

FRANCES HAMILTON

EDUCATION

Ed.D Assessment, Learning, and School Improvement Middle Tennessee State University, Murfreesboro, TN	2016
Ed. S. Curriculum and Instruction Middle Tennessee State University, Murfreesboro, TN	2013
M.A. Administration and Supervision Tennessee State University, Nashville, TN	2008
B.S. Education Athens State University, Athens, AL Areas of Concentration: Elementary Education and Early Childhood Education	1998

CERTIFICATIONS-STATE OF TENNESSEE

402 Elementary K-8 DOE 8/31/2022

497 PreK-4 DOE 8/31/2022

Highly Qualified in Middle School Science

ILL-B Beginning Administrator DOE 8/31/2020

RESEARCH INTERESTS

- Integration of Science with English Language Arts in primary grades
- Science literacy across grade levels
- Mentoring teachers through cognitive coaching

PUBLICATIONS AND PAPERS WITH PRESENTATIONS

PUBLICATIONS

Hamilton, F. A. (under review) Using Outdoor Spaces for Formal and Informal Excursions, *Science and Children*

Hamilton, F. A. (2007). The Evolution of a Teacher's Teaching of Evolution, https://gsa.confex.com/gsa/2007SE/finalprogram/abstract_119288.htm (Accession No. 119288)
Paper in Proceedings of The Geological Society of America 56th annual meeting Southeastern Section, Savannah, GA

Crews, L., Gibson, M. & **Hamilton, F. A.** (2007). Infusion of Integrated Earth and Planetary Science Activities Into Middle School Curricula: A Selection of the Best Practices from the IMEGS Program, https://gsa.confex.com/gsa/2007SE/finalprogram/abstract_119140.htm (Accession no. 119140) Presentation from The Geological Society of America 56th annual meeting of Southeastern Section, Savannah, GA

PRESENTATIONS

- Hamilton, F.A.** (2016). *Engaging the Natural Curiosities of Children in the Early Years*. Presentation at National Science Teachers Association Conference, Nashville, TN.
- Hamilton, F.A.**, Livingston, K., & Thompson, C. (2012). *Sea Shells*. Presentation at Tennessee Science Teachers Association Conference, Murfreesboro, TN.
- Hamilton, F.A.** & Anderson, T. (2012). *Bumping Up Beach Box: Secrets of a Sea Star and Parts of a Wave Foldables*. Presentation at Tennessee Science Teachers Association Conference, Murfreesboro, TN.
- Hamilton, F.A.**, Thompson, C. (2011). *Beach Box*. Presentation at Tennessee Science Teachers Association Conference, Murfreesboro, TN.
- Hamilton, F.A.** (2010). *Foldables*. Presentation at Tennessee Educators of Aquatic and Marine Science Spring Conference, Gatlinburg, TN.
- Hamilton, F.A.** (2010). *Interactive (and I do mean interactive) Notebooks*. Presentation at Lincoln County In-Service, Fayetteville, TN.
- Hamilton, F.A.** & Royle, P. (2009). *Teaching Evolution*. Invited speaker. Presentation at the 2008 (118th) annual meeting of the Tennessee Academy of Science, Nashville, TN.
- Byrne, B., Crews, L., & **Hamilton, F.A.**, et. al. (2008). *Tennessee Earth Science Teachers Lost in Space? We'll Help You Find Your Way*. Presentation at Tennessee Science Teachers Association Conference, Nashville, TN.
- Hamilton, F.A.** (2008). *Ocean Currents*. Presentation at Tennessee Science Teachers Association Conference, Nashville, TN.
- Hamilton, F.A.**, & Thompson, C. (2008). *Mini-Beach Box: Ocean Science for Grades K-8*. Presentation at Tennessee Science Teachers Association Conference, Nashville, TN.
- Hamilton, F.A.** (2008). *Caves!* Presentation at Tennessee Educators of Aquatic and Marine Science Spring Conference. Chattanooga, TN.
- Cox, B., Franks, R., & **Hamilton, F.A.** (2007). *IMEGS: Expanding Knowledge, Exercising Skills, Enhancing Confidence* Poster presentation at National Marine Educators Association Conference, Portland, Maine.
- Hamilton, F.A.** & Livingston, K. (2007). *A Watered Down Topographic Map Grades 6-8*. Presentation at Tennessee Educators of Aquatic and Marine Science Conference, Brandon Springs, TN.
- Hamilton, F.A.** (2007). *Teaching Water Science Using Tubs*. Presentation at Tennessee Educators of Aquatic and Marine Science Spring Conference, Brandon Springs, TN.
- Forrester, T., **Hamilton, F.A.**, & Thompson, C. (2007). *Beach Box: Ocean Science for Grades K-8*. Presentation at Tennessee Science Teachers Association Conference, Nashville, TN.
- Hamilton, F.A.** (2006). *Aquatic Science in a Tub Grades 6-8*. Presentation at Tennessee Educators of Aquatic and Marine Science Conference, Gatlinburg, TN.

