

# BROOKE A. WHITWORTH

## ASSOCIATE PROFESSOR



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### EDUCATION

**Ph.D.**, Science Education, 2011-2014

University of Virginia, Curry School of Education, Charlottesville, VA

Dissertation: Exploring the critical role of a district science coordinator

Advisors: Randy L. Bell, Jennifer L. Chiu

Additional Committee Members: Carol A. Tomlinson, Jennifer L. Maeng

**M.A.Ed.**, Secondary Education, 2002

Wake Forest University, Master Teacher Fellow Program, Winston-Salem, NC

Professional teaching license (Chemistry 9-12, Japanese), State of North Carolina (2002-2022)

**B.A.**, Chemistry, 2001

William Jewell College, Liberty, MO

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### PROFESSIONAL EXPERIENCE

**Professor of Science Education**, 2025-Present

University of South Carolina, Columbia, SC

**Professor of Science Education**, 2025-Present

**Assistant Department Chair**, 2024-Present

**Teaching & Learning Doctoral Program Coordinator**, 2020-Present

**Associate Professor of Science Education**, 2020-2025

Clemson University, Clemson, SC

**Assistant Professor of Science Education**, 2017-2020

The University of Mississippi, Oxford, MS

**Assistant Professor of Science Education**, 2014-2017

Northern Arizona University, Flagstaff, AZ

**Research Graduate Assistant**, 2011-2014

University of Virginia, Charlottesville, VA

**University Supervisor**, 2011-2013

University of Virginia, Charlottesville, VA

**Science & Mathematics Teacher**, 2008-2011

Punahou School, Honolulu, HI

**Science Teacher, 2002-2008**

University North Carolina School of the Arts, Winston-Salem, NC

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**AWARDS & HONORS**

- **NSTA Fellow Award**, *National Science Teaching Association*, 2023
- **Outstanding Science Educator of the Year Award (<10 years)**, *Association of Science Teacher Education*, 2023
- **Top Cited Article 2020-2021**, *Wiley Publishing*, 2022
- **Trailblazers: Provost's Mentoring Initiative for Faculty**, *Clemson University*, 2021
- **College of Education Top Citation Achievement – Over 250 Citations**, *Clemson University*, 2021
- **College of Education Insight Award – Ph.D. in Curriculum & Instruction Program**, *Clemson University*, 2021
- **College of Education Excellence in Research Award – Junior Faculty**, *Clemson University*, 2021
- **Project Kaleidoscope (PKAL) STEM Leadership Institute Scholar**, *AAC&U*, 2021
- **Research Grant Fellow**, *Clemson University*, 2021-2022
- **Outstanding College Science Teacher of the Year**, *Mississippi Science Teachers Association*, 2019
- **Finalist for Outstanding Researcher of the Year**, *University of Mississippi*, 2019
- **Conference Paper Award V: Implications of Research for Educational Practice**, *Association of Science Teacher Education*, 2018
- **Top 1% of Peer Reviewers – Social Sciences**, *Publons Global Peer Review*, 2018
- **Finalist for College of Engineering Forestry & Natural Sciences Professor of the Year**, *Northern Arizona University*, 2017
- **Curry Trustees Fellowship**, *University of Virginia*, 2013
- **Sandra K. Abell Institute Scholar**, *National Association for Research in Science Teaching*, 2013

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**FUNDED GRANTS - \$12,203,937 TOTAL**

1. **Principal Investigator. Whitworth, B. A.**, Wenner, J. A. & High, K. (\$203,487; August 1, 2025 – July 31, 2027). *CU Fellows: Building Leadership Among Science Teachers (BLAST)*. Clemson University R-Initiatives Clemson Research Fellows Grant Program.
2. **Principal Investigator. Whitworth, B. A.**, Wenner, J. A., High, K., Morrison, A., Brown, C. (\$4,345,000 (\$2,896,658 federal funds); June 1, 2023 – May 31, 2029). *NOYCE Track 3 Building Leadership Among Science Teachers (BLAST) Program: Designing, Developing, and Implementing a Science Teacher Leadership Academy*. National Science Foundation Robert Noyce Teacher Scholarship Program Track 3 Competitive Grant Program. Grant number: 2243496
3. **Principal Investigator. Whitworth, B. A.**, Wenner, J. A., Gotwals, A., & Schwarz, C. (\$50,000; January 1, 2023 – October 31, 2023). *Sandra K. Abell Institute for Doctoral Students*. National Association for Research in Science Teaching.
4. **Principal Investigator. Whitworth, B. A.**, Luft, J. A., & High, K. (\$999,995; October 1, 2022 – September 30, 2025). *Examining the Role of District Science Coordinator Professional Learning in Supporting and Retaining Science Teachers*. National Science Foundation Robert Noyce Teacher Scholarship - Track 4 Competitive Grant Program. Grant number: 2150781
5. **Co-Principal Investigator.** Kaminski, R. & **Whitworth, B. A.** (\$993,397; March 1, 2022 – September 30, 2024). *Addressing Student Learning Loss in Secondary ELA and Science*. CHE ESSER:

