

## **Sarah Kathryn Guffey-McCorrison (Katie), Ph.D.**

Associate Professor – Secondary Education – Science

University of South Alabama

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## **EDUCATION**

Ph.D. 2017

Science Education, University of Wyoming

Minor: Quantitative Research

Minor: Environment & Natural Resources

Dissertation Title: Undergraduate students' conceptual understanding of science concepts on the Exam of Geology Standards

Chair: Dr. Timothy F. Slater

M.A. 2012

Science Teaching, East Carolina University

B.S. 2008

Biology, Chemistry, University of North Carolina Wilmington

## **LEADERSHIP & ADMINISTRATIVE EXPERIENCE**

2026 – Present **Program Coordinator, and Associate Professor**, College of Education & Professional Studies, University of South Alabama

Program coordinator for new Ed.D. Teacher Education program in the Department of Leadership and Teacher Education.

2023 – Present **Program Director, and Associate Professor**, College of Education & Professional Studies, University of South Alabama

Principal investigator and Program Director for the National Science Foundation Noyce STREAM Program in the Department of Leadership and Teacher Education.

- Recruit and advise 16 undergraduate science majors to pursue an Alternative Master's in Secondary General Science Education degree. Target goal is four students per cohort (16 students total).
  - Cohort 1 (2024-2025): 5 students, Cohort 2 (2025-2026): 4 students, Cohort 3 (2026-2027): 6 students, Cohort 4 (2027-2028): Recruitment phase in progress
- Manage \$1,200,000.00 budget.
- Collaborate with science faculty in the College of Arts and Sciences on graduate science course development.
- Recruit and collaborate with district science coordinator, principals, and science teachers in the public county school system to serve as mentors to scholars.

2022 – 2023      **Program Director, and Assistant Professor**, College of Education & Professional Studies, University of South Alabama

Principal investigator and Program Director for the National Science Foundation Noyce STREAM Program in the Department of Leadership and Teacher Education.

- \*Same responsibilities as listed above.

## PROFESSIONAL EXPERIENCE

2023 – Present	University of South Alabama, Mobile, Alabama Associate Professor – Science Education
2017 – 2023	University of South Alabama, Mobile, Alabama Assistant Professor – Science Education
2014 – 2017	University of Wyoming – Curriculum & Instruction Ph.D. student – Science Education
2012 – 2014	Graduate Research Assistant – NSF Noyce Scholars Program Vance High School, Charlotte, North Carolina
2013 – 2014	High School Earth and Environmental Science Teacher YMCA, Charlotte, North Carolina
2009 – 2011	Science Day Camp Instructor Parkridge Surgery Center, Columbia, South Carolina
2005 – 2008	Administrative Assistant Cape Fear Community College, Wilmington, North Carolina Tutor: Chemistry, Biology, Anatomy & Physiology

## AWARDS & HONORS

2023	Faculty Excellence Award
2021	Sally Steadman Azalea Chapter of the Mortar Board Senior Honor Society, Top Prof
2021	USA Faculty Fellow in Community Engagement
2020	Selected Participant – Strategic Course Design Mini-Course (SCD-MC)
2017	Best Paper Award – International Science Education Conference
2016	Nielson Graduate Excellence Fellowship
2016	Haub Student Research & Creative Activities Grant
2016	David Bauer Grant Writing Fellowship
2015	Ervian Haub Scholarship for Yellowstone Field Studies
2015	College of Education International Travel Scholarship
2015	Dick & Lynn Cheney Study Abroad Travel Grant
2011	North Carolina Space Grant – Research Grant
2010	Robert F. Noyce Scholarship

## REFEREED PUBLICATIONS (15)

\*Caudle, D. L., Dunk, R. D. P., Ricketts, N., Godfrey, D., Beatty, A. E., Guffey-McCorrison, S. K., Ballen, C. J., Henning, J. A. (accepted 2025). Ideological Awareness in Practice:

Perspectives from Experienced Introductory Biology Instructors. *International Journal of Science Education*.

Gaston, J. P., **Guffey, S. K.**, Rand, A. (2023). Using video and written reflection to assess second-grade students' design thinking and conceptual understanding in an engineering design challenge. *International Journal of Education in Mathematics, Science and Technology*.

Morton, B. C., **Guffey, S. K.**, Parrish, C. W., Byrd, K. O., Ferguson, S. N., Green, A. M. (2023). Analyzing teachers' experiences in an urban summer enrichment program. *The Professional Educator*.

Lanicci, J., & **Guffey-McCorrison, S. K.** (2022). How important is K-12 education in achieving a weather-ready nation? *Journal of Geoscience Education*.  
<https://doi.org/10.1080/10899995.2022.2138725>

Guffey, S. K. (2021). Forming a consensus of core geology concepts from national education reforms. *Journal of Astronomy and Earth Sciences Education*.  
<https://doi.org/10.19030/jaese.v8i2.10408>

Guffey, S. K., Parrish, C. W., Williams, D. S. (2021). Students' perceptions of team learning across teaching frameworks and settings. *Contemporary Issues in Teacher Education*.  
<https://doi.org/10.14507/cie.vol22iss3.1960>

Parrish, C. W., **Guffey, S. K.**, & Williams, D. S. (2021). The impact of team-based learning on students' perceptions of classroom community. *Active Learning in Higher Education*, 14697874211035078. <https://doi.org/10.1177/14697874211035078>

