyone," National Science Teachers Association, Las Vegas NV, April 17, 1998 (with J. Calaway, M. Haynie, and K. Smith).
82. "Linking new teacher performance and teacher preparation programs: Findings and lessons learned," National Association for Research in Science Teaching, San Diego CA, April 21, 1998.
83. "Science through the eyes of a child," National Science Teachers Association, Boston MA, March 25, 1999, (with Marjorie Frank).
84. "Creative science ideas and activities for thematic instruction," National Science Teachers Association, Boston MA, March 26, 1999, (with Kathy Blackwell, Debra Rust, and Linda Waldrup).
85. "An Earth processes share-a-thon for middle school teachers," National Science Teachers Association, Boston MA, March 27, 1999, (with Lawrence Braile, Ken Coles, and 23 middle school teachers).
86. "Earth processes ideas and activities for middle school teachers," National Science Teachers Association, Boston MA, March 27, 1999, (with Lawrence Braile, Ken Coles, and 21 middle school teachers).
87. "In search of the lost Wichita expedition," National Science Teachers Association, Boston MA, March 28, 1999, (with James Calaway).
88. "Reforming the preparation of K-12 teachers through the undergraduate science content experience," National Science Teachers Association, Boston MA, March 28, 1999, (with Ken Ridgway and Daniel P. Shepardson).
89. "From theory to practice: How research in science teacher education informs and changes teacher education programs," National Association for Research in Science Teaching, Boston MA, March 31, 1999, (with Patricia Simmons, Paul Adams, Robert Yager, et. al.).
90. "BioScope initiative: An innovation in high school biology materials development," Federation of Societies for Experimental Biology, Washington DC, April 17-21, 1999, (with J. Paul Robinson, Marshall Overley, Linda Anderson, Barbara Hilton, Rebecca Potratz, and Dave Whitinghill).
91. "Hybridization of WEB-CD-ROMs for high school biology education delivery- the quality learning experience principle," Conference on Computers and Advanced Technology in Education, Philadelphia PA, May 5, 1999, (with J. Paul Robinson and Marshall Overley).
92. "Understanding hydrologic processes in an undergraduate Earth science course through the integration of field trip observations with laboratory modeling," Geological Society of America, Denver CO, October 26, 1999, (with Ken Ridgway and Jeff Trop).
93. "Prime time science," National Science Teachers Association, Orlando FL, April 6, 2000, (with C. Valenta, B. Van Deman, M. Lang).
94. "Perspectives on multicultural science education," National Science Teachers Association, Orlando FL, April 7, 2000, (with J. Yoshioka, M. Atwater, M. Williams).



95. "An Earth science processes share-a-thon," National Science Teachers Association, Orlando FL, April 7, 2000, (with 24 middle school teachers from six Midwestern states).
96. "Integrating technology into the classroom: The Bioscope Project," National Association of Biology Teachers, Orlando FL, October 28, 2000, (with S. Ashburn, D. Eichinger, V. Cross, P. Robinson, S. Witham).
97. "Using action-based research teams to reform the college science curriculum for teacher preparation." Association for the Education of Teachers in Science, Costa Mesa, CA, January 20, 2001, (with D. Shepardson).
98. "Prime time science," National Science Teachers Association, St. Louis, MO, March 22, 2001, (with C. Valenta, B. Van Deman, M. Lange).
99. "Using CD-ROMS in the classroom: An assessment of what works," Featured Technology Session, National Science Teachers Association, St. Louis, MO, March 24, 2001, (with S. Witham, V. Cross, S. Compton).
100. "The Bioscope initiative: The effects of integrating a CD ROM on cell structure and function into secondary biology classrooms," National Association for Research in Science Teaching, St. Louis, MO, March 26, 2001, (with D. Eichinger, V. Cross, S. Witham, P. Robinson).
101. "Using action-based research teams to foster constructivist approaches to college science teaching," National Association for Research in Science Teaching, St. Louis, MO, March 27, 2001, (with D. Eichinger).
102. "Implementing WEBCT into an undergraduate earth science course for preservice elementary teachers," National Science Teachers Association, San Diego CA, March 28, 2002, (with S. Witham).
103. "Inquiring into one's own teaching practices," National Association for Research in Science Teaching, New Orleans LA, April 7, 2002, (with E. van Zee, et. al.).
104. "Teachers as scientists: Three professional development strategies: The field trip," National Association for Research in Science Teaching, New Orleans LA, April 8, 2002, (with D. Shepardson and P. Adams).
105. "Who is your role model? An analysis of pre and in-service teacher perceptions," National Association for Research in Science Teaching, Philadelphia, PA, March 23, 2003, (with D. Shepardson and B. Capobianco) (Poster Discussion).
106. "Top ten science needs questions to share with your principal," National Science Teachers Association, Philadelphia, PA, March 28, 2003, (with S. Witham).
107. "Personalizing officer development," Kappa Delta Pi International Honor Society in Education Biennial Convocation, St. Louis MO, November 14, 2003, (with five undergraduate student officers of ETA Chapter).
108. "Experiencing a constructivist museum exhibit: A case study of twelve children and their families," National Association for Research in Science Teaching, Vancouver, BC, Canada, April 3, 2004, (with M. Hill).
109. "Professional development for the NSTA board and council." National Science

- Teachers Association, Dallas TX, April 1, 2005. (with Nominations and Elections Committee).
110. "Gender equity in secondary science education: An analysis of Texas biology I textbooks," National Association for Research in Science Teaching, Dallas TX, April 6, 2005. (with Nicole O'Leary).
  111. "Fund-raising ideas and activities to support your chapter and the KDP foundation," Kappa Delta Pi International Honor Society in Education Biennial Convocation, Orlando, FL, November 5, 2005. (with five undergraduate student officers of ETA Chapter).
  112. "How to get published in NARST publications," National Association for Research in Science Teaching, San Francisco, CA, April 4, 2006.
  113. "Teaching efficacy as a mediator in novel science curriculum execution: The importance of supportive administration and professional development teams, National Association for Research in Science Teaching, San Francisco, CA, April 5, 2006. (with Loran Carleton and Jenelle Fitch).
  114. "Changes in teachers' context beliefs about teaching science during a year long in-service teacher education program," National Association for Research in Science Teaching, New Orleans, LA, April 15, 2007. (with Loran Carleton Parker).
  115. "Addressing the geoenvironmental and sociocultural contexts in constructivist field-based geoscience teacher education," Geological Society of America, Denver, CO, October 31, 2007. (with Pablo A. Llerandi-Román).
  116. "Grants: Oh the possibilities!," Kappa Delta Pi International Convocation, Louisville KY, November 2, 2007. (with five undergraduate Eta chapter officers).
  117. "Middle level teacher reflections on inquiry and standards based instruction," National Association for Research in Science Teaching, Baltimore MD, April 2, 2008. (with Loran Carleton Parker).
  118. "Learning as a family at the zoo." National Association for Research in Science Teaching, Garden Grove CA, April 20, 2009. (with Loran Carleton Parker).
  119. "Bringing technology education to the next generation of teachers." Kappa Delta Pi International Honor Society in Education 47<sup>th</sup> Biennial Convocation, Orlando FL, October 30, 2009. (with L. Bueno, K. Graves, and J. Kim—KDP Eta Chapter Officers).

#### Regional Meetings:

1. "Order in the secondary science curriculum," Iowa Science Teachers Annual Meeting, Drake University, Des Moines, Iowa, 1964.
2. "Teaching biology creatively," Iowa Science Teachers Annual Meeting, Wartburg College, Waverly, Iowa, 1965.
3. "Innovations in middle school biology," National Science Teachers Association Midwest Regional Meeting, Des Moines, Iowa, 1966.
4. "Individualizing CBA chemistry instruction," Iowa State Education Association East Central District, Iowa City, Iowa, 1969.