Collaborative and Innovative Programs to Address Student Learning Loss Resulting from the Impact of the COVID 19 Pandemic. Grant number: H63010497523

6. **Co-Principal Investigator.** Luft, J. A. & **Whitworth, B. A.** (\$1,370,197; August 1, 2019 – July 31, 2023). *Science Coordinators Advancing a Framework For Outstanding Leadership Development (SCAFFOLD)*. National Science Foundation Discovery Research K-12 Competitive Grant Program. Grant number: 1908431.
7. **Co-Principal Investigator.** Steimle, A., James, J., Jackson, W. & **Whitworth, B. A.** (\$46,619.39; March 1, 2019 – April 30, 2020). *CMSE Science Teacher Leaders Academy 2*. Mississippi Space Grant Consortium.
8. **Principal Investigator. Whitworth, B. A.,** Steimle, A., James, J. & Prewitt, E. (\$299,982; October 1, 2018 – September 30, 2021). *Building Content Knowledge of Elementary Teachers of Science (BUCKETS)*. National Science Foundation IUSE Competitive Grant Program. Grant number: 1833147.
9. **Co-Principal Investigator.** Steimle, A., James, J. & **Whitworth, B. A.** (\$53,485; May 1, 2018 – May 31, 2019). *CMSE Science Teacher Leaders Academy*. Mississippi Space Grant Consortium.
10. **Principal Investigator. Whitworth, B. A.** & Sample, J. (\$304,647; December 5, 2016 – June 18, 2018). *Dynamic Earth, Weather, & Climate (DEWC) in Peoria Unified School District*. Arizona Department of Education Mathematics and Science Partnership Competitive Grant Program.
11. **Principal Investigator. Whitworth, B. A.,** Fredrickson, K., & Cole, D. (\$412,980; December 5, 2016 – June 18, 2018). *Force And Matter Unify Science (FAMUS) in Gila County*. Arizona Department of Education Mathematics and Science Partnership Competitive Grant Program.
12. **Principal Investigator. Whitworth, B. A.,** Kirkley, J. A., & Dolle, E. M. (\$560,925; February 22, 2016 – June 15, 2017). *Alliance for Investigating Motion, Force and Energy (AIMFE)*. Arizona Department of Education Mathematics and Science Partnership Competitive Grant Program.
13. **Co-Principal Investigator.** Rubino-Hare, L., **Whitworth, B. A.,** Sample, J., Manone, M., Fredrickson, K., & Palmer, A. (\$1,936,773; 2015-2019). *Expanding Geospatial Technology Career Development for High School Students through Teacher Professional Development*. National Science Foundation iTEST Competitive Grant Program. Grant number: 1513287.
14. **Interim Principal Investigator & Co-Principal Investigator.** Fredrickson, K., **Whitworth, B. A.,** & Ross, D. (\$626,450; December 8, 2014 – February 26, 2016). *Gila County Energy and ORGanisms (GEORG) for Grades K-8*. Arizona Department of Education Mathematics and Science Partnership Competitive Grant Program.

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## SUBMITTED GRANTS

1. **Co-Principal Investigator.** Dean, S. & **Whitworth, B. A.** (\$749,918 October 1, 2025 – September 31, 2029; **Submitted**, 2024). *RESS Bridging Classrooms and Nature: South Carolina Outdoors for Understanding the Teaching of Science (SCOUTS)*. National Science Foundation Noyce RESS Competitive Grant Program.