Parrish, C. W., **Guffey, S. K.**, Williams, D. S., Estis, J. M., & Lewis, D. (2021). Fostering cognitive presence, social presence, and teaching presence with integrated online—team-based learning. *Tech Trends*. 1-12. <https://doi.org/10.1007/s11528-021-00598-5>

Reeves, L., Parrish, C. W., & **Guffey, S. K.** (2021). Choosing a career in special education. *Journal of Research in Special Educational Needs*, 21(2), 73-85.  
<https://doi.org/10.1111/1471-3802.12500>

\*Maulucci, M., & **Guffey, S. K.** (2020). Evolution in the digital age: implementation of 5E and the Next Generation Science Standards in the virtual biology classroom. *The Electronic Journal for Research in Science and Mathematics Education*, 24(3), 45-52.  
<https://eric.ed.gov/?id=EJ1285255>

Guffey, S. K., & Slater, T. F. (2020). Geology misconceptions targeted by an overlapping consensus of US national standards and frameworks. *International Journal of Science Education*, 42(3), 469-492. <https://doi.org/10.1080/09500693.2020.1715509>

Guffey, S. K., Parrish, C. W., Martin, S. N., Green, A. M. (2020). Successes and challenges of a summer STEM program for students from Title I schools, *Middle School Journal*, (51)3, 26-32, <https://doi.org/10.1080/00940771.2020.1735869>

Guffey, S. K., Slater, T. F., Slater, S. J. (2017). Development of the EGGS Exam of GeoloGy Standards to measure students' understanding of common geology concepts. *Journal of Astronomy and Earth Science Education*, 4(1), 25-62.  
<https://doi.org/10.19030/jaese.v4i1.9973>

Schwartz, A. C., Burrows, A. C., & **Guffey, S. K.** (2017). Mentoring partnerships in science education. *Educational Action Research*, 25(4), 630-649.  
<https://doi.org/10.1080/09650792.2016.1221838>

Guffey, S. K., Slater, S. J., Schleigh, S. P., Slater, T. F., & Heyer, I. (2016). Surveying geology concepts in education standards for a rapidly changing global context. *Contemporary Issues in Education Research*, 9(4), 167-189. <https://doi.org/10.19030/cier.v9i4.9788>

#### **SUBMITTED FOR REVIEW**

\*Orr, L. A., McCorrison, S. K., Baxter, B. N., Lawley, H. K., Marmande, M. H., Mayeaux, K. N., Forbes, D. C. (revising to resubmit March 2026). Breaking the Recipe: Preparation through research-driven experiences. *Journal of College Science Teaching*.

\*Denotes research with Graduate Student

### **CONFERENCE PAPERS & PRESENTATIONS**

\*Scott, N., Norman, T., & **McCorrison, S. K.** (accepted 2025). Pollution Evolution – How human pollution impacts organismal adaptation. National Science Teacher Association Annual Meeting (NSTA). Anaheim, CA. April 2026.

\*Davis, A., Santallana, B., & **McCorrison, S. K.** (accepted 2025). The Un-Pee-lievable Power of Analytical Chemistry: Solving Mysteries with Urinalysis. National Science Teacher Association Annual Meeting (NSTA). Anaheim, CA. April 2026.

McCorrison, S. K., Green, A. M., & Ferguson, S. N. (submitted July 2025). Using early field experience to recruit individuals to become science teachers. AERA Annual Meeting.

\*Lanicci, J. M., McCorrison, S. K., Fink, H. (2025). Creating a K-12 Weather Ready Nation-styled curriculum. Boston MA: American Meteorological Society.

<https://ams.confex.com/ams/105ANNUAL/meetingapp.cgi/Paper/456938>

McCorrison, S. K., Green, A. M., & Ferguson, S. N. (2025). The Noyce Pre-Residency: Early field experiences used to recruit individuals to become science teachers. NARST Annual Meeting Washington, D.C. March 23-26.

\*Rowland, J., Garbe, R., & **McCorrison, S. K.** (2025). Assessing classroom learning conditions for better learning outcomes. Alabama Science Teachers Association Annual Conference. Vestavia Hills, AL. February 24-25.

\*Vaughn, J., Huerta, K., Walker, R., & **McCorrison, S. K.** (2025). From Virtual to reality: enhancing inquiry-based learning through online simulations. Alabama Science Teachers Association Annual Conference. Vestavia Hills, AL. February 24-25.

\*Lanicci, J. M., McCorrison, S. K., Fink, H. (2024). Can weather-related fatalities be reduced by rethinking how weather is taught in K-12 education? Southeastern Coastal & Atmospheric Processes Symposium

<https://www.southalabama.edu/colleges/artsandsci/earthsci/meteorology/secaps/resources/2024agenda.pdf>

Ferguson, S. N., Gaston, J. P., Byrd, K. O., **McCorrison, S. K.**, Green, A., Stefurak, J. R., Parrish, C., Mulekar, M. S. (2023). Noyce Pathway to Mathematics II: An integrated STEM initiative focused in diversity, equity, and inclusion, Annual Meeting of the Mid-South Educational Research Association, Pensacola, FL. (November 9, 2023).

Ferguson, S. N., Byrd, K. O., Gaston, J. P., Parrish, C., **McCorrison, S. K.**, Stefurak, J. R., Green, A. M., Wu, S., (2023). NSF Noyce Pathway to Mathematics II: An Integrated STEM Initiative Focused in Diversity, Equity, and Inclusion, AAAS Noyce 2023 Summit, Washington D.C. (June 26, 2023).