5. "Can you individualize your chemistry instruction?" Indiana State Teachers Association Conference on Instruction, Muncie, Indiana, 1970.
6. "Personalizing the teaching of science in the elementary School," Iowa Academy of Science Annual Meeting, Iowa City, Iowa, April 29, 1972.
7. "Developing school administrators as agents of change," Science Education Division, Indiana Academy of Science, St. Mary's College, Notre Dame, Indiana, November 4, 1972.
8. "Individualizing instruction: Speaking from reality," Indiana Association for Supervision and Curriculum Development, Fall Conference, Indianapolis, Indiana, October 1, 1973.
9. "Teaching science through interest centers," Science Education Division, Indiana Academy of Science, Indiana Central College, Indianapolis, Indiana, October 16, 1973.
10. "Measuring metrically," District II Indiana Elementary School Principals Association, West Lafayette, Indiana, October 24, 1974.
11. "Fostering communication and attitudinal development between elementary and secondary teachers and administrators," Indiana Academy of Science, Science Education Division, DePauw University, Greencastle, Indiana, November 1, 1974.
12. "The geosciences today: An introductory seminar," Iowa Academy of Science Centennial Meeting, Science Teaching Section, Iowa State University, Ames, Iowa, April 19, 1975.
13. "The development, implementation and evaluation of an introductory science seminar for freshmen: The geosciences today," Indiana Academy of Science, Science Education Division, Butler University, Indianapolis, Indiana, October 31, 1975.
14. "Earth science topics for teachers (K-12)," Hoosier Association of Science Teachers, Indianapolis, Indiana, February 14, 1976.
15. "Training of docents and tour methods," The Association of Indiana Museums Annual Meeting, Indianapolis, Indiana, April 18, 1977.
16. "Utilizing inquiry questioning techniques for inquiry tours," Docent Education Program, The Children's Museum, Indianapolis, Indiana, November 30, 1978.
17. "Creative museum methods and techniques," Non-School Docent Education Program, The Children's Museum, Indianapolis, Indiana, February 17, 1979.
18. "Creative docent methods and educational techniques," Docent Education Program, The Children's Museum, Indianapolis, Indiana, November 8, 1979.
19. "The individualized science instructional system (ISIS) approach to science," Replication/Adoption Awareness Conference, Division of Innovative Education, Indiana Department of Public Instruction, Indianapolis, Indiana, January 16, 1980.
20. "Energy education for teachers," Hoosier Association of Science Teachers Annual Meeting, Indianapolis, Indiana, February 9, 1980.

21. "Developing an inquiry questioning technique," Montgomery County Cultural Foundation Old Jail Museum, Docent Education Program, Crawfordsville, Indiana, March 20, 1980.
22. "The individualized science instructional system approach to science," Replication/Adoption Awareness Conference, Indiana Department of Public Instruction, Division of Innovative Education, Indianapolis, Indiana, October 2, 1980.
23. "Developing individualized instruction techniques," Akron Public Schools, Exploratory School Program Conference for Teachers, Akron, Ohio, October 24-25, 1980.
24. "Science for the gifted (7-12)," Illinois State Gifted Conference, Chicago, Illinois, October 27, 1980.
25. "Science for the gifted (7-12)," Region V Gifted Education Conference, Decatur, Illinois, March 17, 1981.
26. "Science ideas for gifted students (7-12)," Harlem Learning Conference, Rockford, Illinois, March 27, 1981.
27. "Designing and implementing gifted secondary science programs," Gifted and Talented Program, Glenbard Township High Schools, Glen Ellyn, Illinois, August 19, 1981.
28. "Creative museum questioning methods," Docent Education Program, The Children's Museum, Indianapolis, Indiana, November 11, 1981.
29. "Environmental/energy education: Dealing with controversial topics in the classroom," Environmental Education Association of Indiana Annual Meeting, Brookston, Indiana, October 1, 1982.
30. "Providing for gifted students in the middle and secondary science classroom," Southwest Florida Teacher Education Conference, Fort Meyers, Florida, February 18, 1983.
31. "A model for the computer education of preservice elementary teachers," Association of Teacher Educators, Indiana Unit, Annual Meeting, French Lick, Indiana, March 26, 1983.
32. "Needed: Federal involvement in education," Association of Teacher Educators, Indiana Unit, Annual Meeting, French Lick, Indiana, March 24, 1984.
33. "The microcomputer education of college faculty," Association of Teacher Educators, Indiana Unit, Turkey Run, Indiana, October 22, 1984.
34. "The new basic in education: Sciencing," Keynote address, Illinois Science Teachers Association, Chicago, Illinois, November 2, 1984.
35. "Creative problem-solving activities for teachers of gifted students," Hoosier Association of Science Teachers Annual Meeting, Indianapolis, Indiana, February 8, 1985.

36. "Science education for the twenty-first century." Educational Service District 189, Mount Vernon, Washington, March 15, 1985.
37. "The new basic in education: Sciencing," Professional Science Educators' Update, Museum of Science and Industry, Chicago, Illinois, August 8, 1985.
38. "Energy education: Ideas and activities for the future," Puget Sound Power and Light Company Annual Fall Energy Education Teachers' Program, Bellingham, Washington, September 30, 1985, Bellevue, Washington, October 2, 1985; Tacoma, Washington, October 3, 1985.
39. "Individualizing instruction through gifted education," 22nd Annual Conference for Educators of the Calumet Area, Valparaiso, Indiana, November 26, 1985.
40. "Creative sciencing: A panel of ideas and activities," Hoosier Association of Science Teachers Annual Meeting, Indianapolis, Indiana, February 14, 1986.
41. "Creative science ideas and activities for teachers and children," National Science Teachers Association Area Convention, Indianapolis, Indiana, November 1, 1986.
42. "Creative sciencing ideas for middle school teachers," Hoosier Association of Science Teachers Annual Meeting, Indianapolis, Indiana, February 13, 1987.
43. "Creative science methods and techniques for the elementary classroom," Hoosier Association of Science Teachers Annual Meeting, Indianapolis, Indiana, February 12, 1988.
44. "Creative science experiences for teachers and children," Indiana Department of Education, Northwest Indiana Prime Time Mini-Science Program, Crown Point Community School Corporation, Cedar Lake, Indiana, April 27, 1988.
45. "The National Science Teachers Association/American Geological Institute National Earth Science Test", National Science Teachers Association Area Convention, Columbus, Ohio, October 20, 1988.
46. "Discovering the wonders of visiting museums," Montgomery County Heritage Alliance, Crawfordsville, Indiana, February 25, 1989.
47. "Methods and techniques for educating the community in science," Entomological Society of America, North Central Branch, Indianapolis, Indiana, March 14, 1989.
48. "Developing Children's Thinking Skills in Science Through Literature," Hoosier Association of Science Teachers Annual Meeting, Indianapolis, Indiana, January 31, 1992 (with Amy M. Kennard).
49. "The Moscow Experiences," Hoosier Association of Science Teachers Annual Meeting, Indianapolis, Indiana, January 31, 1992.
50. "Developing children's thinking skills in science through literature," Wabash Valley Education Center program for teachers, Lafayette, IN, October 3, 1992 (with Amy M. Kennard).
51. "Developing thinking skills in science through children's literature," Wilson Education Center Conference for Teachers, Madison, IN, January 21, 1993.