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## UNFUNDED GRANTS

1. **Co-Principal Investigator.** Wenner, J. A., **Whitworth, B. A.**, Maeng, J., McCurdy, R., & Wilson, R. (\$4,998,513; October 1, 2025 - September 30, 2030; **Unfunded**, 2024) *National STEM Teacher Corps: Southeastern Secondary Science Teacher Alliance for Rural Schools (S<sup>3</sup>TARS)*. National Science Foundation.
2. **Co-Principal Investigator.** McNeese, N., Flathmann, C., Herro, D., & **Whitworth, B. A.** (\$873,991; May 1, 2025-April 30, 2028; **Unfunded**, 2024). *Using Human-AI Teaming to Facilitate Culturally and Locally Relevant Personalized Learning for Middle-School Science Classrooms*. National Science Foundation RITEL.
3. **Co-Principal Investigator.** Che, M., **Whitworth, B. A.**, Voight, M., & Ramiharimanana, C. (\$613,893 September 1, 2025 – August 31, 2029; **Unfunded**, 2024). *Supporting Student Success with Micro-Active Pedagogy for Precalculus to Calculus (MAPP2Calc)*. National Science Foundation IUSE Competitive Grant Program.
4. **Principal Investigator. Whitworth, B. A.** (\$613,893 September 1, 2024 – August 31, 2029; **Unfunded**, 2024). *The Center for Rural Opportunities through Postsecondary Schooling (CROPS)*. Department of Education, Institute of Education Services, Education Research Grants Program.
5. **Principal Investigator. Whitworth, B. A.**, Eicher, L., Brown, C., Malloy, J., & Cook, M. (\$1,699,626; September 1, 2022 – August 31, 2026; **Unfunded**, 2021). *Exploring a System of Mentoring Supports in a Sustainable Teacher Residency Program*. Department of Education, Institute of Education Services, Education Research Grants Program.
6. **Principal Investigator. Whitworth, B. A.**, Wenner, J. A., Morrison, A., & Brown, C. (\$2,999,354; August 1, 2022 – July 31, 2026; **Unfunded**, 2021). *Building Leadership Among Science Teachers (BLAST)*. National Science Foundation Discovery Research K-12 Competitive Grant Program.
7. **Co-Principal Investigator.** Platt, B., **Whitworth, B. A.**, & Gifford, J. (\$299,960; **Unfunded**, 2020). *Collaborative Research: Earth Science Roadtrip for Undergraduate Pre-service Teachers (ERUPT)*. National Science Foundation iUSE Competitive Grant Program.
8. **Co-Principal Investigator.** Gonczi, A., **Whitworth, B. A.**, Maeng, J. L. (\$491,074; **Unfunded**, 2020). *Promoting Leadership and Equity to Advance STEM Education (PLEASE)*. Spencer Foundation Large Grant Program.
9. **Principal Investigator. Whitworth, B. A.** (\$529,326; **Unfunded**, 2020). *Science Teaching Initiative for Leadership and Learning (STILL)*. Hearin Foundation.
10. **Co-Principal Investigator.** Goulet, T., **Whitworth, B. A.**, Balenger, S., Jackson, C., Buchholz, R., Hoeksema, J., Zee, P., & Hom, E. (\$199,992; **Unfunded**, 2020). *Reintegrating Symbiosis: From emergence to senescence*. National Science Foundation Biology Integration Institutes Competitive Grant Program.
11. **Co-Principal Investigator.** Platt, B., **Whitworth, B. A.**, & Gifford, J. (\$418,057; **Unfunded**, 2020). *GP-UP: Earth Science Roadtrip for Undergraduate Pre-service Teachers (ERUPT)*. National Science Foundation iUSE Competitive Grant Program.

12. **Co-Principal Investigator.** Goulet, T., **Whitworth, B. A.,** & Balenger, S. (\$299,785; **Unfunded**, 2019). *Backyard science: Crickets as a conduit to comprehension of and engagement with science by Mississippi middle school age girls and their network of family and friends*. National Science Foundation AISL Competitive Grant Program.
13. **Principal Investigator.** **Whitworth, B. A.,** Steimle, A., James, J. & Jackson, W. (\$4,924,946; **Unfunded**, 2019). *Building Leadership Among Science Teachers (BLAST)*. National Science Foundation Discovery Research K-12 Competitive Grant Program.
14. **Co-Principal Investigator.** Sumrall, W. J. & **Whitworth, B. A.** (\$500,000; **Unfunded**, 2019). *Resilience to Extreme Weather: Changing Attitude to Behavior (REWCAB)*. National Oceanic and Atmospheric Administration Environmental Literacy Competitive Grant Program.
15. **Co-Principal Investigator.** Bennett, J., Xiao, B., Meyer, J. & **Whitworth, B. A.** (\$24,983; **Unfunded**, 2019). *Improving production and training of Physics teachers in Mississippi*. Physics Teacher Education Coalition Recruiting Grants Program.
16. **Principal Investigator.** **Whitworth, B. A.** & Jackson, W. (\$499,826; **Unfunded**, 2019). *Developing productive student teaching mentoring relationships in science education*. Spencer Foundation Research Grants on Education: Large Competition.
17. **Principal Investigator.** **Whitworth, B. A.,** Steimle, A., James, J. & Jackson, W. (\$3,376,086; **Unfunded**, 2018). *Building Leadership Among Science Teachers (BLAST)*. National Science Foundation Discovery Research K-12 Competitive Grant Program.
18. **Co-Principal Investigator.** Platt, B., **Whitworth, B. A.,** & Gifford, J. (\$445,121; **Unfunded**, 2018). *GP-EXTRA: Earth Science Roadtrip for Undergraduate Pre-service Teachers in the South (ERUPTS)*. National Science Foundation iUSE Competitive Grant Program.
19. **Principal Investigator.** **Whitworth, B. A.** & Foster, E. (\$299,978; **Unfunded**, 2018). *Mississippi Abroad in Zimbabwe and Iceland*. National Science Foundation iUSE Competitive Grant Program.
20. **Principal Investigator.** **Whitworth, B. A.** & Luft, J. (\$1,346,587; **Unfunded**, 2017). *SouthEastern Coordinators (SEC) Leading for Change*. National Science Foundation Discovery Research K-12 Competitive Grant Program.
21. **Principal Investigator.** **Whitworth, B. A.** (\$19,991.65; **Unfunded**, 2017). *Fostering Excellence in Elementary Science Teaching (FEEST): Bridging Research, Practice, and Curricular Supports*. Northern Arizona University, NAU Research Development Grants Program.
22. **Principal Investigator.** **Whitworth, B. A.** (\$351,439; **Unfunded**, 2017). *Arizona STEM Coordinator Leadership Academy for K-12*. Toyota Grant Programs.
23. **Principal Investigator.** **Whitworth, B. A.** (\$14,999.86; **Unfunded**, 2016). *The Science Coordinator Role: What leadership practices do coordinators enact?* Northern Arizona University, Faculty Grants Program.