Ferguson, S. N., Byrd, K. O., Gaston, J. P., Parrish, C., **McCorrison, S. K.**, Stefurak, J. R., Green, A. M., Wu, S., (2023). Pathway to Mathematics II: An Integrated STEM

Initiative Focused in Diversity, Equity, and Inclusion. Southeast Regional Noyce Conference, Mobile, AL. (May 30, 2023).

Brand, H., Green., A. M., **Guffey-McCorrison**, S. K., Mangum, J., & McCleave, D. (2022) Educator perspectives: Supporting the emotional & academic needs of students in high school & My journey in STEM education. Southeast Regional Noyce Conference Montgomery, AL. June 15-18.

Guffey, S. K., Burrows, A. C., & Schwortz, A. (2022). Impact of STEM professionals engaging with students in Title One schools. NARST Annual Meeting Vancouver, BC. March 27-30.

Guffey, S. K., Gaston, J. P., Rand, A. D. (2022). Implementing Technology-Based Reflection to assess elementary students' design thinking and conceptual understanding in an engineering design challenge. AERA Annual Meeting San Diego, CA. Apr. 21-26.

Guffey, S. K., Ferguson, S. N., & Green, A. M. (2021). Supporting novice STEM teachers through the Noyce Buddy Program. NARST Annual Meeting Virtual. Apr. 7-10.

Guffey, S. K., Gaston, J. P., Rand, A. D. (2021). Using Flipgrid as a reflection tool to capture students' design thinking in a second-grade classroom. NARST Annual Meeting Virtual. Apr. 7-10.

Guffey, S. K., Ferguson, S. N., & Green, A. M. (2021). Creating community through the Noyce Buddy Program with novice STEM teachers. AERA Annual Meeting Virtual. Apr. 9-12.

Guffey, S. K., Morton, B. C., Curtis, J. T., Billingsly, J. L., & Green, A. M. (2021). Examining preservice teachers' empathy for students in their community. AERA Annual Meeting Virtual. Apr. 9-12.

Guffey, S. K., Gaston, J. P., Rand, A. D. (2021). Using video and written reflection to assess students' design thinking in a second-grade classroom. ASTA Annual Meeting Virtual. March. 15-16.

Guffey, S. K., Ferguson, S. N., & Green, A. M. (2021). Identifying successes and challenges of novice STEM teachers in title one schools. ASTA Annual Meeting Virtual. March. 15-16.

Green, A. M., Ferguson, S., **Guffey, S. K.** & Kent, A. M. (2020). Noyce Pathway to Science: Transitioning from a Student of Teaching to a Teacher of Students [Roundtable Session]. AERA Annual Meeting San Francisco, CA. Apr 17-21. <http://tinyurl.com/rqcr6yj> (Conference Canceled)

Billingsley, J. L., **Guffey, S. K.**, Morton, B. C., Towne, J. (2020). Backpacks for Success Equity Simulation. Southeastern Regional Robert Noyce Conference. July 30, 2020 (Virtual).

Lanicci, J. M. & **Guffey, S. K.** (2020). Can the K-12 Public School System Be Leveraged as Part of the Weather Ready Nation Initiative? 8th Symposium on the Weather Ready Nation Boston, MA. <https://ams.confex.com/ams/2020Annual/meetingapp.cgi/Paper/370452>

Reeves, L., Parrish, C. W., & **Guffey, S. K.** (2020). Factors in choosing a career in special education. Association of Teacher Educators 100<sup>th</sup> Annual Meeting, Atlantic City, NJ.

Guffey, S. K. (2019) Incorporating discourse while modeling tragedy of the commons. Southeastern Regional Robert Noyce Conference, Mobile, AL.

Schwortz, A.C., Burrows, A., & **Guffey, S. K.** (2019.) Mentoring partnerships in science education. American Educational Research Association Annual Conference, Toronto, Canada.

Morton, B., Green, A. M., Kent, A. M., Byrd, K. O., **Guffey, S. K.**, Billingsley, J. L., Vitulli, P., Martin, S. F., & Allison, E. R. (2019). Induction into the profession through a summer

enrichment program: An authentic experience with urban students. American Educational Research Association Annual Conference, Toronto, Canada.

Guffey, S. K. (2018). Using the exam of geology standards (EGGS) to identify college students' misconceptions. Robotic Telescopes, Student Research and Education Conference (RSTRE) and International Astronomy Teaching Summit (iNATS), Hilo, HI.

Guffey, S. K., Slater, T. F., & Burrows, A. C. (2017). Misconceptions in the geosciences targeted by national standards and frameworks. University of Wyoming College of Education Research.

Burrows, A. C., **Guffey, S. K.**, Seeley, C., Mogensen, K. (2017). Using a chatroom to build community in SWARMS. Western Regional Noyce Conference, Fresno, CA.

Guffey, S. K., Slater, S. J., Slater, T. F., Burrows, A. C., & Schleigh, S. P. (2017). The development of a conceptual diagnostic survey to gauge students' knowledge in the geosciences. International meeting of the Association of the Science Teacher Education Conference, Des Moines, IA.

Guffey, S. K., Slater, S. J., Slater, T. F., & Schleigh, S. P. (2017). Validation of the Exam of GeoloGy Standards EGGS Conceptual Diagnostic Survey. International Science Education Conference, Maui, HI.

Guffey, S. K. (2016). Science education and teaching water resources: Learning from the India example. University of Wyoming meeting of Center for Global Studies Student Awards, Book 9, Laramie, WY.

Schleigh, S. P., **Guffey, S. K.**, Walker, C., Kao, L., & Freed, R. (2016). Invited Panel Discussant: Engaging ASTRO 101 students in research. National Astronomy Teaching Summit Proceedings, page 15, San Francisco, CA.