Hamilton, F.A. & McClain, L. (2006). Tennessee under the Sea 4-8. Presentation at Tennessee Science Teachers Association Conference, Nashville, TN.

RESEARCH

Factors That Impact Kindergarten Teachers' Decisions about Teaching Science

August 2016-present

University of Alabama in Huntsville

PI: Frances Hamilton

- Qualitative study investigating *when* Kindergarten teachers teach science and *how* they are incorporating science (i.e. integration of ELA, use of AMSTI kits, etc.) over an extended time period
- Investigating spontaneous interactions between teachers and students upon recognizing, during interviews, that science is informally occurring more frequently than initially recognized
- Participants are teachers from Alabama and Tennessee, in four school systems, with an interesting case where one teacher has moved from a traditional setting to a special STEM school
- Another interesting case in which one teacher, after 26 years of teaching, participated in AMSTI training over the summer
- Qualtrics survey software was used to collect daily journal entries regarding science teaching

Factors That Impact Kindergarten Teachers' Decisions of When to Engage the Natural Curiosities of Their Students in Science

2014 - present

Middle Tennessee State University, Murfreesboro, TN

Dissertation Directed by: Dr. Rick Vanosdall

- Qualitative study examining *when* and *how* Kindergarten teachers teach science, including use of AMSTI kits and integration of other subjects
- Participants were teachers from Alabama and Tennessee, in four school systems, who collected data about their science instruction daily for two months.
- Participatory action research using a collective inquiry approach
- Narrative inquiry that involves professional life history interviews
- Grounded theory exploring individual cases
- Ethnographical study using cross-case analysis to understand culture of science community
- Used purposeful sampling and Qualtrics survey software for data collection

EDUCATIONAL EXPERIENCE

Coordinator of Field and Clinical Experiences

University of Alabama in Huntsville

2014-2017

- Securing placements for students for field experiences and internships
- Supervising the internship portion of the teacher prep program
- Educating and Coordinating edTPA process with interns and supervising teachers
- Evaluating program and placements with survey data collection

Lecturer

2014-2016

Department of Curriculum and Instruction, University of Alabama in Huntsville

ED 371: Teaching Language Arts in the Elementary Classroom (Spring 2015, Spring 2016)

ED 493: Elementary Internship (Spring 2016, Fall 2016)

ED 309: Classroom Behavior and Management (Fall 2015)

ED 532: Space Orientation for Teachers-online (Summer 2015, 2016, Fall 2015, 2016)

SPA 532: Space Orientation for Educators-online (Summer 2015, Fall 2015, 2016)

Assistant Principal-Curriculum**2012-2014**

Ralph Askins Elementary School, Fayetteville, TN

- Mentored teachers and modeled literacy lessons
- Provided professional development on Common Core English Language Arts/Literacy and Math, science standards (science for system)
- Reading Response to Intervention Team Leader
- Led curriculum mapping for ELA, including phonics instruction and reading strategies, math, science, and social studies
- Collaborated with both reading specialists to identify areas of student needs, specific instructional strategies, and analysis of assessment data collected
- Collaborated with the district-wide reading consultant, specifically making her aware of school areas to strengthen in reading instruction and formulating an action plan
- Reviewed lesson plans in grades Pre-K-4
- Conducted teacher evaluations
- Testing Coordinator for benchmark testing and data analysis (school and system)
- An annex was added to the school (2013) in which I was the administrator maintaining the building, including monitoring instruction and discipline issues

Science Consultant**2013-present**

Tennessee State Department of Education

- Led 12 science teachers in writing user guides for science units
- Member of the writing team for the new Tennessee State Science Standards
- Reviewing TCAP (state achievement tests) items, Biology and Chemistry end of course (EOC) items
- Created user guides for Institute for Learning units that were purchased by the state department upon my recommendation
- Answered questions about science teaching from TNCore site

Instructional Coach (Literacy Focus)**2010-2014**

Ralph Askins Elementary School, Fayetteville, TN

- Curriculum mapping of all subjects Pre-K through grade 3
- Provided system-wide professional development on Common Core ELA and math, and science
- Mentored teachers through teacher evaluation process
- School Improvement Plan Chair
- Testing Coordinator for building (TCAP, CRA, and benchmark), analyzed data

Middle School Science Teacher**2009-2010**

Highland Rim Elementary School

- Planned instruction and analyzed data for grades 7-8

Middle School Science Teacher**2003-2009**

Blanche School, Taft, TN

- Chair for the School Improvement Plan-over the whole school (Pre-K-8)
- Planned instruction, and analyzed data, as well as organized annual Rocket Day, bridge building competition, and science fair (also organized county science fair two years)
- Science Department Chair
- Assistant volleyball coach, academic team coach, and LEO club sponsor.