24. **Principal Investigator. Whitworth, B. A.** (\$5,500; **Unfunded**, 2016). *Improving Student Achievement through Mindset Intervention in a Geology Classroom*. Northern Arizona University, CEFNS Lucking Family Faculty Grant.
25. **Co-Principal Investigator.** Luft, J. A., **Whitworth, B. A.**, & Dubois, S. L. (\$30,453; Subcontract; **Unfunded**, 2015). *Science Educator Trajectories*. National Science Foundation Discovery Research K-12 Competitive Grant Program.
26. **Co-Principal Investigator.** Gray, R., **Whitworth, B. A.**, & Ross, D. (\$622,999; Subcontract; **Unfunded**, 2014). *Model Development Units (MDUs): A curriculum framework for integrating disciplinary core ideas, crosscutting concepts, scientific practices, and science-specific literacy skills*. National Science Foundation Discovery Research K-12 Competitive Grant Program.
27. **Co-Principal Investigator.** Ross, D., & **Whitworth, B. A.** (\$15,000; **Unfunded**, 2014). *Examining the efficacy of an intervention: Using the Five Practices Model as a tool for orchestrating productive science discussions*. Northern Arizona University, Faculty Grants Program.

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#### PEER REVIEWED PUBLICATIONS IN RESEARCH JOURNALS

1. Huang, Y., Luft, J.A., Tran, H.H., Deluca, J.J., Pavez, J., & **Whitworth, B. A.** (2025). Exploring the attending and interpretation of three science and engineering practices among secondary science teachers. *International Journal of Science and Mathematics Education*, 1-26. <https://doi.org/10.1007/s10763-025-10548-9>
2. Bateman, J.M.\*, **Whitworth, B. A.**, Wenner, J.A. (2024). In or out of the classroom? Differentiating science teacher leaders and district science coordinators: A literature review. *International Journal of Teacher Leadership*, 13(1), 76-94.
3. He, C. W., Tran, H., Luft, J.A., Ruiz, Y.\*, McCann, S., Huang, Y. & **Whitworth, B. A.** (2024). Science teacher's implementation of science and engineering practices in different instructional settings. *International Journal of Science Education*, 1-23. <https://doi.org/10.1080/09500693.2024.2341189>
4. Luft, J. A., Huang, Y., Singh, H., Ozen-Tasdemir, H., DeLuca, J., Watson, S.\*, Ayano, E., & **Whitworth, B. A.** (2024). Exploring the noticing of science teachers: What teachers' notice and using video to capture teacher knowledge. *School Science and Mathematics*, 124(3), 159-170. <https://doi.org/10.1111/ssm.12623>
5. **Whitworth, B. A.**, Ozen-Tasemir, H., DeLuca, J., Singh, H., Bateman, J.\*, & Luft, J.A. (2024, Advance Online). One approach for designing differentiated professional development. *Science Educator*, 30(1), 1-12.
6. Rubino-Hare, **Whitworth, B. A.**, Boateng, F., & Bloom, N. (2024). The impact of Geospatial Inquiry lessons on student interest in science and technology careers. *Journal of Research in Science Teaching*, 61(2), 419-456. <http://doi.org/10.1002/tea.21904>
7. **Whitworth, B. A.**, Rubino-Hare, L., & Bloom, N. E. (2022, Spring). Scaling professional development: Measures of implementation. *Science Educator*, 28(2), 75-85.