Guffey, S. K., Slater, S. J., Schleigh, S. P., & Slater, T. F. (2016). Development of the Exam of GeoloGy Standards (EGGS). San Francisco meeting of the National Astronomy Teaching Summit Proceedings, page 35.

Slater, S. J., Slater, T. F., Tatge, C., & **Guffey, S. K.** (2015). Expanding astronomy education innovations to the international community. International Astronomical Union General Assembly, 22, 57332. Honolulu, HI.

Schleigh, S. P., Cook, J., & **Guffey, S. K.** (2013). RESTEP to STEM: An effective model of STEM partnerships to improve STEM teacher education. National Science Teacher Association STEM Expo, Saint Louis, MO.

Schleigh, S. P., **Guffey, S. K.**, Stalls, J., & White, K. (2012). Development of a science education ecosystem through authentic research in the science teacher education program. Astronomical Society of the Pacific, Tucson, AZ.

Guffey, S. K., Nester, J., & Price Schleigh, S. (2011). What is evolution? Challenging the resistance: ECU share-a-thon. North Carolina Science Teacher Association Annual Professional Development Institute, Durham, NC.

\*Denotes research with Graduate Student

## Poster Presentations

Guffey-McCorrison, S. K., Green, A. M., Forbes, D. C., Sanders, J. M., & Stefurak, J. R. (2023) Investigating Science Teacher, Research, Education, and Methods used to prepare pre-service teachers, *STREAM*. National Noyce Summit, Washington, D.C.

Guffey-McCorrison, S. K., Green, A. M., Forbes, D. C., Sanders, J. M., & Stefurak, J. R. (2023). Investigating Science Teacher, Research, Education, and Methods used to prepare pre-service teachers, *STREAM*. Southeastern Regional Noyce Conference, Mobile, AL.

Ferguson, S. N., **Guffey, S. K.**, Green, A. M., Kent, A. M., & Mulekar, M. (2020). Southeastern Regional Noyce Connections: Terrific Thursdays. Noyce Summit, Virtual.

Guffey, S. K. & Slater, T. F. (2019). Forming consensus of geology K-12 standards. Mid-South Educational Research Association, New Orleans, LA.

Guffey, S. K., Morton, B., Byrd, K. O., Parrish, C., Green, A. M., Ferguson, S. N., Simpson, J. L. (2019). Preservice teachers' experiences during a summer enrichment program in an urban, high needs school district. Mid-South Educational Research Association, New Orleans, LA.

Guffey, S. K., Parrish, C. W., Williams, D.S., & Estis, J. (2019). Two Birds with One Stone: Examining Students' and Instructors' Perceptions of TBL Across Face-to-Face and Online Courses. Team-Based Learning Collaborative, Tampa, FL.

Ferguson, S. N., **Guffey, S. K.**, Green, A. M. (2019). Outcomes of a Summer Enrichment Program Dedicated to STEM Education for Title I Students and Pre-Service Educators. Association of Science Teacher Educators Annual Conference, Savannah, GA.

Guffey, S. K., & Slater, T. F. (2017). Development of the Exam of GeoloGy Standards, EGGS, to Measure Students' Conceptual Understanding of Geology Concepts. American Geophysical Union, New Orleans, LA.

Guffey, S. K. (2017). Science education and teaching water resources: Learning from the India example. Wyoming Goes Global: Globalization, Sustainability, and Resource Use Over Time, Laramie, WY.

Guffey, S. K., Burrows, A. C., & Borowczak, M. (2017). Support in the classroom: SWARMS scholars' views before and after beginning to teach. University of Wyoming College of Education Research Symposium, Laramie, WY.

Guffey, S. K., Slater, S. J., Slater, T. F., Schleigh, S. P., & Burrows, A. C. (2016). Establishing reliability and validity of the criterion referenced Exam of GeoloGy Standards EGGS. American Geophysical Union, San Francisco, CA.

Guffey, S. K., Slater, S. J., & Slater, T. F. (2015). New contemporary criterion-referenced assessment instruments for astronomy & geology: TOAST & EGGS. International Astronomical Union General Assembly, 22, 57417, Honolulu, HI.

Guffey, S. K., & Burrows, A. C. (2015). SWARMS: Sustaining Wyoming's advancing reach in mathematics and science – Who is applying? University of Wyoming Scholarship and Research Educational Symposium, Laramie, WY.

Guffey, S. K. & Schleigh, S. P. (2014). Identifying the effectiveness teaching science using informal tools. National Conference on Science Education Proceedings. Boston, MA.

Guffey, S. K. & Schleigh, S. P. (2013). Science teaching using informal tools. National Science Teacher Association STEM Expo, Saint Louis, MO.

Guffey, S. K., & Schleigh, S. P. (2012). Informal vs. formal teaching tools: Identifying the effectiveness of technology teaching tools to improve student learning. Astronomical Society of the Pacific Proceedings, page 69, Tucson, AZ.

Guffey, S. K. & Schleigh, S. P. (2012). Evaluation of the implementation of technology in an astronomy classroom. East Carolina University Student Research Symposium, Greenville, NC.

Guffey, S. K. & Schleigh, S.P. (2011). Teachers' perceptions of the effectiveness of a portable planetarium for classroom instruction. North Carolina Space Grant Student Symposium, Durham, NC.

Guffey, S. K. & Schleigh, S. P. (2011). Assessing student learning in astronomy using informal tools for classroom instruction. North Carolina Science Teacher Association Regional Meeting, Greensboro, NC.