52. "Creative elementary science activities for creative teachers," Hoosier Association of Science Teachers Annual Meeting, Indianapolis, IN, February 12, 1993 (with Sheryl Braile).
53. "First year secondary science teaching: the Salish Project," Hoosier Association of Science Teachers Annual Meeting, Indianapolis IN, February 10, 1995, (with Paul Adams, Phil Pusey, Kim Little, Jane Nohl).
54. "EPIcenter: earth processes teaching ideas for teachers (grades 5-9)," Hoosier Association of Science Teachers Annual Meeting, Indianapolis IN, February 10, 1995, (with Lawrence Braile, Sheryl Braile, William Huston, Michelle Akridge).
55. "Implementing 2061 and NRC Standards: The Fruit Fly Story," Wisconsin Professional Science Education Retreat, Kohler WI, June 15, 1995.
56. "EPIcenter: Earth Processes Instructional Center Program for Teachers," Hoosier Association for Science Teachers Regional Meeting, Lafayette IN, October 26, 1995 (with D. Carlton, M. Daily, K. Hohman, P. Porter).
57. "Gender Equity in the Classroom," Hoosier Association of Science Teachers Regional Meeting, Lafayette IN, October 26, 1995 (with R. Hendricks).
58. "Developing Content for Science and Literacy Assessment: The Genetics of Fruit Flies," National Science Teachers Association Western Area Meeting, Salt Lake City, UT, October 21, 1995 (with D. Shepardson, E. Moje, P. Reid, M. Roth).
59. "Summer Escape: An Interdisciplinary Approach to Research and Investigation," National Science Teachers Association Southern Area Meeting, San Antonio Texas, December 15, 1995 (with J. Calaway).
60. "Science Education and Your Future," School District of Marshfield, Marshfield WI, January 22, 1996.
61. "EPIcenter: Earth Processes Instructional Center Program for Teachers," Hoosier Association of Science Teachers Annual Meeting, Indianapolis IN, February 10, 1996 (with 30 middle school science teacher EPIcenter participants).
62. "Effective Instructional Strategies for Teaching Science," Schools City of Gary, Gary IN, September 17, 1996 (with B. Pekarek).
63. "Issues in Science Education," Midfield City Schools, Midfield AL, October 11, 1996.
64. "Developing Docent Questioning Techniques," The Children's Museum, Indianapolis IN, October 15, 1996.
65. "Earth Processes Ideas and Activities for Middle School Teachers," Hoosier Association of Science Teachers Annual Meeting, Indianapolis IN, February 14, 1997 (with S. Braile, L. Braile, and 21 middle school science teachers).
66. "Science Education Standards for the K-12 Classroom," Midfield City Schools, Midfield AL, March 12, 1997.

67. "Gender Equity in Mathematics, Science, and Technology," St. Cloud State University, Schools of Science and Engineering and Education, St. Cloud MN, September 3, 1997.
68. "Earth processes ideas and activities for middle school teachers," Hoosier Association of Science Teachers Annual Meeting, Indianapolis IN, February 13, 1998 (with L. Braile and 14 middle school science teachers).
69. "Using patterns and cycles in the elementary school curriculum," National Science Foundation Urban Systemic Initiative, Cincinnati Public Schools, Cincinnati OH, February 18-19, 1998.
70. "Creative science experiences for elementary students," National Science Teachers Association Regional Meeting, Birmingham AL, November 19, 1998 (with three AL elementary science teachers).
71. "The process of change for teacher education," Teacher Education Equity Project, Washington Research Institute, Seattle WA, July 12, 1999.
72. "Implementing science based standards in elementary schools," Harcourt School Publishers, Orlando FL, August 10, 1999.
73. "Developing action-based research teams to reform your science program," Hoosier Association of Science Teachers Annual Meeting, Indianapolis, IN, February 9, 2000. (with D. Shepardson).
74. "Developing a mentoring plan: A success story-the St. Cloud State University program," State of Washington Gender Equity Conference, Keynote Address, Port Ludlow, WA, July 20, 2000. (with P. Simpson).
75. "Teaching with technology," Crawfordsville Community Schools, Keynote Address, Crawfordsville, IN, August 14, 2000.
76. "Creative science and the Ohio model," Ohio Curriculum Symposium, Keynote Address, Cambridge, OH, October 13, 2000.
77. "Using CD-ROMS in the classroom," Hoosier Association of Science Teachers, Indianapolis, IN, February 8, 2001 (with S. Witham, V. Cross, S. Compton).
78. "Assessing CD-ROM usage in the secondary biology classroom," The Bioscope Initiative National Meeting, West Lafayette, IN, June 14, 2001.
79. "Implementing WEBCT into an undergraduate science course," Hoosier Association of Science Teachers, Indianapolis IN, February 7, 2002, (with S. Witham).
80. "Top ten science needs questions to share with your principal," Hoosier Association of Science Teachers, Indianapolis IN, February 20, 2003, (with M. Roth).
81. "Inquiry in the classroom," Hoosier Association of Science Teachers, Indianapolis IN, February 20, 2003, (with 28 IN middle level science teachers in externally funded grant from IN Commission for Higher Education).
82. "Standards-Based integrated science instruction," Hoosier Association of Science Teachers, Indianapolis IN, February 18, 2004, (with 29 IN middle level science teachers participating in externally funded grant from the IN Commission for Higher Education).

- Schools,
83. "Inquiry in the science classroom: A standards-based approach to learning," Hoosier Association of Science Teachers, Indianapolis IN, February 4, 2005, (with 30 IN middle level science teachers participating in externally funded grant from the IN Commission for Higher Education).
  84. "Effective professional development for teachers," IUPUI/IUSA Summer Conference on Urban Education, Indianapolis IN, June 22, 2005, (with D. Shepardson).
  85. "Inquiry and the national science education standards," Traverse City MI Area Schools, November 14, 2005.
  86. "Inquiry teaching and the Indiana science education standards," Elkhart IN Area Schools, November 17, 2005.
  87. "Middle level standards based integrated science instruction," Hoosier Association of Science Teachers, Indianapolis IN, February 4, 2005, (with 30 IN middle level science teachers participating in externally funded grant from the IN Commission for Higher Education), February 8, 2006.
  88. "Middle level inquiry in the classroom," Hoosier Association of Science Teachers, Indianapolis IN, February 4, 2005, (with 30 IN middle level science teachers participating in externally funded grant from the IN Commission for Higher Education), February 9, 2006.
  89. "Creative sciencing: inquiry for teachers and children," Inquiry and the National Science Education Standards Conference, Saginaw Valley State University, Saginaw MI, February 13, 2006.
  90. "Standards based integrated science instruction," Improving Teacher Quality Conference, Indiana Commission for Higher Education, Indianapolis IN, May 4, 2006.
  91. "Standards based inquiry in the middle level classroom—grades 4-9," Hoosier Association of Science Teachers, Indianapolis IN, February 9, 2007, (with 30 IN middle level science teachers participating in externally funded grant from the IN Commission for Higher Education).
  92. "Reforming undergraduate university science courses," Symposium on Reform in Undergraduate Science, University of Alabama, Tuscaloosa AL, January 18, 2008.
  93. "Standards based integrated science instruction for middle level teachers," Hoosier Association of Science Teachers, Indianapolis IN, February 6, 2008, (with 18 IN middle level science teachers participating in externally funded grant from the IN Commission for Higher Education).
  94. "Standards based inquiry in the middle level classroom—grades 3-9," Hoosier Association of Science Teachers, Indianapolis IN, February 7, 2008, (with 18 IN middle level science teachers participating in externally funded grant from the IN Commission for Higher Education).



95. "Standards based integrated science instruction inquiry for teachers," Hoosier Association of Science Teachers, Indianapolis IN, February 4, 2009, (with S. Louk, and L. Parker and 17 IN middle and high school level science teachers participating in externally funded grant from the IN Commission for Higher Education).
96. "Standards based inquiry in the middle level classroom," Hoosier Association of Science Teachers, Indianapolis IN, February 5, 2009, (with S. Louk, B. Bayley, and 17 IN middle and high school level science teachers participating in externally funded grant from the IN Commission for Higher Education).
97. "Implementing standards based science instruction using an inquiry approach to learning," Lawton Oklahoma Public Schools, August 14, 2009.