Sixth Grade Teacher**1999-2003**

Blanche School, Taft, TN

- Self-contained classroom, planned and taught ELA, Math, Science
- Trained in Gateway English Language Arts
- Trained in Reading Renaissance

Family Child Care Provider**1994-1996**

Department of Defense, Redstone Arsenal, AL

- Cared for children ages 6 months-12 years
- Monthly training on childhood development ages 6 mos-12 years
- Assisted children with homework

Preschool Teacher**1991-1992**

Department of Defense, Augsburg, Germany

- Preschool in my home, supervised by the Department of Defense Family Child Care Program
- Recognized as "Provider of the Quarter" twice. There were 50 FCC providers at the time and I was selected for the award because of the learning experiences I integrated into my program, including taking students to a German hospital, fire station, grocery store, library, etc. I had four groups of six children that came weekly
- Attended Association for Young Children in Europe Conference in Mannheim, Germany in 1991, 1992

RELATED EXPERIENCE**Draft Review Team Leader for the State on Next Generation Science Standards****2011– 2014**

Tennessee State Department of Education

- Collected data from state-wide surveys and compiled reports, along with Science Coordinator at the Tennessee Department of Education, and submitted reports to Achieve

Program Director**2006-2014**

Tennessee Educators of Aquatic and Marine Science

- Planned annual spring conference (location, lodging, food, workshop presenters, etc.) and planned TEAMS sessions at annual Tennessee Science Teachers Association (TSTA) conference
- Scheduled 120 sessions with presenters from all over the world during our 2010 NMEA national conference in Gatlinburg
- Middle Tennessee representative from 2002-2005

Common Core Coach in Literacy-Science**2013-2014**

TNCORE/TN State Department

- Trained science teachers across the state on common core state standards in science literacy

TCAP Item Reviewer for Pearson**2011-2014****TCAP Item Reviewer for McGraw Hill****2004**

- Reviewed for TCAP (state achievement test) and MAAS (for students with accommodations) science grades 3-8

Quality Assurance Review Team Member**2011-2012**

AdvancEd/Southern Association of Colleges and Schools

- AdvancEd (SACS) visits to schools in Tennessee. Reviewed mainly the Teaching and Learning component, but also data analysis and others

Contributor	2011-2012
Tennessee Curriculum Center (web site)	
<ul style="list-style-type: none"> • Located and submitted resources for middle school science 	
Science Representative	2007-2008
Project Citizen Curriculum for Tennessee Department of Education	
<ul style="list-style-type: none"> • Provided information and feedback regarding science aspects of the curriculum as it was designed and written 	
Master Teacher	2006
UTMartin IMEGS	
<ul style="list-style-type: none"> • Took information given to participants by the professors and instructed how to use the information in the classroom, including teaching strategies, and integration of curriculum 	
Participant	2006-2009
Lincoln County Schools "So You Want To Be an Administrator" Program	
<ul style="list-style-type: none"> • Enrolled in a three year administrators program through central office 	

GRANTS

NREA Mini Grant (2002). National Rural Electric Cooperatives Association. \$500
 TEAMS Mini Grant (2006). Tennessee Educators of Aquatic and Marine Science \$100
 TEAMS Mini Grant (2007). Tennessee Educators of Aquatic and Marine Science \$100
 NMEA Conference Scholarship Award (2007). National Marine Educators Association \$500
 TEA Space Grant (2009). Tennessee Educators Association Space Grant \$1000
 NMEA Conference Scholarship Award (2012). National Marine Educators Association \$500

AWARDS

National Association of GeoScience Teachers	
Tennessee Outstanding Earth Science Teacher	2009
Tennessee Science Teachers Association Teacher of the Year Grades 5-8	2008
Blanche School Teacher of the Year	2004-2005
Lincoln County Middle School Teacher of the Year	2004-2005
Lincoln County Distinguished Classroom Educator (all grades)	2004-2005
Oceans Alive (took 3 students to sea-one of 8 teachers selected nation-wide)	2004
Sea Scholar (one of 13 chosen nation-wide to go to sea)	2000
One of 25 selected to travel to Biloxi, Mississippi for water studies	2000
Provider of the Quarter (for preschool program in Augsburg, Germany)	1991, 1992

SERVICE

Tennessee Education Association	
<ul style="list-style-type: none"> • Representative Assembly • Representative 	2000-2003 2005, 2007-2009
Kappa Delta Pi-Rho Gamma Chapter	
<ul style="list-style-type: none"> • Historian • President (ACE Award Winner) 	2000 1999

MEMBERSHIPS

Tennessee Educators of Aquatic and Marine Science (TEAMS)	Enrolled	2000
Tennessee Earth Science Teachers (TEST)		2001
Tennessee Science Teachers Association (TSTA)		1999
National Marine Educators Association (NMEA)		2005
National Science Teachers Association (NSTA)		2005
Tennessee Academy of Science (TAS)		2008
Geological Society of America (GSA)		2007
Association of Teacher Educators (ATE)		
Association for Supervision and Curriculum Development (ASCD)		