## GRANT & FELLOWSHIP EXPERIENCE

### FUNDED

Stefurak, J. R. (Principal), **McCorrison, S. K.** (Co-Principal), Byrd, K. O. (Co-Principal). Alabama Mathematics Science Technology Initiative FY 2026. Alabama State Department of Education, \$2,575,000.00. (October 2025 – September 2026).

Ferguson, S. N. (Principal), **Guffey, S. K.** (Co-Principal), Parrish, C. W. (Co-Principal), Byrd, K. O. (Co-Principal), Gaston, J. P. (Co-Principal), "Pathway to Mathematics II: An Integrated STEM Initiative Focused on Diversity, Equity, and Inclusion" Sponsored by National Science Foundation, External to the University, \$1,197,891.00. (May 1, 2023 - 2028) (Award #2243319).

**Guffey, S. K.** (Principal), Forbes, D. C. (Co-Principal), Sanders, J. M. (Co-Principal), Stefurak, J. R. (Co-Principal), Green, A. M. (Co-Principal), "Investigating Science Teacher, Research, Education, And Methods Used to Prepare Preservice Science Teachers (STREAM)," Sponsored by National Science Foundation, External to the University, \$1,189,475.00. (September 1, 2022 - 2027) (Award #2151148).

Gong, N. (Principal), Zha, S. (Co-Principal), **Guffey, S. K.**, Parrish, C., Leavesley, S., Wang, J., Van Haneghan, J. P., "RET Site: Research Experiences for Teachers in Biologically-inspired Computing Systems," Sponsored by National Science Foundation, Federal, \$592,628.00. (March 1, 2020 - February 28, 2024). (Award #1953544).

Green, A. M. (Principal), Kent, A. M. (Co-Principal), Martin, S. F. (Co-Principal), Mulekar, M. S. (Co-Principal), **Guffey, S. K.** (Co-Principal), "Southeastern Regional Robert Noyce Conference: Breaking Down Barriers in STEM Teacher Education," Sponsored by National Science Foundation, External to the University, \$3,499,897.00. (March 2019 - July 2021) (Award #1905392).

Parrish, C. (Principal), **Guffey, S. K.** (Co-Principal), "Two Birds with One Stone: Examining the Effects of TBL on Teacher Education across Face-to-Face and Online Courses," Sponsored by University of South Alabama, \$2,500.00. (August 15, 2018 - August 15, 2019).

### SUBMITTED

Chen, Y. (Principal), Terbeck, F. J. (Supporting), **McCorrison, S. K.** (Supporting), "CAREER: Designing Human-AI Collaborative Inquiry for Secondary Environmental Science Education," Sponsored by National Science Foundation - NSF, External to the University, \$499,838.00. (2026 - 2030).

### NOT FUNDED

**McCorrison, S. K.** (Principal). The Early Career Research Fellowship's Education Research. National Academies Science, Engineering, Medicine. Gulf Research Program, \$75,000. (December 2025 – July 2027).

**McCorrison, S. K.** (Principal), Gossen, A. N. (Co-Principal), Scyphers, S. B. (Co-Principal), "Coastal Scholars: Promoting place-based learning and civic engagement in Baldwin County, Alabama," Sponsored by National Academies of Sciences, Engineering and Medicine - NASEM, External to the University, \$749,097.00. (August 15, 2025 - July 31, 2029).

Terbeck, F. J. (Principal), **McCorrison, S. K.** (Co-Principal), Chen, Y. (Co-Principal), White, K. D., "Pipelines to Progress: Community-Driven Solutions for Wastewater Resilience in Alabama's Black Belt," Sponsored by National Academies of Sciences, Engineering and Medicine (NASEM), External to the University, \$748,009.00. (2025 - 2028).

Ding, L. (Principal), **McCorrison, S. K.** (Co-Principal), Gossen, D. (Co-Principal), Segev, A. (Co-Principal). "Mind Reset: Teaching an Ontological Framework to Overcome Science Misconceptions to Teachers," Sponsored by National Science Foundation, External to the University, Requested \$448,359.00 (November 2024).

Lanicci, J. M. (Principal), **McCorrison, S. K.** (Co-Principal), Linzmeier, B. J. (Co-Principal), "Building a Weather Ready Nation in Southern Alabama," Sponsored by National Science Foundation, External to the University, \$199,995.95. (August 2024 - August 2026).

**Guffey, S. K.** (Principal), Lanicci, J. M. (Co-Principal), & Green, A. M. (Co-Principal), "Leveraging K-12 Education to Achieving a Weather-Ready Nation," Sponsored by National Oceanic and Atmospheric Administration, External to the University, Requested \$51,456.17.

Stefurak, J. R., Gaston, J. P. (Co-Principal), Morton, B. (Co-Principal), Ferguson, S. N. (Supporting), Brannan, L. (Supporting), Parrish, C. (Supporting), **McCorrison, S. K.** (Supporting), Gossen, A. N. (Supporting), Parkes, C. A. (Supporting), Upton, A. W., Byrd, K. O. (Supporting), "Williamson College Launchpad," Sponsored by Mobile County Commission - American Rescue Plan Act, External to the University, \$1,629,640.00. (2022 - 2025).

Gaston, J. (Principal), **Guffey, S. K.**, (Co-Principal), & Rand, A. D. (Co-Principal). "Using Flipgrid as a reflection tool to capture students' design thinking in science classrooms," Sponsored by University of South Alabama, Internal to the University, Requested \$1,359.00.

