WILLIAM J. SUMRALL, Ph.D.
Professor of Science Education

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BOLD PRINT REPRESENTS STUDENT ACHIEVEMENTS

EDUCATION

1990 Ph.D., Science Education, University of Southern Mississippi
1986 M.S., Science Education, University of Southern Mississippi
1982 B.S.Ch.E., Chemical Engineering, University of Mississippi
1978 B.S., Zoology, University of Mississippi

PREVIOUS WORK EXPERIENCE

2006-Present Professor, Dept of Teacher Education, University of Mississippi
2005-2006 Interim Chair of Dept of Curriculum and Instruction, University of Mississippi
2004-2005 Assistant Chair and Professor, Dept of Curriculum and Instruction, University of Mississippi
2000-2004 Professor, Dept. of Curriculum and Instruction, University of Mississippi
1999-2000 Assistant Dean for Curriculum and Learning Outcomes, Mississippi State University
1996-2000 Professor, Dept. of Curriculum and Instruction, Mississippi State University
1994-1996 Associate Professor, Dept. of Curriculum and Instruction, Mississippi State University
1993-1994 Assistant Professor, Dept. of Curriculum and Instruction, Mississippi State University
1991-1993 Assistant Professor, Dept. of Curriculum and Instruction, McNeese State University
1990-1991 Assistant Professor, Dept. of Curriculum and Instruction, Northeastern Illinois University
1987-1990 Instructor and Graduate Assistant, Dept. of Science Education, University of Southern Mississippi
1986-1987 Science Teacher, Grade 9, Pensacola High School, Pensacola, Florida
1983-1986 Science Teacher, Grades 8-12, Lecanto Middle and High School, Lecanto, Florida

COURSES TAUGHT IN HIGHER EDUCATION

University of Mississippi

Undergraduate
EDFD 209 Foundations of American Education
EDCI 320 Service Projects in Science Education K-12
EDCI 352 Education, Society and the K-12 Learner
EDCI 353 Planning & Teaching Strategies for Effective Classroom Instruction
EDEL 404 Science in the Elementary School
EDEL 416 Math and Science in the Elementary School
EDLE 417 Action Labs in the Elementary School
EDLE 464 Student Teaching: Elementary Education
EDLE 480 Student Teaching: Secondary Education
EDCI 419 Effective Classroom Management for Teacher Educators
EDSE 400 Principles of Education
EDSE 446 Special Methods1: Science

Graduate
EDCI 520 Service Projects in Science Education K-12
EDCI 601 Advanced Curriculum and Theory
EDCI 616 Science, Technology in the Classroom
EDEL 519 Classroom Management
EDEC 551 Science and Numbers in Early Childhood Education
EDEL 615 Problems & Investigations in Teaching Elementary Science
EDEL 627 Problems in Teaching Arithmetic II
EDEL 629 Clinical and Diagnostic Procedures in Math
EDEL 531 Methods of Remedial Lang. Arts and Math
EDEL 700 Seminar in Elementary Education
EDSE 700 Seminar in Secondary Education
EDRS 605 Methods of Research I
EDEL 630 Clinical Projects
EDSE 625 Trends and Issues in Secondary Education
EDSE 636 Teaching Secondary School Science

EDSE 646 Advanced Methods of Teaching Science
EDSE 690 Masters Seminar in Secondary Education

Mississippi State University

Undergraduate
EDE 4113 Science for Children (elementary science methods taught in Senior Block over 9 semesters between fall, 1993 and summer, 1997)
EDS 4886/4896 Secondary Student Teachers
EDE 4886/4896 Elementary Student Teachers
EDS 4653/6653 Teaching of Science (secondary science methods)

Graduate
EDE 7003 Directed Individual Study
EDE 8433 The Elementary School Curriculum
EDE 8443 Seminar in Elementary Education
EDE 8483 Teaching Physical Science for Elementary Teaching
EDE 8493 Teaching Biological Science for Elementary Teaching
EDF 8363 Principals of Curriculum Development
EDS 9001 Dissertation Research/Dissertation
EDS 9003 Dissertation Research/Dissertation

McNeese State University

Elementary Science Methods (6 semesters multiple sections)
Elementary Math Methods (1 semester)
Introduction to Education (6 semesters multiple sections)

Northeastern Illinois University

Secondary Science Methods
General Secondary Methods
Secondary Student Teachers

University of Southern Mississippi

Elementary Physical Science
Elementary Physical Science Laboratory
Physical Science for Non-Science Majors
Elementary Science Methods

Advising Loads

Hooded eighteen doctoral candidates at Mississippi State and the University of Mississippi
Served on over thirty-five dissertation committees since 1994
Advised secondary science undergraduates at Northeastern Illinois University and Mississippi State University
Advised undergraduate elementary at Mississippi State University
Advised graduate secondary science and elementary at both Mississippi State and The University of Mississippi at all levels

1) TEXTBOOK P U B L I S H E D

Sumrall, W. J. (2015). Doing What Scientists and Engineers Do: How to Create an Elementary Science Classroom Where Students Are Successful at Doing Science and Engineering (2nd Ed). Dallas, TX: Sentia Publishing.

Sumrall, W. J. (2014). Doing What Scientists and Engineers Do: How to Create an Elementary Science Classroom Where Students Are Successful at Doing Science and Engineering. Dallas, TX: Sentia Publishing.

Belk, J., Ehle, M., Price, E., Nuby, J., Sumrall, W., & Thomas, L. (2001). A standards-based approach to teaching in courses with field components. Dubuque, Iowa: Kendall/Hunt.

WORKBOOK PUBLISHED

Halpin, R., & Sumrall, W. (1999). Practical relationships integrating science and mathematics strategies(PRISMS). Mississippi State University: Funded through Mississippi Department of Education.

CURRICULUM DEVELOPED

Authored- Rejecting Myths and Misconceptions in Astronomy for the Middle Grades funded through the Space Telescope Science Institute/NASA.

Co- Authored book **R**oadways **I**nto the **D**evelopment of **E**lementary **S**tudents funded through the Mississippi Department of Transportation for state-wide distribution.