#### Conferences Attended

1. SALISH Leadership Conference (1 of 10 universities invited), El Paso, TX, January 9-13, 1994.
  2. Teacher Education Equity Project Conference, Center for Advanced Study in Education, City University of New York, Minneapolis, MN (1 of 60 invited participants), August 5-9, 1994.
  3. Indiana Forum on the Draft National Science Standards; Indiana Mathematics, Science, and Technology Education Alliance; Indianapolis IN (1 of 60 invited participants), February 9, 1995.
  4. Revitalizing Undergraduate Mathematics and Science Education: A National Dialogue, Michigan State University, East Lansing MI, May 8-10, 1997.
  5. Workshop for Directors of Science, Mathematics, Engineering and Technology Centers; National Science Foundation, Division of Undergraduate Education, Biosphere 2 Center, Oracle AZ, (1 of 30 invited participants), January 7-9, 1998.
  6. From Preparation to Practice in Teacher Education, National Science Foundation, Directorate for Education and Human Resources, Collaboratives for Excellence in Teacher Preparation, Washington DC, (1 of 200 invited participants), May 7-8, 1999.
  7. Summit on Global Education, Phi Delta Kappa International, Vancouver, British Columbia, Canada, (1 of 400 invited participants), October 18-20, 2007.
- F. Evidence of Involvement in the Graduate Research Program of the Department:
- a. Chairperson Ph.D. dissertations:
    1. Marshal D. Malcolm, The effects of the science curriculum improvement study on a child's self-concept and attitude toward science, May, 1979
    2. Safia Mohamed Ahmed Sallam, The effects of inquiry instruction in a geosciences course upon preservice elementary teacher attitudes toward teaching science and the acquisition of integrated science process skills, December, 1980
    3. Kathleen Jeanne Shaver Steele, The effect of computer-assisted mathematical instruction upon the computer literacy of fifth-grade students using a microcomputer, August, 1981

4. Beth Eddinger Wesley, The effects of computer assisted instruction and locus of control upon preservice elementary teachers' acquisition of computer literacy and the integrated science process skills, December, 1983
  5. Christine Kuehn, The analysis of fifth and sixth grade students' acquisition of the process of inventing, August, 1985
  6. Lois Mary Hanebutt, A qualitative study of preservice elementary teachers' understanding of physics concepts, August, 1991 (Recipient of Departmental, School of Education, and National Association of Teacher Educators Distinguished Dissertation Awards)
  7. Paul E. Adams, Beginning Teacher Cognition: A Case Study of Four Secondary Science Teachers, May, 1996 (Recipient of Department of Curriculum and Instruction Outstanding Dissertation Award, April 18, 1997).
  8. James T. McDonald, Learning science in small groups: The relationship of conversation to conceptual understanding, April 2002, (Co-chair).
  9. Martha L. Hill, Experiencing a constructivist museum exhibit: A case study of twelve children and their families, April 2002.
  10. William J. Newman, Discourse in Elementary Science: The Teacher's Roles, Intents and Actions, May, 2003, (Co-chair).
  11. Amanda Hopkins, Elementary Preservice Teachers' Science Self-Efficacy: Impact of an Earth and Atmospheric Science Content Course on Student Teachers' Practice, April 2007.
  12. Pablo Antonio Llerandi Román, The Effects of a Professional Development Geoscience Education Institute Upon Secondary School Science Teachers in Puerto Rico, August 2007.
  13. Loran Elaine Parker, Learning as a Family at the Zoo, May 2008.
- b. Chairperson, M.S. thesis:
1. Marsha Davis Combs, The effect of cognitive pretesting utilizing feedback upon the achievement and attitudes of preservice elementary teachers in an introductory geosciences course, May, 1980
  2. Barbara Elaine Lary, An analysis of teachers' perception of student attitudes toward energy, May, 1987
  3. Marty Lu Glassburn, The effects of an atmospheric science teacher inservice program on teacher attitudes toward science teaching and content knowledge acquisition, July, 1988
  4. Lois Mary Hanebutt, A study of the effectiveness of science: A process approach to measurement skills for sixth grade students, August, 1988
  5. Amy Maureen Kennard, Children's Understandings of Science: Goldilocks and the Three Bears Revisited, May, 1992

6. Laura Lynn Stahly, Third grade students' ideas about the lunar phases, August, 1996
7. Shelly Anne Witham, Implementing WEBCT into an earth science course for elementary education majors, April 2001
8. Loran Elaine Carleton, Investigating undergraduate atmospheric science students' ideas about the nature of science, May 2006

G. Research and/or Training Grants Received:

1. Fellowship Grant, Iowa State Education Association, 1968-69, \$1,000
2. Iowa Testing Program Special Research Award, University of Iowa, 1969-70, \$6,000
3. National Science Foundation, Conference for Elementary and Middle School Administrators Concerning New Programs in Science and Mathematics, January 14, 1971 to September 30, 1971, \$18,689
4. National Science Foundation, Co-operative College School Science Program with Crawfordsville Community School Corporation, January 1, 1972 through June 30, 1973, \$31,000
5. National Science Foundation, Conference for Elementary and Middle School Administrators, January 1, 1972 through September 30, 1972, \$20,000
6. National Science Foundation, Cooperative College-School Science Program, Elementary Science Study, with Lafayette School Corporation, January 10, 1973 through May 31, 1974, \$26,846
7. Education Department, Purdue University, Internal Research Support, Project to Study the Effects of the Implementation of the Metric System in Schools, January 8, 1973 through May 31, 1973, \$500
8. National Science Foundation, Instructional Improvement Implementation Program, Elementary Science Study, with Lebanon School Corporation, March 15, 1974 through July 31, 1975, \$23,054
9. National Science Foundation, Instructional Improvement Implementation Program, Science Curriculum Improvement Study, with Tippecanoe School Corporation, March 15, 1974 through July 31, 1975, \$23,054
10. National Science Foundation, Instructional Improvement Implementation Program, Secondary and Middle School Science Programs, Lebanon School Corporation, January 15, 1975 through July 31, 1976, \$26,466
11. Education Department, Purdue University, Internal Research Support, The Development and Evaluation of Guidelines for the Inclusion of Energy Education Materials into the K-12 School Curriculum, September 1, 1975 through May 31, 1976, \$1,750
12. National Science Foundation, Pre-College Teacher Development in Science Program, The Geosciences Today for Junior High and Middle School Science Teachers, April 10, 1978 through September 30, 1979, \$29,307

13. National Science Foundation, Pre-College Teacher Development in Science Program, The Geosciences Today for Junior High and Middle School Science Teachers, May 1, 1980 through October 31, 1981, \$33,447
14. United States Department of Education, A Project to Develop and Disseminate Metric Education Video Tapes for Teachers, K-8, October 1, 1980 to December 31, 1981, \$36,001
15. National Science Foundation, Division of Pre-College Education in Science and Mathematics, The Geosciences Today for Junior High/Middle School Science Teachers (grades 5-9), October 15, 1984 through March 31, 1986, \$122,798
16. Indiana Department of Education, A Project to Evaluate the State of Indiana Energy Education Program, April 1, 1986 through June 30, 1986, \$19,000
17. National Science Foundation, Division of Pre-College Education in Science and Mathematics, Atmospheric Science Education Program for Teachers (grades 5-9), April 1, 1986 through March 31, 1987, \$137,497
18. National Science Foundation, Division of Pre-College Education in Science and Mathematics, Atmospheric Science Education Program for Teachers (grades 5-9), April 1, 1987 through March 31, 1988, \$164,286
19. National Science Foundation, Division of Pre-College Education in Science and Mathematics, Atmospheric Science Education Program for Teachers (grades 7-12), June 1, 1988 through May 31, 1989, \$241,140
20. National Science Foundation, Division of Pre-College Education in Science and Mathematics, Atmospheric Science Education Program for Teachers (grades 7-12), June 1, 1989 through November 30, 1990, \$261,826
21. National Science Foundation, Division of Pre-College Education in Science and Mathematics, Integrating Laboratory Instruction and Assessment, Earth Science Education Consultant, Dr. D. Shepardson, project director, September 1, 1992-August 31, 1995
22. United States Department of Education, Eisenhower National Program for Mathematics and Science, The University of Iowa subcontract, Linking Teacher Preparation Outcomes and Teacher Performance, 1993-96, October 1, 1993-December 31, 1994, \$31,970
23. National Science Foundation, Earth Processes Education Program for Teachers (Grades 5-9), May 1, 1994-April 30, 1999, Co-Director, \$726,091
24. United States Department of Education, Eisenhower National Program for Mathematics and Science, The University of Iowa subcontract, Linking Teacher Preparation Outcomes and Teacher Performance, 1993-96, January 1, 1995-December 31, 1995, \$26,798
25. Research Foundation City University of New York, National Science Foundation Subcontract, Teacher Education Equity Project, 1994-95, November 10, 1994-December 31, 1995, Co-Director, \$1500
26. United States Department of Education, Eisenhower National Program for Mathematics and Science, The University of Iowa subcontract, Linking Teacher