## TEACHING EXPERIENCE

### University of South Alabama

#### Directed Student Learning

Thesis Committee Member (April 2024 – Present)

Advised: Kadence Johnston

Dissertation Committee Member (March 2024 – May 2025)

Advised: Tiara Bailey

Thesis Committee Member (August 2022 – May 2024)

Advised: Darien Caudle

Thesis Committee Member (August 2022 – May 2024)

Advised: Haley Mullinax

Dissertation Committee Member (February 2022 – July 2022)

Advised: Abrity Abdullah

Dissertation Committee Member (May 2020 – May 2023)

Advised: Jennifer T. Curtis  
 Dissertation Committee Member (January 2020 – Present)  
 Advised: Barbara Bressette  
 Dissertation Committee Member (January 2019 - Present).  
 Advised: Margaret Salter  
 Undergraduate Honors Thesis Chair, “The Effects of Active Learning on  
 Conceptual Misunderstandings in Introductory Level Geology Courses,”  
 Leadership and Teacher Education. (October 2018 – May 2022).  
 Advised: Jake Green  
 Dissertation Committee Member, "Educator Effectiveness and its Effects on  
 Student Engagement and Achievement," Leadership and Teacher  
 Education. (January 2018 - December 2018).

Advised: Ashley Lehman

#### Graduate Courses

SED 556	Teaching Science in Secondary Schools
SED 564	Trends and Practices in Teaching Science
SED 560	Graduate Research Seminar
SED 555	Curriculum and Teaching in Secondary Schools
SED 597	Internship Secondary Education Science
SED 552	The High School Curriculum
SED 559	Advanced Teaching Techniques
SED 529	Graduate Field Experience
SED 596	Internship Social Studies
SED 593	Internship English Language Arts

#### Undergraduate Courses

EDU 456	Teaching Secondary Science
EDU 440	Project-Based Instruction
EDU 326	Classroom Interactions
EDU 337	Teaching Elementary Science
EDU 340	Fundamentals of Teaching
EDU 468	Internship Science
EDU 499	Undergraduate Honors Thesis
EDU 341	Middle Level Education
EDU 467	Internship Social Studies
EDU 466	Internship English Language Arts
EDU 342	Secondary Field Experience

#### University of Wyoming

##### Undergraduate Courses

EDSE 3275	Science Methods I
EDSE 4275	Science Methods II
EDSE 4500	Residency in Teaching with Supervision across Wyoming

## LICENSURES AND CERTIFICATIONS

Quality Circle Grant Reviewer, Dave Bauer Institution. (April 24, 2019 – August 2022).  
 Classroom Assessment Scoring System (CLASS), Teachstone. (August 2018 – August 2021).  
 North Carolina Secondary Science (6-12) Teaching License (May 2012 – July 2015).

## **PROFESSIONAL AFFILIATIONS**

National Association for Research in Science Teaching  
American Educational Research Association  
National Science Teacher Association  
American Meteorological Society  
National Earth Science Teacher Association  
Alabama Science Teacher Association  
Association for Science Teacher Education  
Geological Society of America  
American Geophysical Union  
Mid-South Education Research Association  
Team-Based Learning Collaborative

## **PROFESSIONAL SERVICE**

### **INTERNATIONAL/NATIONAL**

Reviewer, September 2023 – Present  
The American Biology Teacher  
Reviewer, August 2023 – Present  
National Association for Research in Science Teaching (NARST)  
Reviewer, August 2023 – Present  
American Educational Research Association (AERA)  
Reviewer, April 2023 – Present  
Science & Education  
Reviewer, June 2022 – Present  
Journal of Geoscience Education  
Reviewer, June 2019 – Present  
Science Education  
Reviewer, April 2019 – Present  
Electronic Journal of Science Education  
Reviewer, November 2018 – December 2018  
Pearson  
Reviewer, November 2018 – December 2018  
Robotic Telescopes, Student Research and Education (RTSRE)  
Editorial Review Board Member, 2017 – Present  
Journal of Astronomy & Earth Sciences Education  
Co-Chair, 2017 – 2018  
Association for Science Teacher Education STEM Strand  
Advisory Board, 2017 – 2018  
Journal of College Science Teaching

Logistics Chair, 2016 – 2018

National Astronomy Teaching Summit

## **STATE/REGIONAL**

Advisory Board Member, June 2024 – present

Bishop State Community College General Education & Instruction Advisory Board

Governing Board Member, September 12, 2024 – present

South Alabama Research & Inservice Center (SARIC) Region 10 Governing Board

VEX IQ Robotics Challenge Judge, January 31, 2026

Science Department at Mobile County Public School System VEX IQ Robotics Challenge

VEX IQ Robotics Challenge Judge, February 8, 2025

Science Department at Mobile County Public School System VEX IQ Robotics Challenge

Committee Member, September 24, 2024 – February 5, 2025

Science Textbook Adoption Committee, Mobile County Public Schools

Science Fair Judge, February 1, 2024

Clark-Shaw Magnet School, Mobile, AL

VEX IQ Robotics Challenge Judge, January 27, 2024

Science Department at Mobile County Public School System VEX IQ Robotics Challenge

Science Fair Judge, January 26, 2023

Clark-Shaw Magnet School, Mobile, AL

VEX IQ Robotics Challenge Judge, January 28, 2023

Science Department at Mobile County Public School System VEX IQ Robotics Challenge

VEX IQ Robotics Challenge Judge, February 5, 2022

Science Department at Mobile County Public School System VEX IQ Robotics Challenge