REFEREED PUBLICATIONS IN NATIONAL JOURNALS

Sumrall, W. and Sumrall, K. (2021). Using past science events:building an ADI foundation. 45(1). Science Scope

William J. Sumrall & Kristen M. Sumrall (2021). Changing attitude into behavior: How to reduce carbon dioxide emissions, Science Activities, DOI: 10.1080/00368121.2021.1885334

Sumrall, W. J., Robinson, H. and Sumrall, K. (2019). Science based serendipitous events. Science Scope 43(2), 62-70.

William J. Sumrall, Kristen M. Sumrall & Hannah A. Robinson (2019) Using biomimicry to meet NGSS in the lower grades. Science Activities, DOI: 10.1080/00368121.2018.1563041

William J. Sumrall & Kristen M. Sumrall (2018) Quantifying and better assessing an engineering design challenge: Going beyond the egg drop. Science Activities, 55:1-2, 34-45, DOI: 10.1080/00368121.2018.1498825

Sumrall, W. and Sumrall, K. (2018). Project and problem based learning and assessment: How to go beyond the challenge. Science Scope 42(4) 84-91.

Sumrall, W., & Sumrall, K. (2018). Understanding by design. Science and Children 56(1) 48-54.

Sumrall, W. (October, 2015). Using a STEM-based approach to make recycling metallic elements relevant. Science Scope 39(1) 55-60.

Moore, V., Sumrall, W., Mott, M., Mitchell, E., & Theobald, B. (2015). Exploring consumer literacy, The Social Studies, 106, 193-203.

Mott, M.S., Chessin, D., Sumrall, W.J., Rutherford, A.S., & Moore, V.J. (2011). Assessing student scientific expression using media: The MESPR-Media enhanced science presentation rubric. Journal of STEM Education: Innovations & Research, 12(1).

Craven, J., Sumrall, W., Moore, J., & Logan, K. (2011). A monumental lesson in the first grade: Learning social studies through the study of historical structures. Social Studies and the Young Learner.

Mott, M.S., Sumrall, W.J., Rutherford, A.R., Sumrall, K., & Vails, T. (2010). "Lecture" with interaction in an adult science methods course-session: Designing interactive whiteboard and response system experiences. Journal of Literacy and Technology, 11(4). DOI: http://www.literacyandtechnology.org.

Sumrall, W., & Mott, M. (2010) Building models to better understand the importance of cost versus safety in engineering. Science Scope. 34(3). 45-52.

Prestwich, D., Sumrall, J., Chessin, D. (2010). Science rocks! Science and Children. 46 (6), 86-88.

Curry, K., Sumrall, W., & Moore, J. (2008). Ways animals communicate. Science Activities 45(3).

W. Sumrall, & Moore, J. (2008). Engendering inquiry. Science Scope 32(1), 52-53.

Moore, J., & W. Sumrall. (2008). Problem solving with patents. Science Scope 31 (7), 16-22.

Sumrall, W., Russell, W., & **Carter, L**. (2007). Yard sale! Challenges for young geographers. Social Studies and the Young Learner 20(2), P1-P4.

Curry, K., Moore, J., & Sumrall, W. (2007). Extra! Extra! Learn all about it. Science Scope 31 (4), 40-45.

Carter, L., Sumrall, W., & Curry, K. (2006). Say cheese! Digital collections in the classroom. Science and Children 43 (8), 19- 23.

Sumrall, W. and **Curry, K.** (2006). Teaching for Transferal. Science Scope 29 (7), 14-17.

Sumrall, W. (2005). Collaborative measurement. Science Scope 29(1), 6.

Whittington, S., & Sumrall, W. (2005). Perceptions of elementary and middle school teachers in northwest Mississippi towards inquiry science. Journal of the Council for Elementary Science International. 38(1), 20-29.

Sumrall, W., & **Schillinger, D**. (2004). Non-traditional characteristics of a successful science fair project. Science Scope 27(6), 20-24.

Sumrall, W., & **Schillinger, D.** (2004), A student directed model for designing a social studies/science curriculum 95(1), The Social Studies. 5-10.

Sumrall, W. (2003). Real world mathematics: Modeling and scaling using a spreadsheet. Learning and Leading with Technology 31(3), 14-17. (Editorial Panel Reviewed)

Sumrall, W., & **Schillinger, D.** (2003). Quality control and design in science learning. Science Scope 27(2), 28-33.

Sumrall, W., & Rock, D. (2002). Repeated patterns in math and science: Understanding cycles. Science Scope 25(7), 18-22.

Sumrall, W., Chessin, D., & **Schillinger, D**. (2001). Investigating science careers online. The Science Teacher 68(6), 74-76.

Sumrall, W. (2001). Trash or treasure. Science Scope 24(4), 28-33.

Sumrall, W., & Halpin, R. (2000). Integration and presentation. Science Scope 24(1), 68-71.

Motamedi, V., & Sumrall, W. (2000). Mastery learning and contemporary issues in education. Action in Teacher Education 22(1), 32-39.

Sumrall, W. J., & **Cosgrove, P.** (1999). Parachuting paraboliods. Science Scope 23(2), 24-26.

Vaughan, M., Sumrall, W. J., & Rose, L. (1998). Preservice teachers use the newspaper to teach science and social studies literacy. Journal of Elementary Science Education 10(2), 1-19.

Sumrall, W. J., & **West, L. S.** (1998). Using a vignette technique to compare preservice elementary teachers', African American high school students', and young scholars' beliefs about the future. The Journal of Environmental Education, 29 (4), 45-51.

Mott, M., & Sumrall, W. (1998). Interactive multimedia. Science Scope, 21(7), 42-44.

Sumrall, W., **Richardson, D**., & **Yan, Y.** (1998). Microwave oven observations. The Science Teacher, 65 (2), 38-42.

Sumrall, W. (1998). Aluminum analysis. The Science Teacher, 65(1), 32-35.

Sumrall, W. J. (1997). Why avoid hands-on science. Science Scope, 20(4), 16-19.

Sumrall, W. J., & Sumrall, C. M. (1995). Introducing electronic mail applications within preservice elementary science methods courses. Journal of Computing in Teacher Education, 11(4), 23-30.

Sumrall, W. J., Barrett, H., & Wicker, C. (1995). Canister-llations (Helpful Hints section). Science and Children, 32(7), 45.

Sumrall, W. J., & **Criglow, J.** (1995). The "scoop" on science data: A study of spoons shows students that scientific inquiry is a vital part of their lives. Science and Children, 32(6), 36-39, 44.