- Preparation Outcomes and Teacher Performance, 1993-96, January 1, 1996-December 31, 1996, \$31,049
27. School of Education and School of Science Deans Grant, Preparing Science and Mathematics Teachers for the 21st Century, December 1, 1995 - December 31, 1996, Co-Director, \$21,200.
  28. School of Education, Professional Development School Grant, Identifying Characteristics of the Multi-Age Intermediate Classroom that Foster Successful Learning for Children, November 1, 1996-May 31, 1997, Co-Director, \$1000.
  29. National Science Foundation, Action Based Research Science Partnerships for Excellence in K-12 Teacher Preparation: A Pilot Program, May 15, 1997-October 31, 1999, Co-Director, \$200,000.
  30. Commission for Higher Education State of Indiana, Eisenhower Professional Development Program, Mathematical Achievement Through Problem Solving, January 1, 1998-June 30, 1999, Co-Director, \$79,460.
  31. National Science Foundation, Bio-SCOPE: A Project to Create Biology-Driven Student-Scientist Partnerships. April 1, 1998-March 31, 1999, Co-Director, \$502,718.
  32. School of Science, Technology Initiative Grant, Instructional Portable Classroom Computing Cart Systems, July 1, 1998-June 30, 1999, Director, \$24,500.
  33. National Science Foundation, Bio-SCOPE: A Project to Create Biology-Driven Student-Scientist Partnerships. April 1, 1999-March 31, 2000, Co-Director, \$503,096.
  34. National Science Foundation, Bio-SCOPE: A Project to Create Biology-Driven Student-Scientist Partnerships. April 1, 2000-March 31, 2001, Co-Director, \$509,768.
  35. Purdue University Multimedia Instructional Development Grant, Integration of Web Based Multimedia into a Geoscience Content Course-GEOS 102, June 1, 2000-July 31, 2001, Director, \$22,140.
  36. Purdue University School of Science Instructional Computing Grant, Implementing Technology into the Geoscience 102 Course, July 1, 2000-June 30, 2004, Director, \$8,354.00.
  37. National Science Foundation, Bio-SCOPE: A Project to Create Biology-Driven Student-Scientist Partnerships. April 1, 2001-March 31, 2002, Co-Director, \$484,235.
  38. Purdue University School of Science, Instructional Computing Grant, Implementing Technology into the EAS 102 Course, September 1, 2001-August 31, 2004, Director, \$12,000.00.
  39. Indiana Higher Education Commission, Eisenhower Grant, Implementing Standards Based Instruction into Middle Level Science Classrooms. January 1, 2002-July 31, 2003 Co-PI, \$76,304.
  40. Kappa Delta Pi International Honor Society in Education, Reading is Fundamental Grant Award to Eta Chapter, March 2002, \$175.00.

41. Indiana Higher Education Commission, Standards-Based Integrated Science Instruction. Improving Teacher Quality Partnership Program, March 1, 2003-April, 30, 2005, Co-PI, \$267,680.00.
42. Purdue University Office of Engagement, Interactive Rock Cycle, January 18-February 15, 2003, Faculty Sponsor for Ms. Ashley Allen, \$100.00.
43. Purdue University P3T3 Grant, October 22, 2003-March 30, 2004, \$1300.00.
44. Purdue University Office of Engagement, Student Grant Program for Community Service/Service Learning, Faculty Sponsor for ETA Chapter, Kappa Delta Pi, Thanks-4-Giving Books, November 17-25, 2003, \$1348.00.
45. Purdue University, Earth Science for Elementary Teachers (EAS 102), ITaP Digital Content Grant, April 29, 2004-April 28, 2006, \$19,038.85.
45. National Science Foundation, Hands-on science in schools: Mapping amplification of earthquake motion in Indiana, June 22, 2004-June 21, 2005, \$10,000, (Co-PI with Dr. Jennifer Haase, EAS Research Scientist).
46. Indiana Higher Education Commission, Standards-Based Integrated Science Instruction for the Middle Grades. Improving Teacher Quality Partnership Program, January 1, 2005-April, 30, 2006, PI, \$240,675.00.
47. Purdue University Teaching Academy Educational Grant, April 28, 2005, \$1000.00.
48. Indiana Department of Education, Encouraging Technology and Hands-on Science in Elkhart, May 1, 2005-April 30, 2008, Co-PI, \$270,487.00. (Total awarded \$590,691.00).
49. Indiana Department of Education, Frankfort-Purdue Science Partnership, May 1, 2005-April 30, 2008, Co-PI, \$306,007.00. (Total awarded \$562,713.00).
50. Indiana Higher Education Commission, Standards-Based Integrated Science Instruction for the Middle Grades. Improving Teacher Quality Partnership Program, May 1, 2006-April, 30, 2007, PI, \$142,383.00.
51. Purdue University Office of Engagement, Student Grant Program for Community Service/Service Learning, Faculty Sponsor for ETA Chapter, Kappa Delta Pi, Murdock After-School Tutoring Program, October 2, 2006-December 8, 2006, \$1500.00.
52. Indiana Higher Education Commission, Standards-Based Integrated Science Instruction for the Middle Grades. Improving Teacher Quality Partnership Program, January 1, 2007-December 31, 2007, PI, \$159,408.00.
53. Indiana Higher Education Commission, Standards-Based Integrated Science Instruction for the Middle Grades. Improving Teacher Quality Partnership Program, January 1, 2008-January 31, 2009, PI, \$163,305.00.
54. Purdue University Office of Engagement, Student Grant Program for Community Service/Service Learning, Faculty Sponsor for ETA Chapter, Kappa Delta Pi, Glen Acres Program, February 23, 2007-April 30, 2007, \$1500.00.
55. Purdue University Office of Engagement, Student Grant Program for Community

Service/Service Learning, Faculty Sponsor for ETA Chapter, Kappa Delta Pi, Oakland Elementary School Program, October 2, 2006-December 8, 2006, \$1500.00.

56. Indiana Higher Education Commission, Standards-Based Integrated Instruction for Grades K-8 in Mathematics, Science, and Social Studies. Improving Teacher Quality Partnership Program with School City of East Chicago IN Schools, January 1, 2009-December 31, 2010, PI, \$362,977.00 plus \$160,600 In-Kind Monies for a total of \$523,577.00.

**Total of Grants Received = \$6,853,433.00**

X. EXCELLENCE IN ENGAGEMENT

A. Formal student counseling and advisement service:

Eight undergraduate students in the Department of Earth and Atmospheric Sciences

Six graduate students (M.S.) in the Department of Curriculum and Instruction

Two graduate students (Ph.D.) in the Department of Curriculum and Instruction

150 teachers enrolled in graduate courses over the past five years

B. University or departmental administrative service (including work on administrative committees):

1. Science and Mathematics Education Committee, 1970-1985
2. Earth Science Certification Committee of Teacher Education Council, Chair, 1970-1998
3. General Science Certification Committee of Teacher Education Council, 1970-1998
4. Department of Education Undergraduate Curriculum Committee, 1971-75, Chair, 1978-89
5. Senator, HSSE Faculty Senate, 1974-78, 1980-83, 1983-86
6. HSSE, AMOCO Outstanding Teacher Awards Committee, 1976, 1986
7. Department of Earth and Atmospheric Sciences Course Improvement and Curriculum Evaluation Committee, 1976-1988
8. School of Science, Dean's Ad Hoc Committee for the Improvement of Graduate Teaching Assistants, Chair, 1977-79
9. Department of Earth and Atmospheric Sciences, Earth Science Teaching Program Committee, Chair, 1974-present
10. Senior Faculty Fellow, Owen Hall, 1979-present
11. Dean's Grant Steering Committee, Implementation of Mainstreaming Through Improved Education, U.S. Department of Education, 1979-82
12. University Faculty, Professional and Administrative Staff Compensation and Benefits Committee, Chair, 1979-84