8. **Whitworth, B. A.**, Rubino-Hare, L., Boateng, F., Hamlin, A., Bloom, N., & Nolan, E.\* (2022). Teacher enactment of the Geospatial Inquiry cycle in classrooms following scaled up professional learning and development. *International Journal of Science Education*, 44(3), 379-415. DOI: 10.1080/09500693.2022.2030073
9. **Whitworth, B. A.**, Wilson, S.\*, & Watson, S.\* (2021). Examining teacher leadership as a model for improvement in science education. *Science Educator*, 28(1), 21-29.
10. Maeng, J.L., **Whitworth, B. A.**, Bell, R.L., & Sterling, D. (2020). The effect of professional development on elementary science teachers' understanding and classroom implementation of reform-based science instruction. *Science Education*, 104, 326-353. DOI: 10.1002/sce.21562
11. Moore, V., Prewitt, E., Carpenter-McCullough, A., & **Whitworth, B. A.** (2020, January). Teamwork makes the dream work: Using Team-Based Learning in the science classroom. *Journal of College Science Teaching*, 49(3), 38-46.
12. **Whitworth, B. A.**, Rubino-Hare, L., Bloom, N. E., Walker, M. C.\*, & Arendt, K.\* (2020). Scaling professional development: Preparing professional development providers to lead Power of Data Teacher Workshops. *International Journal of Science Education*, 42, 1-24. DOI: 10.1080/09500693.2019.1699975
13. Biggers, M., Miller, A. R., Zangori, L., & **Whitworth, B. A.** (2019). (Mis)alignments in mentorship: Exploring challenges to preservice science teacher preparation. *Journal of Science Teacher Education*, 30, 344-356. DOI: 10.1080/1046560X.2018.1562812
14. Wheeler, L. B., Navy, S. L., Maeng, J.L., & **Whitworth, B. A.** (2019). Development and validation of the Classroom Observation Protocol for Engineering Design (COPED). *Journal of Research in Science Teaching*, 56, 1285-1305. DOI: 10.1002/tea.21557
15. Luft, J. A., **Whitworth, B. A.**, Berry, A., Kind, V., & Navy, S. L. (2018). Science Education Trajectories: Charting the course for teachers, educators, researchers, and policy makers. *Journal of Science Teacher Education*, 30, 63-79. DOI: 10.1080/1046560X.2018.1535226
16. Maeng, J. L., Bell, R. L., St. Clair, T., Gonczi, A. L., & **Whitworth, B. A.** (2018). Supporting elementary teachers' understandings and enactment of nature of science instruction: A randomized controlled trial. *International Journal of Science Education*, 40, 2245-2264. DOI:10.1080/09500693.2018.1528643.
17. **Whitworth, B. A.**, Maeng, J. L., & Bell, R. L. (2018). Exploring practices of science coordinators participating in targeted professional development. *Science Education*, 102, 474-497. DOI: 10.1002/sce.21337
18. Maeng, J. L., **Whitworth, B. A.**, Wheeler, L. B., Gonczi, A. L., & Dubois, S. L. (2017). Elementary science teachers' integration of engineering design into science instruction: Results from a randomized controlled trial. *International Journal of Science Education*, 39, 1529-1548. DOI: 10.1080/09500693.2017.1340688

19. Wheeler, L. B., Maeng, J. L., & **Whitworth, B. A.** (2017). Characterizing teaching assistants' knowledge and beliefs following professional development activities within an inquiry-based general chemistry context. *The Journal of Chemical Education*, 94(1), 19-28. DOI: 10.1021/acs.jchemed.6b00373
20. **Whitworth, B. A.**, Bell, R. L., Maeng, J. L., & Gonczi, A. L. (2017). Supporting the supporters: Professional development for science coordinators. *Journal of Science Teacher Education*, 28, 699-723. DOI: 10.1080/1046560X.2017.1404814
21. **Whitworth, B. A.**, Maeng, J. L., Wheeler, L. B., & Chiu, J. L. (2017). Investigating the role of a district science coordinator. *Journal of Research in Science Teaching*, 54, 914-936. DOI: 10.1002/tea.21391
22. Gonczi, A. G., Maeng, J. L., Bell, R. L., & **Whitworth, B. A.** (2016). Situating computer simulation professional development: Does it promote inquiry based simulation use? *Computers in the Schools*, 33, 133-152. DOI: 10.1080/07380569.2016.1205351
23. Rubino-Hare, L. A., **Whitworth, B. A.**, Bloom, N. E., Claesgens, J. M., Fredrickson, K. M., Henderson-Dahms, C., & Sample, J. C. (2016). Persistent teaching practices after geospatial technology professional development. *Contemporary Issues in Technology and Teacher Education*, 16(3), 208-285. Retrieved from: <http://www.citejournal.org/volume-16/issue-3-16/science/persistent-teaching-practices-after-geospatial-technology-professional-development>
24. Wheeler, L. B., Maeng, J. L., & **Whitworth, B. A.** (2015). Teaching assistants perceptions of a training to support an inquiry-based general chemistry laboratory course. *Chemical Education Research and Practice*, 16, 824-842. DOI: 10.1039/c5rp00104h
25. **Whitworth, B. A.** & Chiu, J. L. (2015). Professional development and teacher change: The missing leadership link. *Journal of Science Teacher Education*, 26, 121-137. DOI: 10.1007/s10972-014-9411-2
26. Wheeler, L. B., Bell, R. L., **Whitworth, B. A.**, & Maeng, J. L. (2014). The science ELF: Assessing the Enquiry Levels Framework as a heuristic for professional development. *International Journal of Science Education*, 37, 55-81. DOI: 10.1080/09500693.2014.961182

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#### PEER REVIEWED BOOK CHAPTERS

1. **Whitworth, B. A.**, Wenner, J., & Tubin, D. (2022). Science teacher leadership: The current landscape and paths forward. In J. Luft & M. G. Jones (Eds.), *The handbook of research on science teacher education* (pp. 257-272). Taylor & Francis.