Sumrall, W. J. (1995). Reasons for the perceived images of scientists by race and by gender of students in grades 1-7. School Science and Mathematics, 95(2), 83-90.

Sumrall, W. J., & Sumrall, C. (1994). What research says: Process skills used effectively. Science and Children, 32(3), 41-42.

Sumrall, W. J., & Forslev, A. (1994). Spreadsheet meteorology. Science Scope, 18(1), 36-38.

Sumrall, W. J., & Wicker, C. (1993). Lets go to the beach! Science Scope, 16(8), 40-43.

Sumrall, W. J., & Aronin, G. (1993). Environmental empowerment. The Science Teacher, 60(2), 38-41.

Sumrall, W. J. (1992). Spreadsheet science. The Science Teacher, 59(4), 62-63.

Sumrall, W. J. (1991). Silver science. The Science Teacher, 58(9), 36-39.

Wicker, C., & Sumrall, W. J. (1991). Recycling resources (idea bank). The Science Teacher, 58 (7), 54-56.

Sumrall, W. J., & Brown, F. W. (1991). Consumer chemistry in the classroom. The Science Teacher, 58(4), 28-31.

PATENT

Submitted four patent applications to The University of Mississippi Office of Technology Management. One application has received a patent (Patent #- D530,206).

GRANTS FUNDED

Awarded in 2023

Sumrall, W. (2023) Using Project Based Learning in a Middle Grade STEM Based Curriculum Focused on Launch, Descent and Reconnaissance for Planetary Exploration. Grant funded through the United States Air Force. $49,996.

Awarded in 2012

Davidson, G., & Sumrall, W. (Co-Investigator), (2012). EMPOWERING SCIENCE TEACHERS TO ADDRESS PERCEIVED CONFLICTS BETWEEN SCIENCE AND RELIGION IN THE CLASSROOM: REACHING BERKMAN AND PULTZER'S. Grant funded through the Templeton foundation. $109, 275

Awarded in 2011

Sumrall, W. (2011). AN OIL SPILL PROFESSIONAL DEVELOPMENT PROGRAM FOR FORMAL AND INFORMAL EDUCATOR. Grant funded through Institutes of Higher Learning. $900.

Awarded in 2006

Sumrall, W., & Reid, J. (2006), Math Across the Science, Technology, Society Curriculum (MASTS-C). Grant funded by the IHL of Mississippi ($143,130).

Sumrall, W. (2006), Rejecting myths and misconceptions in astronomy for the middle grades. Grant funded by the Space Telescope Science Institute/NASA ($49,000).

Awarded in 2005

Sumrall, W., & Mims, C. (2005), Building an enhanced, sequenced, and/or total math/science/social studies curriculum for middle school instruction. Grant funded by the IHL of Mississippi ($102,033)

Sumrall, W. (2005), Environmental letter writing project. Grant funded by the Captain Planet Foundation ($1,048)

Awarded in 2004

Sumrall, W., & Rock, D. (2004), Building an enhanced, sequenced, and/or total math/science/social studies curriculum for middle school instruction. Grant funded by the IHL of Mississippi ($105,358)

Awarded in 2003

Sumrall, W., Sumrall, C., & Thomas, L., (2003), Developing an inquiry based elementary science curriculum for the pre-service teaching candidates. Grant funded by University of Mississippi Associates. $12,500.

Awarded in 2001

Sumrall, W. (2001). Building a modern elementary science education laboratory to meet NCATE accreditation standards and to improve classroom instruction. Grant funded by University of Mississippi's Ole Miss Associates. $5000.

Sumrall, W. (2001). Developing a standards-based middle school science curriculum. Grant funded by University of Mississippi's Faculty Research Award. $4000.

Sumrall, W., Chessin, D., & Whitwell, M., (2001). Proposal for Teaching/Resource Materials. Grant funded by University of Mississippi's School of Education. $6,575.91.

Awarded in 1998

Sumrall, W., & Greene, D. (1998, June). Supporting partnerships involving reforms in teaching (SPIRIT). Grant funded by the Mississippi Department of Educaition. $91,000.

Sumrall, W. (1998, July). Integrating environmental education within mathematics and physical science curriculum. Grant funded by the United States Environmental Protection Agency. $35,156.

Halpin, R., & Sumrall, W. (1998, August). Swimmer II. Grant funded by the Mississippi Department of Education. $25,479.

Awarded in 1997

Sumrall, W., & Greene, D. (1997, September). The relationship between reading material and students= achievement levels in science education: Grades 5-6. Grant funded by Mississippi State Public Schools Partnership. $4,000.

Sumrall, W. (1997, August). Faculty scholarship enhancement application. Grant funded by the College of Education at Mississippi State University. 1 course release time.

Awarded in 1995

Sumrall, W. (1995, January). Increasing students' understanding of science through a collaboration effort between MSU science students, parents, and teachers of children at Emerson Elementary. Grant funded by Mississippi State Research Initiative. $2,905.

Sumrall, W., & Rose, L. (1995, August). A comparative study to investigate the effectiveness of using the newspaper to teach science and social studies in order to increase conceptual learning and reading skills of elementary students in the public schools. Grant funded by Mississippi State Public Schools Partnership. $4,000.

Sumrall, W., (1995, August). Improvement in the science and mathematics achievement levels of African American students in Mississippi. Grant funded by the National Science Foundation. $100,000.

Awarded in 1994

Sumrall, W. & Rose, L. (1994, November). Enhancing teaching in the public schools by using the newspaper to increase science and social studies literacy. Grant funded by Mississippi State Public Schools Partnership. $10,000.