Science Fair Judge, January 27, 2022

Clark-Shaw Magnet School, Mobile, AL

Science Fair Judge, February 15, 2019

Mobile County Public School System, Mobile, AL

Certified Trainer, 2018 – 2021

Classroom Assessment Scoring System (CLASS)

Big Sister, 2017 – 2020

Big Brothers Big Sisters of Alabama

Graduate Student Representative, 2016 – 2017

Technology Committee for the UW College of Education

President, 2015 – 2017

Noyce Student Chapter University of Wyoming

Committee Member, 2015 – 2016

Association for Science Teacher Education Graduate Student Committee

Committee Member, 2012 – 2014  
Charlotte-Mecklenburg Earth & Environmental Science Alliance  
Representative, 2012 – 2014  
Advancement Via Individual Determination (AVID), Charlotte-Mecklenburg School District

### **UNIVERSITY LEVEL COMMITTEES**

Committee Member, September 2024 – Present  
University of South Alabama Graduate Council Committee

Committee Member, August 2024 – Present  
University of South Alabama Student Grievance Committee

Review Board Committee Member, 2017-2021  
Alabama Space Grant Consortium

### **COLLEGE LEVEL COMMITTEES**

Committee Chair, August 2025 – Present  
University of South Alabama, College of Education & Professional Studies, Faculty Scholarship and Research Development Committee

Committee Member, August 2024 – May 2025  
University of South Alabama, College of Education & Professional Studies Faculty Scholarship and Research Development

Committee Member, 2024 – Present  
University of South Alabama, College of Education & Professional Studies, Faculty Council

Committee Member, 2024 – Present  
University of South Alabama, College of Education & Professional Studies Tenure & Promotion

Review Board Committee Member, 2018 – 2022  
University of South Alabama Continuous Improvement in Educator Preparation (CIEP)

Review Board Committee Member, 2017 – 2022  
University of South Alabama Council for Accreditation of Education (CAEP) Standard 1

Committee Member, 2017 – 2020  
University of South Alabama Community Partners

### **DEPARTMENT LEVEL COMMITTEES**

Committee Member, 2024 – Present  
USA CEPS Department of Leadership & Teacher Education Undergraduate Curriculum

Committee Member, August 19, 2019 – May 2023  
USA CEPS Department of Leadership & Teacher Education Student Awards

Committee Member, August 2019 – May 2021  
USA CEPS Department of Leadership & Teacher Education CPAC

Committee Member, August 2019 – May 2021  
USA CEPS Department of Leadership & Teacher Education Recruitment and Retention

Committee Member, 2017 – 2019  
University of South Alabama Social Media

## WORKSHOPS

Author & Presenter, Billingsley, J. L., Morton, B. C., **Guffey, S. K.**, & Towne, J. “Working for Equity.” University of South Alabama College of Education and Professional Studies, Department of Counseling and Instructional Design. August 13, 2020.

Author & Presenter, Guffey, S. K., Billingsley, J. L., Morton, B. C., & Towne, J. “Backpacks for Success Equity Simulation.” University of South Alabama, Faculty Development Institute. July 10, 2020.

Author & Presenter, Billingsley, J. L., **Guffey, S. K.**, Morton, B. C., & Towne, J. “Backpacks for Success Equity Simulation.” University of South Alabama, Faculty Development Institute. July 10, 2020.

Author & Presenter, Morton, B., **Guffey, S. K.** “Let's talk about culture: Applying the cultural proficiency continuum in your classroom.” University of South Alabama College of Education and Professional Studies, Mobile, AL. August .2019

Author & Presenter, Guffey, S. K. “Exploring the NGSS through Tragedy of the Commons.” December 2019, University of South Alabama.

Presenter, Guffey, S. K., & Parrish, C. W. “Classroom Learning Assessment Scoring System (CLASS).” August 2019, Deans for Impact, University of South Alabama.

Author & Presenter, Guffey, S. K. “Exploring the NGSS through Tragedy of the Commons.” December 13, 2018, University of South Alabama/

Presenter, Guffey, S. K., & Parrish, C. W., “Classroom Learning Assessment Scoring System (CLASS).” August 22-23, 2018, Deans for Impact, University of South Alabama.

Presenter, Martin, S. F., & **Guffey, S. K.**, “Science is for Everyone: Helping English Learners and All Others in the P-12 Classroom.” April 25, 2018, Professional Development/SARIC, University of South Alabama.

Guffey, S. K. Author & Presenter, “Tragedy of the Commons.” April 19, 2018, University of South Alabama – Baldwin County.

Author & Presenter, Guffey, S. K., Kimball, S. “The Secret Lives of Weather,” March 22, 2018, University of South Alabama.

Author & Presenter, Guffey, S. K., EdTPA Bootcamp, "Video Compression for EdTPA Portfolio," University of South Alabama, University Commons. (January 2018).

## DEVELOPMENT ACTIVITIES

Mini-Course, “Strategic Course Design Mini-Course (SCD-MC), Cohort 2,” University of South Alabama, Office of Academic Affairs. (November 13, 2020-January 11, 2021).

Conference Attendance, “Racial Justice in Education and Society Virtual Conference,” Initiative for Race Research and Justice (RRJ), Peabody College, Vanderbilt University. (December 5, 2020).

Seminar Series, “USA Women and COVID-19,” University of South Alabama. (October 2020 – Present).

Seminar Series, "Mobile in Black and White: Dialogue to Action," University of South Alabama. (May 2020 – Present).