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#### PEER REVIEWED PUBLICATIONS IN PRACTITIONER JOURNALS

1. Cooper, D.\* & **Whitworth, B. A.** (2024, November/December). We're all in this together: Collaborative modeling tasks for the chemistry classroom. *The Science Teacher*, 91(6), 78-84. <https://doi.org/10.1080/00368555.2024.2403636>
2. Roy, A.\* & **Whitworth, B. A.** (2024, November/December). Establishing a writing center and why science teachers need to be in on it. *The Science Teacher*, 91(6), 41-46. <https://doi.org/10.1080/00368555.2024.2402416>



3. Wenner, J. A., & **Whitworth, B. A.** (2024, August). I CAN: Strategies for Rethinking How We Share Objectives. *Science and Children*, 61(4), 69-72. <https://doi.org/10.1080/00368148.2024.2366021>
4. **Whitworth, B. A.**, & Sneed, A. (2024, November/December). Powerful Practices for the Differentiated Science Classroom. *The Science Teacher*, 91(6), 47-56. <https://doi.org/10.1080/00368555.2024.2404231>
5. Halliday-Isaac, A.\* & **Whitworth, B. A.** (2023, January/February). Ancient antimicrobials: An inquiry-based look at the social context behind microbes. *The Science Teacher*, 90(3), 65-68.
6. Ruiz, Y.\* & **Whitworth, B. A.** (2023, May/June). What's up with gravity? Addressing misconceptions through discrepant events. *The Science Teacher*, 90(5), 20-25.
7. Ruiz, Y.\* & **Whitworth, B. A.** (2023, July/August). Shattering the language barrier: English Learners and the Next Generation Science Standards. *The Science Teacher*, 90(6), 46-51.
8. Kulkarni, S.\* & **Whitworth, B. A.** (2022, September). Using podcasts in science classrooms: Storytelling for all ears. *The Physics Teacher*, 60(6), 419-421. DOI: 10.1119/5.0038642
9. Watson, S.\* & **Whitworth, B. A.** (2022, July/August). Particulate matters: Water filtration and solar disinfection. *Science Scope*, 45(6), 40-48.
10. Jackson, W., Simpson, L. A.\*, **Whitworth, B. A.** (2022, February). Talking is thinking: Supporting student sense-making through discourse and assessment. *The Physics Teacher*, 60(2), 90-93. DOI: 10.1119/5.0021977
11. Mosely, J.J.\* & **Whitworth, B. A.** (2021, July/August). The "magic" of density: A unique take on the 5E lesson. *Science Scope*, 44(6), 74-83.
12. Lytal, L. C.\*, **Whitworth, B. A.**, & Morton, G. (2021, September/October). No bones about art. *Science Scope*, 45(1), 60-66.
13. Rock, C. A.\* & **Whitworth, B. A.** (2021, March/April). Airbags as real-life applications for science. *The Science Teacher*, 88(4), 47-51.
14. Simpson, L. A.\* & **Whitworth, B. A.** (2021, May/June). Science portfolios: Embedding the nature of science. *The Science Teacher*, 88(5), 58-63.
15. Todd, L. C.\* & **Whitworth, B. A.** (2021, July/August). Going viral: Using technology in the classroom to show the spreading of viruses. *Science Scope*, 44(6), 64-73.
16. Henning, A.\*, **Whitworth, B. A.**, & Huff Macpherson, A. (2020, February). Comics in the classroom: What's at the center of the solar system. *The Science Teacher*, 87(6), 37-43.
17. Wilson, S.\* & **Whitworth, B. A.** (2020, November/December). Do not disturb the flow: Smoking and the cardiovascular system. *The Science Teacher*, 88(2), 54-59.