HONORS/AWARDS

Award Name	Organization	Date Received	Award
2005 Outstanding Grants and External Funding	UM Ed Alumni Chapter	May, 2005	Plaque & $2000
2004 Outstanding Service Award	UM PDK Chapter	May, 2004	Plaque
2002 Outstanding Researcher Award	UM Ed Alumni Chapter	May, 2002	Plaque & $2000
2000 College of EducationMSU Faculty/Research Scientist/ Engineer award recipient	Office of Research	April 3, 2000	Plaque

Key to City of Greenville	Mayor of Greenville	April 3, 2000	Key and ribbon
1999 Phi Delta Kappa Outstanding Researcher Award	MSU PDK Chapter	April, 1999	Plaque

STUDENT HONORS/AWARDS NOMINATED BY SUMRALL

Name of student nominated	Award	Organization	Year
Amy Holmes	Outstanding Pre-Service Teacher	Phi Delta Kappa, UM Chapter	2005
LeAnn Carter	Outstanding Graduate Student	Phi Delta Kappa, UM Chapter	2005
Susan Lee	Outstanding Student Researcher	Phi Delta Kappa, UM Chapter	2005
LeAnn Carter	Outstanding Graduate Student	Phi Delta Kappa, UM Chapter	2004
Peggy Jackson	Outstanding Graduate Student	Phi Delta Kappa, UM Chapter	2004
Susan Lee	Outstanding Graduate Student	Phi Delta Kappa, UM Chapter	2004
Donald Schillinger	Outstanding Graduate Student	Southeastern Regional Association of Teacher Educators	2001
Jennifer Napier	Outstanding Undergraduate	Southeastern Regional Association of Teacher Educators	2001
Melissa Nail	Outstanding Graduate Student	Phi Delta Kappa, MSU Chapter	2000
M. Vaughan	Outstanding Graduate Student	Southeastern Regional Association of Teacher Educators	1998
Michael Mott	Outstanding Graduate Student	Southeastern Regional Association of Teacher Educators	1997
Lillie West	Outstanding Graduate Student	Phi Delta Kappa, MSU Chapter	1997
Penni Hairston	Outstanding Undergrad Student	Phi Delta Kappa, MSU Chapter	1996

COURSES DEVELOPED OR INNOVATIONS IN EXISTING COURSES

RECENT INNOVATION

EDSE 646 Advanced Methods of Teaching Science assigns science technology tasks to graduate student for review, analysis and reporting. Specifically electronic hand held data recording instrumentation (i.e., Pasco), Davis Electronic Weather Stations, and Internet Sites are examples of technology that are tested and reported upon by graduate students. Technology gained through internal university grants.

New instructional materials have been garnered through two internal grant opportunities (see grant section for details).

INNOVATIONS SINCE 1993 (*Italics represent where a publication, workshop or, paper presentation was derived from the course innovation*)

Instrument developed to align favored topic coverage in a graduate course

Student contracts developed to promote professional growth in science education

Workshop and student grant proposal writing to promote professional growth in science education

Use of email for assignment, communication, and answering questions within all classes since 1993

Modeling with teaching candidates problem solving and other classroom enhancement activities that go beyond the classroom walls (e.g., dropping parachutes from a football stadium to learn aerodynamics, visiting a music museum to make connections with the physics of sound).

Involving both undergraduate and graduate students in research projects

Involving students in paper and workshop presentations at conferences to encourage their professional growth

Providing students precise directions through assignment packets along with syllabus at the beginning of a semester.

Development of a cooperative learning wheel to facilitate the assignment of roles out in the classrooms

Communication and survey developed to enhance and improve field experiences of teacher candidates

Modeling of two recycling instruments developed by me to support and enhance science laboratory

Encouraging students to join various organizations for professional growth

Peer evaluation form to assess cooperative learning

Dissemination of free materials opportunities for enhancing science classroom instruction

Dissemination of classroom enhancement opportunities (e.g., listing of state parks, museums, etc.)

Recruitment of over 14 guest speakers to enhance classroom instruction

OTHER UNIVERSITY ASSIGNMENTS

Past and Present Assignments at UM

University Standing Committees

Research & Technology Park task force
Sabbatical Leave Review Committee
Copyright Committee
Region 7 Scientific Review Committee Member for Science Fair since 2001
Academic Program Review Committee 2002
University Tenure and Promotion Committee
Task Force on University Policies
Counsel for Academic Administrators
2004 & 2005 Frist Award Committee

School Committee

Assessment Committee
External Review Committee
Search Committee for Endowed Chair in Reading
Search Committee for Assistant Dean for Advisement

Curriculum and Instruction Committees

C&I Graduate Admission Council
Merit Pay Committee
NCATE Focus Group
Faculty Recruitment and Retention (Mentoring, Search, Etc.)
Adding Letter Grades to Senior Block Committee
Chair Student Teaching Assessment Instrument Committee
Academic Program Review Committee
Elementary Mathematics Education Search Committee
NCATE Unit Assessment Committee
NCATE Advanced Program Advisors Committee
Graduate Assistants Committee
Chair's Advisory Committee/ Graduate Committee
C&P (Representative)
Chair of Secondary Math Search Committee
Conceptual Framework Committee
Chair of Field Experience Committee

OTHER SERVICE

University

2005 Chair of Faculty Senate
Region 7 Scientific Review Committee Member
Dinner for Six Participant Fall 2001

School

NCATE Secondary Science Primary Writer and Compiler

Department

Grading masters portfolios and since summer 2001
Grading graduate comprehensive exams since 2001
Guest Speaker for Martha Whitwell's secondary science class concerning science fair Northeast Mississippi Community College Student Recruitment

Past Assignments at MSU

Curriculum and Instruction Committees

Faculty Development Co-chairperson in Curriculum and Instruction
Undergraduate Secondary Advising Committee
Merit Pay Committee
Summer School Policy Committee
Sabbatical Leave Committee (chair 1999-2000)

College of Education Committees

Box Council, ex-officio (1996-1997, 1998-2000)
Undergraduate Education Advisory Committee (UGEAC) ex-officio (1999-2000)
UGEAC Chair (1996-1997 and 1998-1999)
NCATE planning committee 1994-1997
NCATE/SACS steering committee Chair (1999-2000)

University Committee

Graduate Council (1998-2000)
Region 5 Science Fair Steering Committee (1993-1996)
Faculty Research Advisory Council (1994-2000)

Northeastern Illinois University

University Committee

Faculty Council for Academic Affairs
Faculty Senate Committee on Intercollegiate Athletics
Basic Skills committee a subcommittee of the General Education Committee

McNeese State University

Intradepartmental Committee

Chairman of "K-8 Science Curricula Development Committee"

University Committee

Faculty Senate
Officer (Faculty at Large)- Faculty Senate Executive Committee
Officer in McNeese State Credit Union