13. HSSE Senate Faculty Affairs Committee, 1984-86, Chair, 1985-86
14. Continuing Education Administration Academic Advisory Council Member, 1985-1987
15. University Senate, 1986-89, 1991-93
16. University Senate Nominating Committee, 1986-89, Chair, 1988-89
17. University Senate Advisory Committee, 1988-89
18. School of Science Grievance Committee, 1986-88, 2001-03
19. University Ad Hoc Committee to study creation of a School of Education, 1986-87
20. School of Science Committee on Minority Affairs, 1987-present
21. Advisory Committee, Gifted Education Resource Institute, 1980-present
22. Senior Faculty Fellow, Coordinator, 1988-89
23. Transition Committee, School of Education-School of Liberal Arts, 1988-89
24. Chair, Advisory Committee for Computing Services, School of Education, 1989-92
25. Department of Curriculum and Instruction, Undergraduate Curriculum Committee, 1991-95; Chair, 1991-94
26. Department of Curriculum and Instruction, Elementary Education Program Convenor, 1991-94
27. Department of Curriculum and Instruction, Leadership Team, 1991-95, 2001-02, 2004-05
28. School of Education, Accreditation Committee Chair, 1990-93
29. School of Education, Leadership Team, 1991-94
30. Teacher Education Council, Ex-Officio Member, 1990-94; Member, 1996-99
31. Department of Curriculum & Instruction, Graduate Foundations Committee, 1992-93
32. Department of Curriculum & Instruction, Faculty Search Committee, 1993; Chair, 1994-95, 2000-02; 2002-03; Chair, 2003-04; Chair, 2004-05.
33. University Future Directions for Purdue University West Lafayette Committee, 1993
34. University Affirmative Action Committee, 1991-94
35. University Commencement Committee, 1991-94
36. Department of Curriculum & Instruction, Academic Review Committee, 1993-94
37. University Class of 1941 Teaching Innovation Grants Committee, 1993



38. University Helping Students Learn Awards Committee, 1993
39. University Space Management Committee, 1993-94
40. University Continuing Education Committee, 1991-94
41. School of Education Educational Placement Transition Committee, 1993-94
42. Department of Curriculum and Instruction Department Head Search Committee Chair, 1993
43. School of Science Outreach Committee, 1993-97; Search Committee, 2003-04
44. Department of Earth and Atmospheric Sciences Education, Outreach Committee, 1991-present, Chair, 1993-2002; 2004-05, 2005-Present
45. University Academic Representatives Council, 1992-94
46. College of Education, Area Promotion and Tenure Committee, 1994-97, 2001-02, 2004-07, 2007-10
47. Department of Curriculum and Instruction, Merit Review Committee, 1994-95, 1995-96
48. University Tech Prep Review Committee, Chair, 1994
49. Department of Curriculum and Instruction, Ad Hoc Committee for the Preparation of a New Elementary Education Program, 1994-95
50. Department of Curriculum and Instruction, Elementary Education Program Committee, Chair, 1994-95
51. University Human Relations Advisory Committee, 1991-94
52. University Continuing Education Administration Advisory Committee, 1991-94
53. Department of Curriculum and Instruction, Curriculum Theory Search Committee Chair, 1994-95
54. Department of Curriculum and Instruction, Teaching Impact Awards Committee, Co-Chair, 1995-96.
55. School of Education, Teaching Awards Committee, Chair, 1995-96, 1998; 2000-05; Chair, 2000-02; 2004-05.
56. School of Education, Grievance Committee, Chair, 1995-97; 1997-01.
57. College of Science, Distance Education Committee, 1995-present.
58. Department of Earth and Atmospheric Sciences, Outstanding Teacher Award Committee, 1996-2002.
59. Department of Earth and Atmospheric Sciences, Peer Faculty Teaching Evaluations Committee, 1996-2004; 2005-06; Chair, 1996-98.

60. School of Education, Curriculum Committee, Chair, 1996-97.
61. College of Education, Professional Development Schools, Steering Committee, 1997-99; 1999-01, 2001-04.
62. Purdue University, Teaching Academy, Executive Council, 1997-02.
63. University Promotions Committee, 1998-2001.
64. University Library Area Promotions Committee, 1998; 1999.
65. University Lilly Endowment Retention Initiatives Committee, 1997-2003; Faculty and TA Development Advisory Committee, 1998-2003.
66. School of Education, Dissertation Awards Committee, Chair, 1997-98.
67. School of Education, Faculty Affairs Committee, 1998-1999.
68. Department of Curriculum and Instruction, Committee on Recognition of Excellence in Teaching, Chair, 1997-98. (One faculty member reviewed), Chair, 2000-01. (one faculty member reviewed).
69. School of Education, Task Force on Field Experiences in the Reformed Teacher Preparation Program, 1998.
70. University Teaching Academy Mentoring Subcommittee, 1997-2002.
71. Department of Curriculum and Instruction, Elementary Education Reform Block VI Theory Into Practice and Student Teaching Team, 1999-2002.
72. University Course and Instructor Evaluation Steering Group, 1999-2002.
73. School of Science, Murphy Award Selection Committee, 1999.
74. School of Pharmacy, Nursing and Health Sciences, Murphy Award Selection Committee, 1999, 2001.
75. Department of Curriculum and Instruction, Graduate Committee, 2000-05; 2008-11; Chair, 2002-03, 2009-10; Graduate Course and Program Review Subcommittee, 2000-2002, 2003-2004; 2004-05, Awards and Fellowship Review Subcommittee, 2002-03; 2008-09.
76. School of Education, School Mathematics and Science Center, Advisory Committee, 2000-04.
77. Department of Curriculum and Instruction, Science Education Program Area, Convenor, 2000-05; 2008-11.
78. University Teaching Academy, Faculty Mentoring Network, Steering Committee, 1999-2002.
79. University Course and Instructor Evaluation Steering Group, 2000-2002.
80. Horizons Mentoring Program for Students, 1995-present; Advisory Board, 2000-present.

81. University CAPS Adaptive Programs Review Board, 2004-05.
  82. University Committee on the Use of Human Research Subjects, 2001-04; University Social Science Institutional Review Board, 2004-present. IRB Investigative Violation Subcommittee, 2008-09.
  83. School of Education Strategic Planning Task Force, 2001-2002.
  84. Department of Earth and Atmospheric Sciences, Springfest Organizing Committee, 2001-04.
  85. Department of Earth and Atmospheric Sciences, Undergraduate Committee, 2002-04; Chair 2002-03.
  86. University Grievance Review Committee, 2002.
  87. College of Education, Nominations and Elections Committee, 2002-06; Chair, 2002-03; 2004-05; 2005-06.
  88. Department of Curriculum and Instruction, Secondary Education Committee, Chair-elect, 2002-03; Chair, 2004-05
  89. School of Education Faculty Development Task Force, Co-Chair, 2003-04
  91. College of Science/College of Education, Purdue Science and Engineering Education Research Center Committee, 2004
  92. Department of Curriculum and Instruction, Ad Hoc Committee on Portfolio Assessment Needs, 2004
  93. Department of Chemistry, Primary Promotions Subcommittee, 2003-05
  94. Department of Earth and Atmospheric Sciences, College of Science Pilot Curriculum Reform Team, 2006-present
  95. Department of Curriculum and Instruction, Graduate Applications Coordinator, Science Education Program Area, 2007-present
  96. Purdue University Student Union Board, Homecoming Windows Judge, 2008
  97. Information Technology at Purdue, Teaching and Learning Technologies Digital Content Reviewer, 2008-09.
  99. College of Education, Advanced Programs Task Force, Chair, 2008.
  100. College of Education, Area Promotion and Tenure Committee, 2008-11.
  101. Department of Curriculum and Instruction Representative to the College of Education Summer School Retreat, January 28, 2008.
  102. College of Science Grade Appeals Committee, 2009-10.
- C. Public and/or governmental service activities, including international programs:

1. Science Advisory Committee, Iowa Educational Broadcasting Services, Public Television Network, Des Moines, Iowa, 1969-70
2. Chair, Earth-Space Science Evaluation Review Subcommittee, Indiana State Textbook Commission Committee, 1975-76; Member, 1992-93
3. Chair, Elementary Science Evaluation Review Subcommittee, Indiana State Textbook Commission, 1980-81
4. Science Validation Committee, Indiana Department of Education, National Teacher Examination, Indianapolis, Indiana, 1984
5. Science Education Advisory Council, The Children's Museum, Indianapolis, Indiana, 1985-1988
6. Public School Foundation of Tippecanoe County, Inc., Grants and Distribution Committee, 1986-present; chair, 1992-present; Board of Directors, 1993-present
7. Core Review Test Committee Member, Indiana Department of Education, Indianapolis, Indiana, 1986-1988
8. Holmes Group, Midwest Region, Committee for Government Relations and Liaison, Chicago, Illinois, 1987-89
9. Peer Reviewer/Advisor, Office of Educational Research and Improvement, U. S. Department of Education, Washington, D.C., 1987-89
10. Indiana Corporation for Science and Technology, Education Committee, Indianapolis, Indiana, 1989-98
11. Board of Examiners, Professional Standards Board, State of Indiana, Indianapolis, Indiana, 1990-2002.
12. Presidential Award for Science and Mathematics Teachers, State Selection Committee, Ball State University, Muncie, Indiana, 1991-93
13. Member, Teacher Training & Licensing Advisory Committee, Indiana Department of Education, Indianapolis, Indiana, 1991-92
14. Peer Reviewer, Directorate for Education and Human Resources, National Science Foundation, Washington, DC, 1992-93
15. Board of Examiners, National Council for Accreditation of Teacher Education, Washington, DC, 1991-98; chair, Board of Examiner Team 1993
16. "Grant writing for success", Public School Foundation of Tippecanoe County, Sunnyside Middle School, October 21, 1992
17. Outstanding Science Teacher Award Committee, Sigma Xi, Purdue University, West Lafayette, IN, 1992-98; Chair, 1992-98
18. Science Education Advisor, National Science Teachers Association Tapestry Grant, Invasive Exotic Species of Indiana, Pike High School, Indianapolis, IN, 1994-97
19. Peer Reviewer and Panel Assistant Chair, National Science Foundation, Division of Undergraduate Education, Earth and Environmental Science, Arlington, VA, 2000

20. Human Participants Protection Education for Research Teams, National Institutes of Health, Course Completion Certification, August, 2001.
  21. Greater Lafayette Chamber of Commerce May 2002, November 2003, April 2007 Heroes Recognition.
  22. Indiana Department of Education, Office of Program Development, Core 40 Review of Indiana Academic Standards in Science, July 2002.
  23. Department of Curriculum and Instruction, National Science Foundation ENVISION Grant, Advisory Board, 1999-2004.
  24. American Geological Institute National Advisory Board for Middle Level Earth Science Education, 2001-2006.
  25. National Advisory Board for National Science Foundation Grant at Ft. Hays State University (KS) for Middle Level Preservice Science Teacher and Faculty Preparation, 2002-2004.
  26. Indiana Department of Education, 21<sup>st</sup> Century Learning Centers Program, Families Organized within the Community United with School (FOCUS) Advisory Council, Murdock Elementary School, Lafayette IN, 2003-2007 (Assisted in preparing the grant proposal which was funded at the level of \$664,000 plus in-kind contributions totaling \$1,200,000). (In February, 2005, IDOE added a \$14,000 supplement to the grant).
  27. College of Science Grievance Committee, 2006-07.
  28. Department of Earth and Atmospheric Sciences, Prescott Memorial Fund Committee, 2006-present.
  29. National Advisory Board for National Science Foundation Grant (\$2.1 million) to conduct research on Reform in Undergraduate Science Courses Serving Pre-service Teachers: Evaluation of a Faculty Professional Development Model, University of Alabama, 2006-2011.
  30. Indiana Department of Education, 21<sup>st</sup> Century Learning Centers Program, Families Organized within the Community United with School (FOCUS) Advisory Council, Murdock Elementary School, Lafayette IN, 2007-2010 (Assisted in preparing the grant proposal which was funded at the level of \$413,000 plus in-kind contributions totaling \$1,200,000). New Grant is being prepared for 2010-13 that will be expanded to include two additional LSC schools.
- D. Community service activities (selected):
1. "Future Trends in Science Education," Science, Technology and Public Policy Luncheon Series, Purdue University, West Lafayette, Indiana, March 23, 1977
  2. "New Frontiers in Geoscience Education," Department of Geosciences Seminar, Purdue University, West Lafayette, Indiana, April 27, 1978
  3. "National Aeronautics and Space Administration Day," Purdue University, West Lafayette, Indiana, December 16, 1978 (attended by 225 teachers from throughout the State of Indiana)

4. Parent's Council, Burtsfield Elementary School, West Lafayette, Indiana, 1978-80
5. Area IV Council on Aging, Energy Education, Lafayette, Indiana, 1979-80
6. "Museums: Our Educational Institutions of the Future," Montgomery County Cultural Foundation Annual Meeting, Crawfordsville, Indiana, January 22, 1980
7. "Creative Sciencing for Young Children," The Learning Center, West Lafayette, Indiana, January 28, 1980
8. "NASA Program for Teachers," Purdue University, West Lafayette, Indiana, December 10, 1985 (attended by 700 teachers from throughout the State of Indiana)
9. "Planet Earth Telereview," WYFI, Channel 20, Indianapolis, Indiana, January 25, February 8, 1986
10. Greater Lafayette Chamber of Commerce, Golden Apple Awards Committee, 1987-present
11. Public Schools Foundation of Tippecanoe County Indiana, Grants Awards Committee, 1989-present, Chair, 1991-present; Board of Directors, 1993-present
12. Presentations to local university and community groups regarding, "Reflections on recent events in the Soviet Union from a science educator's perspective," 1991-1993
13. "Encouraging Student Authors", Greater Lafayette Reading Council; Lafayette School Corporation and Dimension Cable Television; Cumberland School; Vinton School, 1992
14. "Invention Fair", Battleground Elementary School, Battleground, IN, March 17, 1992
15. "Teaching As a Career", West Lafayette High School, March 31, 1992
16. "Schooling in the 21st Century," Harrison Kiwanis Club, January 31, 1994
17. "Today's Russia," Dayton Elementary School, May 18, 1994
18. "Environmental Education for Parents and Children," Washington Elementary School, September 22, 1994
19. "Developing Collaborative Reform Efforts," Department of Agricultural Economics Curriculum Committee, School of Agriculture, September 28, 1995
20. "Purdue University Salish Project: Preparing Secondary Mathematics and Science Teachers," School of Education Research Seminar Series, January 26, 1996, (with P. Adams).
21. "Developing a Faculty Portfolio: Tips and Suggestions," Teachers on Teaching Workshop by the Purdue University Center for Instructional Services, April 24, 1996, (with D. Eichinger).
22. "Constructivism in the Science Classroom," Princeton Earth Physics Project, Purdue University, June 11, 1996.

23. "The Purdue University Salish Project: Emerging Results," Science Education Seminar, Purdue University, September 25, 1996.
24. "Developing Action Based Research Teams to Improve Teaching," Conversations About Teaching, Purdue University, October 6, 1998.
25. "The important of mentoring," Teaching Academy Mentoring Network Meeting, Purdue University, October 18, 1999.
26. "Authoring children's books," Super Saturday Primary Class, Purdue University, October 30, 1999.
27. "Connecting K-12 and college teaching," Wabash Area Lifetime Learning Association, Morton Community Center, West Lafayette IN, March 29, 2000.
28. "Reflections on mentoring," University Teaching Academy Mentoring Network, Purdue University, September 9, 2000.
29. Lafayette Catholic Schools Education Fair Judge, 1995-present.
30. "Fun with Fossils," Kids Alive Pre-K, Covenant Church, West Lafayette IN, November 14, 2002.
31. "Sinking and Floating," Cumberland Elementary School, Kindergarten, West Lafayette IN, November 20, 2003.
32. "Recycling Your Trash," Phoenix Community Day School, First Grade, Paradise Valley AZ, November 26, 2003.
33. "Migrating from WEBCT to Vista," Teaching and Technology Seminar Series, Purdue University, October 27, 2004.
34. "The Great Melting Race," Cumberland Elementary School, First Grade, West Lafayette, IN, May 20, 2005.
35. "Creating Implementation Plans After Funding," Guest Instructor, EDPS 609: Program Development for the Organization of Human Services, February, 22, 2006.
36. "Observing Rocks and Minerals," Miami Elementary School, Fourth Grade, Lafayette IN, April 19, 2006.
37. "The Three Little Pigs' Build Homes," Cumberland Elementary School, Multiage 2-3, West Lafayette IN, April 20, 2006.
38. "Do the Locomotion," Kid's Alive Preschool, West Lafayette IN, April 26, 2006.
39. "Standards Based Elementary Science Instruction," Tippecanoe School Corporation Elementary Science Inservice Program, January 24, 2007.
40. "Faculty Fellow Collaboration Methods and Techniques," Faculty Fellow Program, Purdue University Residences, January 24, 2007.
41. "Nuts and Bolts of the Owen Hall Faculty Fellow Program," Meredith Hall Faculty Fellow Meeting, February 1, 2007.