18. Hedman, J. O.\* & **Whitworth, B. A.** (March, 2019). The science project portfolio: An approach to improve experiences and outcomes for science fair stakeholders. *Science Scope*, 42(7), 46-53. DOI: 10.2505/4/ss19\_042\_07\_46
19. Luft, J. A. & **Whitworth, B. A.** (January, 2019). Reaching for the future: Building a professional trajectory. *The Science Teacher*, 86(5), 34-39.
20. Nolan, E.\*, **Whitworth, B. A.**, & Rubino-Hare, L. (November/December, 2019). A lesson in geospatial inquiry. *The Science Teacher*, 87(4), 26-33.
21. Simpson, L.\*, & **Whitworth, B. A.** (September, 2019). Modeling for ecological engineering. *The Science Teacher*, 87(2), 31-39.
22. Westman, B.\* & **Whitworth, B. A.** (March, 2019). Fraught with friction: Supporting student thinking using a PEOE strategy. *Science & Children*, 56(7), 44-49.
23. Rains, S. L.\*, & **Whitworth, B. A.** (2018). A better way of farming: Building an aquaponics system for the classroom. *The Science Teacher*, 86(3), 40-45. DOI: 10.2505/4/tst18\_086\_03\_40
24. Beyea, S. M.\* & **Whitworth, B. A.** (2017). Out in the field: Learning about plant diversity. *Science Scope*, 41(3), 50-58.
25. **Whitworth, B. A.** & Wheeler, L. B. (2017). Is it engineering or not? *The Science Teacher*, 84(5), 25-29.
26. **Whitworth, B. A.**, Beyea, S. M.\*, & Purell, M. (2016, Winter). STEM Learning in Your Own Backyard: Designing a place-based middle school summer program. *Green Teacher*, (108), 21-25. Retrieved from: <http://greenteacher.com/stem-learning-in-your-own-backyard/>
27. Wheeler, L. B., **Whitworth, B. A.**, & Gonczi, A. L. (2014). Engineering design challenge. *The Science Teacher*, 81(9), 30-36. DOI: 10.2505/4/tst14\_081\_09\_30
28. **Whitworth, B. A.**, Chiu, J. L., & Bell, R. L. (2014). Kinesthetic investigations in the physics classroom. *The Physics Teacher*, 52, 616-618. DOI: 10.1119/1.4862112
29. **Whitworth, B. A.** & Bell, R. L. (2013). Physics portfolios: A picture of student understanding. *The Science Teacher*, 80(8), 38-43. DOI: 10.2505/4/tst13\_080\_08\_38
30. **Whitworth, B. A.** & Chiu, J. L. (2013). Pre-Service teachers' use of visualizations in the science classroom: A case study. *Journal of Virginia Science Education*, 5(1), 16-33. Retrieved from: [http://www.vast.org/docs/Journal9\\_FullVersion-1.pdf](http://www.vast.org/docs/Journal9_FullVersion-1.pdf)
31. **Whitworth, B. A.**, Maeng, J. L., & Bell, R. L. (2013). Differentiating inquiry. *Science Scope*, 37(2), 10-17. DOI: 10.2505/4/ss13\_037\_02\_10

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## EDITORIAL PUBLICATIONS

1. **Whitworth, B. A.** (2025). Developing Disciplinary Literacy. *The Science Teacher*, 92(4), 6-7. <https://doi.org/10.1080/00368555.2025.2518723>

2. **Whitworth, B. A.** (2025). Fostering Innovation, Creativity, and Curiosity in Science Education. *The Science Teacher*, 92(3), 6–7. <https://doi.org/10.1080/00368555.2025.2491937>
3. **Whitworth, B. A.** (2025). Science for All. *The Science Teacher*, 92(2), 6-7. <https://doi.org/10.1080/00368555.2025.2461952>
4. **Whitworth, B. A.** (2025). Misinformation in Science. *The Science Teacher*, 92(1), 6-7. <https://doi.org/10.1080/00368555.2025.2439773>
5. Wenner, J.A. & **Whitworth, B. A.** (2024). Editorial. *International Journal of Teacher Leadership*, 13(1), 1-3.
6. **Whitworth, B. A.** (2024). Differentiation and Inclusivity for All. *The Science Teacher*, 91(6), 6-7. <https://doi.org/10.1080/00368555.2024.2419805>
7. **Whitworth, B. A.** (2024). Equitable Science for a Socially Just Classroom. *The Science Teacher*, 91(5), 6. DOI: 10.1080/00368555.2024.2393958
8. Tofel-Grehl, C. & **Whitworth, B. A.** (2023, January/February). Introduction to the Special Issue on Immunology. *The Science Teacher*, 90(3), 10-11.

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#### NON-PEER REVIEWED PUBLICATIONS

1. **Whitworth, B. A.** (2022, August 4). *SC teacher shortage likely to grow without needed support*. The Post & Courier, Charleston, SC.
2. Watson, S. A.\*, **Whitworth, B. A.**, Steimle, A., & James, J. (2022, Summer). "I can see the bright side of science!": Building content knowledge of elementary teachers of science. ICRSME Newsletter, 9-11.
3. **Whitworth, B. A.** (2014). *Exploring the critical role of a district science coordinator*. (Doctoral Dissertation). University of Virginia: Charlottesville, Virginia.
4. **Whitworth, B. A.** (2001). Team learning: A pilot study. In Leah P. McCoy (Ed), *Studies in teaching: 2001 research digest* (p. 116-120). Winston-Salem, NC: Wake Forest University.
5. **Whitworth, B. A.** (2001). The world is my home. In Graduating Pryor Leadership Fellows of William Jewell College (Ed), *True North: Insights on Leadership for College Students* (p. 38-40). Liberty, MO: William Jewell College.