OFF-CAMPUS SERVICE ACTIVITIES PAST AND PRESENT

International

2005 – Council of Elementary of Science International (CESI) Board of Directors
2007- CESI membership officer
2007-2009 Make and Take Coordinator for CESI at NSTA convention

National

1996-2003- Advisory Board of Science Scope, Chair 1998/1999
1996-present- Manuscript Review Board of Science Scope
1996-2004- Intel ISEF Fair Director for the state of Mississippi

State

2008- Chair and External Reviewer Mississippi College
2007- Exernal Reviewer William Carey College
2006- External Reviewer Delta State University
2004 –present External Process Review Team
1996-2004- President of Science and Engineering Fairs in Mississippi
1996-present- Member board of directors for MSTA
1983-present- Involved in science fairs at school, regional, state and international levels (teacher, judge, judge coordinator, and staff development). Recently judged at Grenada high, Oxford middle and Oxford university schools
1991-present- Conducted staff developments for 16 public schools

Local

1995-1996- Vice President Programs- Phi Delta Kappa, Mississippi State Chapter
1994-Historian- Phi Delta Kappa, Mississippi State Chapter

1993-Vice President Programs- Phi Delta Kappa, Lake Charles Chapter
2001-2003 Vice President Membership- Phi Delta Kappa, University of Mississippi Chapter
2004-2005 President – Phi Delta Kappa, University of Mississippi Chapter
2000-2004 - Rotary Club Member and 9 weeks star student coordinator

MULTICULTURAL EXPERIENCES

Conducted science education research concerning African American childrens' perceptions of scientists and science in general (See Publications and Presentations)

Project Director for National Science Foundation Grant designed to increase the achievement levels of seventh and eighth grade African American children in science and mathematics during a 1996 Summer Science Camp

CURRENT PROFESSIONAL AND ACADEMIC ASSOCIATION MEMBERSHIPS AND PARTICIPATION

*Intel International Science and Engineering Fairs- State of Mississippi Director (1996-present) for Science and Engineering Fairs
Mississippi Science Teachers Association- Board Member and Convention Auction Organizer (2002-present)
National Association for Biology Teachers
National Association for Research in Science Teaching
*National Science Teachers Association- Advisory Board Member and Chair (1998 and 2002) for NSTA Journal Science Scope
*Phi Delta Kappa- President (2004-2005), University of Mississippi Chapter

*Denotes attendance at most recent meeting

WORKSHOP AND PAPER PRESENTATIONS

Sumrall, W. & Sumrall, K. (March, 2018). Using Models to Move Past the Scientific Processes of Test and Measurement into the Engineering Stage of Development: Combining STEM and *NGSS* Through Understanding by Design (UBD). Presentation at the National Science Teachers Association Conference in Atlanta, Georgia.

Sumrall, K. & Sumrall, W. (March 2018). Meet Me in the Middle Session: Roundtable Conversations, Session A. Presentation at the National Science Teachers Association Conference in Atlanta, Georgia.

Sumrall, W., & Sumrall, K. (February 2018). Using The 5e Model Of Instruction To Bring Out The Science Behind Doing A Problem Based Challenge. Presentation at Mississippi Academy of Sciences in Hattiesburg, Mississippi.

Sumrall, K. and Sumrall W. (October, 2017). Middle School Science and Career Readiness Standards:2018 Mississippi College and Career Readiness for Science. Presentation at the Mississippi Science Teachers Association Conference in Biloxi, Mississippi.

Sumrall, W., & Sumrall, K. (April, 2017). Using biomimicry in the early grades: Meeting NGSS practices. Presentation at the National Science Teachers Association National Conference in Los Angeles, California.

Moore, V., Sumrall, W., Mott, M., and Prewitt, E. (December, 2016). Starbucks, Yeti, North Face: A brand-new look at labels. Annual NCSS national conference. Washington, D.C.

Harden, J., Sumrall, W., Sumrall, K. (October, 2016). Problem-Based learning: Student competitions such as BEST robotics for all grade levels. Presentation at the Mississippi Science Teachers Association State Conference. Biloxi, Mississippi.

Sumrall, K., and Sumrall, W. (April, 2016). Parachutes. Presentation at the National Science Teachers Association conference in Nashville, Tennessee

Sumrall, J., and Sumrall, K.(October, 2015). Internet problem-based learning: Student competitions for all grade levels. Presentation at the Mississippi Science Teachers Annual Meeting, Jackson, MS.

Sumrall, K., Sumrall, J., and Allen, P. (October, 2015). Stemming with parachutes. Presentation at the Mississippi Science Teachers Annual Meeting, Jackson, MS.

Robinson, N., Sumrall, J., Moore, V., Stapp, A., and Prewitt, E. (September 2015). Discovering history with GPS technology. Presentation at the MGA Pre-Service Geography Conference.

Sumrall, W., & Sumrall, K. (April, 2014). Doing problem-based science challenges and managing your classroom: How to do both successfully! Presentation at the annual National Science Teachers Association conference, Boston, MA.

Sumrall, W. J. and Sumrall, K. M. (April, 2013). Engendering inquiry and teaching for transferal. Paper presented at the National Science Teachers Association National Meeting, San Antonio, TX.

Sumrall, W. J., and Sumrall, K. M. (April, 2013). Learning science by creating a newspaper. Paper presentation at the National Science Teachers Association national meeting, San Antonio, TX.

Sumrall, W.J. & Sumrall, M.K. (March/April, 2012). How pure science becomes applied science: Using STS to understand the STEM initiative. Workshop presented at the National Science Teachers Association National Conference. Indianapolis, Indiana.

Mitchell, E., & Sumrall, W.J. (March/April, 2012). Debate in the science classroom. Paper presented at the National Technology and Social Sciences Conference in Las Vegas, Nevada.

Mitchell, E., & Sumrall, W.J. (November, 2011). Assessment comparisons between lecture-based on inquiry emphasized teaching: What is fair? Paper presented at the Mid-South Educational Research Association Conference in University, Mississippi.

Sumrall, W., and Sumrall, K. (March, 2011) How safe is it? Engineering and cost considerations when building classroom structures. Presentation at the National Science Teachers Association National Conference in San Francisco, California.

Sumrall, W. (November, 2009). CESI Session: Make and take. Presentation made at the National Science Teachers Association Regional Conference in Fort Lauderdale, FL.