42. "The 5E's of Science Education," Elkhart (IN) Community Schools Mathematics/Science Partnership Program, March 20, 2008.
43. "Classifying Rocks and Minerals," Dayton Elementary School (IN) Grade 3, April 4, 2008.
44. "Sorting Science," Cumberland Elementary School, Kindergarten, West Lafayette IN, May 13, 2008.
45. "Bag the Beans Science," Happy Hollow Elementary School, Grade 4, West Lafayette IN, May 20, 2008.
46. "Observing Plant Fossils," Bon Air Elementary School Grade 5, Kokomo, IN, September 25, 2008.

E. Consulting activities (selected):

1. Testing Consultant, Educational Testing Service, National Teacher Examinations, Princeton, New Jersey, 1974-76, 1980
2. Juvenile Book Division Reviewer, Harper Collins, Publishers, New York, New York, 1977-present
3. Science Education Consultant, Agency for Instructional Television, Bloomington, Indiana, 1980-86
4. Science Education Consultant, Vincennes Community Schools, Instructional Television Project, Vincennes, Indiana, 1981-86
5. Science Education Consultant, Manitoba (Canada) Department of Education, 1981, 1982, 1985
6. Juvenile Book Division Reviewer, Macmillan Publishing Company, New York, New York, 1983-present
7. Consultant, Museum of Science and Industry, Chicago, Illinois, 1983-1986
8. Science Education Consultant, Holt Rinehart and Winston, Austin, TX, 1985, 1993-95
9. Grant Evaluation Consultant, United States Department of Commerce, National Oceanic and Atmospheric Administration, National Sea Grant College Program, Rockville, Maryland, 1985
10. Science Education Consultant, Harcourt School Publishers, Orlando, Florida, 1985-present
11. Energy Education Consultant, Puget Sound Power and Light Company, Bellevue, Washington, 1985, 1990
12. Science Education Consultant, American College Testing Program, Test Development Department, Iowa City, Iowa, 1987-1991



13. Grant Evaluation Consultant, Panel Chair, National Science Foundation, Directorate for Science & Engineering Education, Division of Teacher Preparation & Enhancement, Washington, D.C., March 16-18, 1989
14. Test Assessment Consultant, Content Mastery Examinations for Teachers (CMET), IOX Assessment Associates, Los Angeles, California, 1989-92
15. Contributing Science Education Editor; Project Dragonfly National Science Journal for Children, Grades 3-6; Miami University, School of Interdisciplinary Studies, Oxford OH; 1994-97
16. Science Education Consultant for the following organizations and school districts: Zionsville (IN) Public Schools; Midfield (AL) City Public Schools; Geological Society of America; Monroe County (IN) Schools; Franklin (IN) Township Schools; Longman Publishers; Park View Elementary School (Morton Grove IL); The Indianapolis (IN) Children's Museum; 1995
17. Science Education Consultant, Agency for Instructional Technology, Bloomington IN; 1995
18. Earth Science Education Consultant, Earth Science Teacher Enhancement Program Guidebook, The Geological Society of America, Boulder CO, 1995-96
19. Science Education Consultant for the following organizations and school districts: Zionsville Eagle-Union (IN) Public Schools; Midfield (AL) City Public Schools; Teacher Education Equity Project University of Washington, Seattle; The Indianapolis (IN) Children's Museum; Graduate School of Education, Harvard University, Cambridge MA; 1996
20. Science Education Consultant for the following organizations and school districts: Zionsville Eagle Union (IN) Public Schools; Midfield (AL) City Public Schools; Nickerson Research Institute (Seattle WA); Knox (IN) Middle School; Swedish National Agency for Higher Education; Geological Society of America; The Indianapolis (IN) Children's Museum; Harcourt Brace School Publishers; Curtin University of Technology (Perth Australia); 1997.
21. Science Education Consultant for the following organizations and school districts: Zionsville Eagle Union (IN) Public Schools; Midfield (AL) City Public Schools; Nickerson Research Institute (Seattle WA); Knox (IN) Middle School; Curtin University of Technology (Perth Australia); Indiana State Teachers Association; Compuquill Inc.; Department of Geological Sciences, Clemson University (Clemson SC); University Corporation for Atmospheric Research, Program for the Advancement of Geoscience Education (Boulder CO); 1998.
26. Science Education Consultant for the following organizations and school districts: Zionsville Eagle Union (IN) Public Schools; Midfield (AL) City Public Schools; Washington Research Institute (Seattle WA); Pearson Education/Prentice Hall (Columbus OH); Compuquill Inc. (Atlanta GA); University of Arizona (Tucson AZ); 1999.
27. Science Education Consultant for the following organizations and school districts: Merrill Prentice Hall Publishers, Zionsville (IN) Community Schools, Crawfordsville (IN) Community Schools, Weizmann Institute (Israel) of Science Graduate School and Committee on Appointments and Promotions, Washington Research Institute (Seattle WA), Harcourt School Publishers, Glencoe McGraw Hill Publishers; 2001.

28. Science Education Consultant for the following organizations and school districts: American Geological Institute, Zionsville (IN) Community Schools, Technion-Israel Institute of Technology, Washington Research Institute (Seattle WA), Harcourt School Publishers, Sargent-Welch; 2002.
29. Science Education Consultant for the following organizations and school districts: American Geological Institute, Zionsville (IN) Community Schools, Weizmann Institute (Israel) of Science Feinberg Graduate School, Council for Renewal of Higher Education (Stockholm, Sweden), Randall L. Tobias Foundation (Literacy for Life) of Indianapolis IN, Maine Township High School East (IL), Harcourt School Publishers, 2003.
28. Science Education Consultant for the following organizations and school districts: Harcourt School Publishers, Iowa State University, Indiana University, University of Louisville, Randall Tobias Foundation, University of Alabama, Westfield-Washington Schools (IN), 2004.
29. Science Education Consultant for the following organizations and school districts: Harcourt School Publishers, The Israel Science Foundation, Addison Wesley Publishers, University of North Carolina-Greensboro, Merrill-Prentice Hall Publishers, American College Testing Program, Pearson Education, 2005.
30. Science Education Consultant for the following organizations and school districts: Addison-Wesley-Pearson Publishers, Hasten Hebrew Academy (Indianapolis IN), Carroll County (IN) Community Schools, The Israel Science Foundation, Delphi (IN) Community Schools, Lawton (OK) Public Schools, Harcourt School Publishers, 2006.
31. Science Education Consultant for the following organizations and school districts: Pearson Merrill Prentice Hall Publishers, Lawton (OK) Public Schools, University of Tulsa (OK), C.L.A.S.S. Works Indianapolis (IN), Weizmann Institute (Israel) of Science Graduate School and Committee on Appointments and Promotions, 2007.
33. Science Education Consultant for the following organizations and school districts: Lawton (OK) Public Schools, Kokomo (IN) Public Schools, Crawfordsville (IN) Public Schools, Holt-Houghton Mifflin-Harcourt Publishers, McGraw Hill Publishers, Kids Discover Magazine, Elkhart (IN) City Public Schools, C.L.A.S.S. Works Indianapolis (IN), University of New England, Higher Education Research and Development Reviewer, Armidale, New South Wales, Australia, Gray M. Sanborn School (IL), Central Catholic Junior-Senior High School (IN), University of Alabama Tuscaloosa National Study of Education in Undergraduate Science Grant from the National Science Foundation.
34. Science Education Consultant for the following organizations and school districts: Lawton (OK) Public Schools, Kokomo (IN) Public Schools, Crawfordsville (IN) Public Schools, Houghton Mifflin Harcourt Publishers, University of Alabama Tuscaloosa National Study of Education in Undergraduate Science Grant from the National Science Foundation, Louisiana State University Department of Educational Theory, Policy, and Practice.