Faculty Fellowship, "Faculty Mentor/Mentee Program," University of South Alabama. (August 2018 - Present).

Workshop, "Quality Enhancement Plan: Technology for Team-Based Learning," University of South Alabama, Mobile, AL. (May 10, 2018 - 2019).

Seminar, "Responsible Conduct of Research: Management of Data," University of South Alabama. (November 13, 2019).

Conference Attendance, "Mid-South Educational Research Association," New Orleans, LA. (November 6, 2019 - November 8, 2019).

Seminar, "Dave Bauer Grant Writing Workshop: Part 5 Writing Seminar," Dave Bauer Institute. (November 4, 2019).

Seminar, "Responsible Conduct of Research: Research Misconduct," University of South Alabama. (October 9, 2019).

Seminar, "Bauer Grant Writing Workshop: Fund Raising," Dave Bauer Institute. (August 27, 2019).

Conference Attendance, "2019 Noyce Summit," Washington, D.C. (July 10, 2019 - July 12, 2019).

Conference Attendance, "Southeastern Regional Noyce Conference," Mobile, AL. (June 23, 2019 - June 26, 2019).

Seminar, "Bauer Grant Writing Workshop: Quality Circle Review," Dave Bauer Institute. (April 24, 2019).

Seminar, "Bauer Grant Writing Workshop-Foundation and Corporations Grants," David Bauer Institute. (January 28, 2019).

Seminar, "David Bauer Grant Writing Workshop: Government Grants," Dave Bauer Institute. (October 24, 2018).

Workshop, "Classroom Assessment Scoring System," Teachstone & Deans for Impact, Gulf Shores, AL, USA. (July 31, 2018 - August 3, 2018).

Conference Attendance, "Standards Institute," San Diego, CA, USA. (July 9, 2018 - July 13, 2018).

Seminar, "NSTA Webinar," National Science Teacher Association. (May 23, 2018).

Workshop, "Next Generation Science Standards," Mobile, AL, USA. (May 8, 2018).

Conference Attendance, "Alabama EPSCOR NSF Day," Birmingham, AL, USA. (May 1, 2018).

Workshop, "3-Dimensional Learning in the Secondary Classroom," National Science Teacher Association, Mobile, AL, USA. (April 11, 2018).

Workshop, "Civil Rights Training," Mobile, AL, USA. (April 4, 2018).

Conference Attendance, "NSTA Conference - Science on my Mind," National Science Teacher Association, Atlanta, GA, USA. (March 15, 2018 - March 18, 2018).

Workshop, "Continuous Improvement in Educator Preparation (CIEP)," Mobile, AL, USA. (February 2, 2018).

## EXTRACURRICULAR ACTIVITIES

United Way Campaign Representative for Department of Leadership & Teacher Education (September 2025 – November 2025).

Tenure Reviewer for Another Institution. (September 2025).

Faculty Scholarship & Research Development, Internal Grant Proposal Reviewer. (August 2025 - Present).

Recommendation Letters. (March 2025 - May 2025).

## MEDIA, NEWS, & PRESS

December 6, 2024: Sincerely South Podcast: *Episode 27: Disparities Between Individuals and their Organizational Norms with Sophia Houston & Dr. Katie McCorrison*

<https://podcasts.apple.com/us/podcast/episode-27-disparities-between-individuals-and-their/id1609679515?i=1000678600977>

August 25, 2023: Sincerely South Podcast: *Episode 16: Noyce Scholarship with Dr. Katie McCorrison, Dr. David Forbes, and Pamela McPherson*

<https://podcasts.apple.com/us/podcast/episode-16-noyce-scholarship-with-dr-katie-mccorison/id1609679515?i=1000625687049>

Spring 2024: Pillars Annual Magazine *Volume 15*, University of South Alabama College of Education and Professional Studies

[https://www.southalabama.edu/colleges/ceps/resources/ceps\\_pillars\\_2024.pdf](https://www.southalabama.edu/colleges/ceps/resources/ceps_pillars_2024.pdf)

April 14, 2023: *USA Receives Scholarship Grant for Future Diverse Mathematics Teachers*  
<https://www.southalabama.edu/departments/publicrelations/pressreleases/041423noycescholarship.html>

October 14, 2022: *South Awarded NSF Grant to Increase K-12 Science Teachers in Local Schools*

<https://www.southalabama.edu/departments/publicrelations/pressreleases/101422streamgrant.html>

August 11, 2021: *Creating a Supportive and Mentoring Community for Noyce Scholars*  
<https://www.southalabama.edu/colleges/ceps/news/noycescholars.html>

July 28, 2021: *Back to the Lab for Summer Research Experience*

<https://www.southalabama.edu/departments/publicrelations/pressreleases/072821teachers.html>

March 16, 2021: *Episode 45: Dr. Katie Guffey & Dr. Angela Rand and the Future of Elementary Science*

<https://anchor.fm/nextined/episodes/Episode-45-Dr--Katie-GuffeyDr--Angela-Rand-and-the-Future-of-Elementary-Science-es8a3m/a-a4t3pup>

April 22, 2019: *TeamUSA Faculty Accomplishments in Team-Based Learning Research and Innovation*

<https://www.southalabama.edu/departments/qep/news/tblc.html>

## ONLINE PRESENCE

GoogleScholar <https://scholar.google.com/citations?user=uyBN1ksAAAAJ&hl=en>

Researchgate <https://www.researchgate.net/profile/Sarah-Guffey/research>

Linkedin <https://www.linkedin.com/in/katie-guffey-mccorison-9b6bab63/>