Sumrall, W., Barlow, K., Carroll, K., Frazier, C., Pannel, J. & Wiginton,J. (March, 2009). Council for Elementary Science International Session: Make and take extravaganza. Workshop presented at the National Science Teachers Association National Conference, New Orleans, LA.

Sumrall, W., Curry, K., and Moore, J. (March, 2008). Make and Take for Elementary Teachers. Workshop for the Council for Elementary Science International, Boston, MA.

Sumrall, W., Curry, K., and Moore, J. (March, 2008). Using the invention and patent process to learn about science and technology. Workshop presented at the National Science Teachers Association National Conference, Boston, MA.

Sumrall, W., **Curry, K**., and Moore, J. (March, 2008). Make and Take for Elementary Teachers. Workshop for the Council for Elementary Science International, Boston, MA.

Sumrall, W., **Curry, K**., and Moore, J. (March, 2008). Using the invention and patent process to learn about science and technology. Workshop presented at the National Science Teachers Association National Conference, Boston, MA.

Sumrall, J., and Raddin, D. (October, 2007). Outdoor inquiry based instruction: What is needed to be successful. Workshop presented at the Mississippi Science Teachers Association state conference, Jackson, MS

Curry, K., Sumrall, W., and Moore, J. (February, 2008). Surfing in the classroom. Paper presentation at the Creating Futures Through Technology Conference. Biloxi, Misssissippi.

Sumrall, W., Chessin, D., Coskey, S., Curry, K., and Deaton, C. (March, 2007). Make and take extravaganza. Workshop presentation for the Council for Elementary Science International. St. Louis, Missouri.

Sumrall, W., and **Curry, K**. (March, 2007). Teaching for transferral: The assessment challenge. Workshop presentation at the National Science Teachers Association National Conference, St. Louis, Missouri.

Sumrall, W., Carter, L., & **Curry, K.** (April, 2006). Understanding density???? through the stages of inquiry. Workshop presented at the National Science Teachers Association National Conference. Anaheim, California.

Curry, K., Sumrall, W., & Carter, N. (April, 2006). Roadways into developing elementary students. Paper presented at the National Science Teachers Association National Conference, Anaheim, California.

Sumrall, W., & **Schillinger, D**. (March, 2005), How students can be successful at science fair and inquiry? Paper presented at the national meeting of the National Science Teachers Association, Dallas, TX.

Sumrall, W., **Curry, K**., & **Carter, L**. (February, 2006). Math across the science, technology, and social studies curriculum. Paper presented at the Mississippi Academy of Sciences, Vicksburg, Mississippi.

Curry, K., Sumrall, W., & **Carter, L**. (February, 2006). Pre-service teachers' perception of the particulate nature of matter. Paper presented at the Mississippi Academy of Sciences, Vicksburg, Mississippi.

Schillinger, D. & Sumrall, W. (March, 2005) A Web/CD-based science curriculum studying the history, philosophy, and nature science. Paper presented at the national meeting of the National Science Teachers Association, Dallas, TX.

Harris, M., Hampton, E., Kosheleva, O., Ingwalson, G., & Sumrall, W. (February, 2005). Modules to promote parent engagement. Paper presented at the American Teacher Educator 2005 Annual Meeting in Chicago, Illinois.

Holmes, K., Sumrall, W., & **Witt, E.** (February, 2005). Experiences and monsters: How they contribute to science learning. Paper presented at the Mississippi Academy of Sciences. Oxford, MS.

Lee, S., & Sumrall, W. (February, 2005). Perceptions of elementary and middle school teachers in northeast Mississippi towards inquiry science teaching. Paper presented at the Mississippi Academy of Sciences. Oxford, MS.

Sumrall, W., & Hurley, M. (March, 2004). How should math and science be integrated? Paper presented at the national meeting of the National Science Teachers Association, Atlanta, GA.

Sumrall, W., **Schillinger, D**., & Bellipanni, L. (March, 2004). Test, design, and quality control through inquiry. Paper presented at the national meeting of the National Science Teachers Association, Atlanta, GA.

Sumrall, W. (November, 2004). Math across the science, technology, and society curriculum. Paper presented at Project Gear-Up, Biloxi, MS.

Sumrall, W. & Sumrall, C., (March, 2003). Garage sale science and flea market finds. Paper presented at the national meeting of the National Science Teachers Association. Philadelphia, PA.

Schillinger, D. & Sumrall, W. (March, 2003). Infusing science-related careers into the curriculum. Paper presented at the national meeting of the National Science Teachers Association. Philadelphia, PA.

Sumrall, W. & Bellipanni, L., (October, 2002). Mississippi science and engineering fairs 2002: Rules and regulations. Paper presented at the state meeting of the Mississippi Science Teachers Association. Jackson, MS.

Pope, M., Nail, M., & Sumrall, W. (March, 2002). Using children's literature to jump-start your science lessons. Paper presented at the national meeting of the National Science Teachers Association. San Diego, CA.

Sumrall, C., & Sumrall, W. (March 2002). Digging for $$$$$$'s. Paper presented at the national meeting of the National Science Teachers Association. San Diego, CA.

Sumrall, W. (2001, December). Developing a math and science standards based curriculum for the new millennium. Paper presented at the regional meeting of the National Science Teachers Association. Memphis, TN.

Sumrall, W., & **Schillinger, D.** (2001, November). Balancing a math/science curriculum: What works best for learning mathematics. Workshop presented at the Mississippi Council of Teachers of Mathematics in Olive Branch, MS.

Sumrall, W., & Sappington, T. (2001, October). Mississippi science and engineering fair update: Past, present, and future. Workshop presented at the Mississippi Science Teachers Association in Biloxi, MS.

Sumrall, W. (2001, October). Invited workshop. Workshop conducted at the Third Annual Regional Science Teacher's Conference in Galveston, TX.

Sumrall, W., **Nail, M., Pope, M.,** & Bellipanni, L. (2001, March). Encouraging year-round classroom inquiry through the infusion of technology into the development of science fair and other classroom projects. Paper presented at the national meeting of the National Science Teachers Association. St. Louis, MO.

Nail, M., Measells, B., Pope, M., & Sumrall, W. (2001, March). Science news: Using student-produced newletters to facilitate science education, create communities of science learners, and build home-school partnerships. Paper presented at the national meeting of the National Science Teachers Association. St. Louis, MO.

Bellipanni, L., Smith, R., & Sumrall, W. (2001, March). Science fair alumni-Where are they and what are they doing? Paper presented at the national meeting of the National Science Teachers Association. St. Louis, MO.

Bellipanni, L., Smith, R., Sumrall, W., & Dunigan, B. (2001, March) Pros and cons of constructivism as it applies to elementary and secondary teachers. Paper presented at the national meeting of the National Science Teachers Association. St. Louis, MO.

Sumrall, C., & Sumrall, W. (2001, March) Go for the gold. Paper presented at the national meeting of the National Science Teachers Association. St. Louis, MO.

Sumrall, W. (2000, October). How to use spreadsheet graphing to integrate math and science competencies. Paper presented at the Mississippi Council of Teachers of Mathematics. Mississippi State, MS.

Mott, M., Sumrall, W., & **Pope, M.** (2000, April). The reliability and developmental validity of theHypermedia-authored Science Presentation Rubric (HASPR). Paper presented at the national meeting of the National Science Teachers Association. Orlando FLA.

Sumrall, W., **Nail, M**., **Mott, M.**, **Pope, M.** & Bellipanni, L. (2000, April). Making chemistry relevant: Problem solving using real-world applications. Paper presented at the meeting of the National Science Teachers Association, Orlando, FLA.

Nail, M., **Pope, M.**, & Sumrall, W. (2000, April). Success in science: How to incorporate constructivist-based hands-on activities within your journal writing assignments. Workshop presented at the National Science Teachers Association, Orlando, FLA

Sumrall, W. J., & **Foxx, R.** (1999, October). Science Fair. Paper presented at the state meeting of the Mississippi Science Teachers Association presented in Vicksburg, Mississippi

Sumrall, W. J., & **Mott, M. S**. (1999, April). Using the commodities prices of metals on the internet to teach stoichiometric word problems. Paper presented at the national meeting of the National Science Teachers Association in Boston, Massachusetts.

Mott, M. S., & Sumrall, W. J. (1999, April). Performance-based assessment for students' scientific presentations. Paper presented at the national meeting of the National Science Teachers Association in Boston, Massachusetts.

Bellipanni, L., Ehrman, D., & Sumrall, W. (1998, November). Science fairing. Workshop presented at the regional meeting of the National Science Teachers Association in Birmingham, Alabama.

Sumrall, W., **Foxx, R**., & Bellipanni, L. (1998, October). 1998/1999 Mississippi science and engineering fairs update. Workshop presented at the meeting of the Mississippi Science Teachers Association in Biloxi, Mississippi.

Belk, J., Jones, L., & Sumrall, W. (1998, October). Free & inexpensive resources to use in the constructivist approach to teaching science. Workshop presented at the meeting of the Mississippi Science Teachers Association in Biloxi, Mississippi.

Wicker-Sumrall, C., & Sumrall, W. (1998, October). Classroom contests and grant opportunities. Workshop presented at the meeting of the Mississippi Science Teachers Association in Biloxi, Mississippi.

Sumrall, W., **Vaughn, M**., & **Mott, M.** (1998, November). Senior Block Field Experiences at Mississippi State University: A Model for Elementary Preservice Teachers. Paper presented at the meeting of The Southeastern Regional Association of Teacher Educator in the Bahamas.

Motamedi, V, & Sumrall, W. (1998, November). Mastery Learning and Contemporary Issues in Education. Paper presented at the meeting of the Mid-South Educational Research Association in New Orleans, Louisiana.

Vaughan, M., & Sumrall, W. (1998, April). Comparative study: An intervention of using the newspaper to teach science and social studies literacy. Paper presented at the meeting of the National Science Teachers Association meeting in Las Vegas, Nevada.

Mott, M., & Sumrall, W. (1998, April). Scientists are presenters: Integrating science and social studies. Paper presented at the meeting of the National Science Teachers Association meeting in Las Vegas, Nevada.

Sumrall, W., **Mott, M.**, & **Vaughn, M.** (1998, April). Why avoid hands-on science. Workshop presented at the meeting of the National Science Teachers Association in Las Vegas, Nevada.

Pepper, K., Sumrall, W., & **Mott, M**. (1998, February). Evaluation of a preservice teacher education program using an evaluation model to further develop the research-based knowledge of teacher education. Poster session presented at the meeting of the American Association of Colleges for Teacher Education in New Orleans, Louisiana.

Sumrall, W., Belk, J., & **Mott, M**. (1997, November). Future investigators exploring science through action (FIESTA)-Results from a National Science Foundation Summer Science Camp. Paper presented at the Mid-South Educational Research Association in Memphis, TN.

Mott, M., Sumrall, W., & Hodges, L. (1997, November). Writing curriculum: A review of methods and assessments. Paper presented at the Mid-South Educational Research Association in Memphis, TN.

Sumrall, W., **Mott, M**., & Bellipanni, L. (1997, October). Fairs update. Workshop presented at the Mississippi Science Teachers Association meeting in Biloxi, MS.

Mott, M., Hodges, L., & Sumrall, W. (1997, October). Computer-assisted elementary writing curriculum: Methods and assessment. Paper presented at the Mid-South Educational Research Association in Memphis, TN.

Vaughan, M.N., Sumrall, W.J., & Rose, L.H. (1997, April). Integrating science and social studies concepts through newspaper lessons. Paper presented at the meeting of the National Science Teachers Association in New Orleans, Louisiana.

Sumrall, W.J. & Bellipanni, L.J.(1996, November). Science fair review: Rules and regulations. Workshop presented at the meeting of the Mississippi Science Teachers Association in Biloxi, Mississippi.

Sumrall, W.J. & **Huser, C.** (1996, March). Using university graduate students to help elementary children learn science. Paper presented at the meeting of the National Science Teachers Association in St. Louis, Missouri.

Sumrall, W.J. & Sumrall, C. (1995, November). Effectiveness of introducing electronic mail applications within two preservice elementary science methods courses. Paper presented at the meeting of the Mid-South Educational Research Association in Biloxi, Mississippi.

Sumrall, W.J. (1995, November). Reasons for the perceived images of scientists by race and gender of students in grades 1-7. Paper presented at the meeting of the Southeastern Regional Association of Teacher Educators in Lake Charles, Louisiana.

Sumrall, W.J. & Bellipanni, L. (1995, November). Science fair rules and regulations. Paper presented at the meeting of the Mississippi Science Teachers Association in Biloxi, Mississippi.

Sumrall, W.J. & et al (1995, November). Aerodynamics is a dynamite way to teach problem solving! Workshop presented at the meeting of the Mississippi Science Teachers Association in Biloxi, Mississippi.

Sumrall, W.J. (1995, November). Publishing your ideas - How to do it and why should I do it? Paper presented at the meeting of the Mississippi Science Teachers Association in Biloxi, Mississippi.

Sumrall, W.J. & Sumrall, C. (1995, February). The effectiveness of infusing internet applications within two preservice elementary science methods courses. Paper presented at the Mississippi Academy of Sciences in Biloxi, Mississippi.

Foxx, R. & Sumrall, W.J. (1995, February). An instructor's approach to science education and interactive learning. Paper presented at Mississippi Academy of Sciences in Biloxi, Mississippi.

Sumrall, W. J. & Rose, L. (1994, December). Enhancing teaching in the public schools by using the newspaper to increase science and social studies literacy. Paper presented at the meeting of the Rural Systemic Initiative Conference in Monroe, Louisiana.

Sumrall, W. J. (1994, November). Using spreadsheet/graphing to teach a variety of science lessons. Paper presented at the meeting of the Mississippi Science Teachers Association in Jackson, Mississippi.

Sumrall, W. J. & **Foxx, R.** (1994, November). Why would a teacher avoid teaching science hands-on? Workshop presented at the Mississippi Science Teachers Association in Jackson, Mississippi.

Sumrall, W. J. (1994, October). Using spreadsheet/graphing computer functions to teach a variety of science lessons. Paper presented at the National Science Teachers Association meeting, in Portland, Oregon.

Sumrall, W. J. (1994, March). Using spreadsheet/graphing computer functions to teach a variety of science lessons. Paper presented at the National Science Teachers Association meeting in Anaheim, California.

Sumrall, W. J. (1994, March). Process skills are not unique to a science discipline. Workshop presented at the National Science Teachers Association meeting in Anaheim, California.

Sumrall, W. J. (1994, February). An analysis of predictions preservice teachers and high school students made about the planet's future. Paper presented at the Mississippi Academy of Sciences in Biloxi, Mississippi.

Richardson, M. & Sumrall, W. J. (1994, February). A comparison study of middle school students that have the choice of doing an extra credit science assignment. Paper presented at the Mississippi Academy of Sciences in Biloxi, Mississippi.

Sumrall, W. J., Wicker, C. & Bellipanni, L. (1993, December). Using the experimental method throughout all science disciplines. Workshop to be presented at the meeting of the National Science Teachers Association in Orlando, Florida.

Sumrall, W. J. (1993, December). How to make stoichiometric problems relevant through economic analysis of precious metals. Paper to be presented at the meeting of the National Science Teachers Association, Orlando, Florida.

Sumrall, W. J., & Wicker, C. (1993, July). Students become active participants in safeguarding the environment. Paper presented at the international meeting of the National Science Teachers Association in Oaxtepec, Mexico.

Sumrall, W. J. (1993, July). How to make stoichiometric problems relevant through economic analysis of precious metals. Paper presented at the meeting of the National Science Teachers Association in Oaxtepec, Mexico.

Sumrall, W. J., & Aronin, G. (1993, June). Using spread sheet graphing to teach a variety of science lessons. Paper presented at the meeting of the National Educational Computing Conference in Orlando, Florida.

Sumrall, W. J., & Harris, W. (1993, March). An investigation of the perceived images that black students have toward the nature of science and scientists in general. Paper presented at the meeting of the Research Association of Minority Professors in Houston, Texas.

Sumrall, W. J. (1993, March). How to make stoichiometric problems relevant through analysis of precious metals. Paper presented at the meeting of the National Science Teachers Association in Kansas City, Missouri.

Sumrall, W. J., & Bellipanni, L. J. (1993, March). Using the experimental method throughout all science disciplines. Paper presented at the meeting of the National Science Teachers Association in Kansas City, Missouri.

Sumrall, W. J., & Aronin, G. (1992, March). Students become active participants in safeguarding the environment. Paper presented at the meeting of the National Association of Science Teachers in Boston, Massachusetts.

Sumrall, W. J., & Brown, F. W. (1992, March). Learn how to make chemistry interesting and relevant through the analysis of consumer goods. Paper presented at the meeting of the National Association of Science Teachers in Boston, Massachusetts.

Sumrall, W. J., & Bellipanni, L. J. (1991, March). A process skill workshop involving all disciplines of science. Paper presented at the meeting of the National Science Teachers Association in Houston, Texas.

ADMINISTRATIVE WORK EXPERIENCE

Interim Chair for Department of Curriculum and Instruction, fall 2005- 2006
Assistant Chair for Department of Curriculum and Instruction, spring, 2004-2005

Assistant Dean for Curriculum and Learning Outcomes, summer, 1999 to summer 2000

Secondary Program Coordinator in Curriculum and Instruction fall, 1998-spring, 1999

Some duties of the Coordinator include class scheduling with secondary faculty, dissemination of information to secondary faculty, program development undergraduate and graduate, coordinate curricula matters at the secondary level, call and set-up meetings with secondary faculty, lead role in setting standards at secondary level, work with department chair and other program areas to coordinate policies and other curricula matters

Interim Senior Block Experience Director fall, 1996-summer, 1997

The Senior Block at MSU is four methods courses (i.e. language arts, mathematics, science, and social studies) in which elementary preservice teachers enroll the semester prior to their student teaching.

Some duties of the Director included working with public school administration to place students in their field experience, disseminate materials to and work with supervising teachers during students' placement

in the field, schedule and work with faculty who supervise students during their field experience, scheduling of events/classes within the block experience time frame.

Project Director

Some duties of the Director include budget development and control, supervising both preservice and inservice teachers, scheduling, curricula development, and final report development.

President of Mississippi Science and Engineering Fairs

Coordinate regional director meetings, provide teacher inservices, budget control, coordinator and in some cases mediator between parents, judges, fair directors, and students