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#### PUBLICATIONS ACCEPTED

1. Bateman, J.M.\*, Schwendemann, M.\*, **Whitworth, B. A.**, & Luft, J.A. (2024, Accepted). Examining district science coordinators communities of practice. *Journal of Research in Science Teaching*.
2. Schwendemann, M. L.\*, Cooper, D. J.\*, Hunter, A. D.\*, Wenner, J. A., & **Whitworth, B. A.** (2025, Accepted). The relationship between science teacher and district science coordinator demographic match and professional growth plans. *Science Educator*.

3. Schwendemann, M. L.\*, Jones, D. A.\*, Wenner, J.A., & **Whitworth, B. A.** (2024, Accepted). Universe in the classroom: A twist on universe in a box. *Science and Children*.

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## PUBLICATIONS IN REVIEW

1. Bateman, J.M.\*, Arastoopour-Irgens, G. & **Whitworth, B. A.** (In Review). Investigating science leadership professional identity.
2. Hunter, A. D.\*, Schwendemann, M. L.\*, Wenner, J. A., & **Whitworth, B. A.** (In Review). Thinking about teacher needs in professional development.
3. Jones, D.\* & **Whitworth, B. A.** (Revise & Resubmit). The chicken and the egg: Hatching curiosity in the classroom.
4. Luft, J.A., Huang, Y., Singh, H.\*, Deluca, J., Yonai, E., Bateman, J.\*, Watson, S.\*, Ayano, E., Ozen-Tasdemir, H., & **Whitworth, B. A.** (Revise & Resubmit). Practices, attributes and knowledge of science district coordinators: Building a foundation.
5. Owusu, K. A.\*, Owusu Achiaw, A., & **Whitworth, B. A.** (Revise & Resubmit). Scientific Reasoning Skills of Upper Primary School Pupils in Private and Public Schools in Ghana.
6. McCann, S. R., Ruiz, Y. E.\*, Schwendemann, M. L.\*, **Whitworth, B. A.**, & Luft, J. A. (In Review). Identifying how district science coordinators leverage their capital to monitor and promote equity.
7. Roy, A.A., Duncan, K.E., **Whitworth, B. A.**, & Wenner, J.A. (In Review). It is beyond time to teach the truth about science”: Science teachers grappling with racism in science knowledge construction.
8. **Whitworth, B. A.**, Brown, C., Watson, S.A.\*, Jackson, W., Simpson, L. A.\* (In Review). Thinking about science differently: Impacting Preservice Elementary Teachers with a physical science course.
9. **Whitworth, B. A.**, Rubino-Hare, L., Boateng, F., Nolan, E.\*, Bloom, N., & Manone, M. (Revise & Resubmit). Examining professional learning and development designed to support teacher Geospatial Inquiry implementation and Geospatial Technology skills.
10. Yonai, E., Roy, A.\*, He, X., Schwendemann, M.\*, Luft, J., & **Whitworth, B. A.** (In Review). The value of noticing: What new science teachers’ noticing of classroom instruction reveals about their knowledge of science practices. *Journal of Science Teacher Education*.
11. Zangori, L., Miller, A. R., Landreth, S.\*, & **Whitworth, B. A.** (Revise & Resubmit). Mind the (mentoring) gap: Exploring challenges to preservice and cooperating science teacher alignment with respect to teaching and standards-based reform.

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## EDITORSHIPS

- **The Science Teacher – Editor in Chief**, *National Science Teaching Association*, June 2024 – September 2027
- **Special Issue on Science Teacher Leadership**, *International Journal of Teacher Leadership*, 2024, Julianne Wenner & Brooke A. Whitworth

- **Special Issue on Immunology**, *The Science Teacher*, January/February 2023, Colby Tofel-Grehl & Brooke A. Whitworth

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## NATIONAL AND INTERNATIONAL PRESENTATIONS

1. Moore, K.\*, Roy, A.A.\*, Landreth, S.\*, & **Whitworth, B. A.** (2025, Submitted). Empathy and engineering: A case study in enriching education [Poster presentation]. Association for Science Teacher Education. Chicago, IL, United States.
2. Schwendemann, M. L.\*, Luft, J. A., Loureiro, P. A. C., & Whitworth, B. A. (submitted). Out-of-field teaching and professional learning opportunities: Are we supporting our out-of-field teachers? [Paper presentation]. Association of Science Teacher Education Annual Meeting, Chicago, IL.
3. Duncan, K.E., Roy, A.A.\*, **Whitworth, B. A.**, & Wenner, J.A. (2025, April). *Shattering Race Evasiveness: Teacher Learning about the Role of Race in Science Content Knowledge Production*. A presentation at the American Educational Research Association Annual Meeting, Denver, CO.
4. **Whitworth, B. A.**, Bateman, J.M.\*, Schwendemann, M.\*, Singh, K.\*, Ozen, H., Hunter, A.\*, Luft, J.A. (2025, Accepted - Canceled). *Using Ecological Systems Models to Understand District Science Coordinators' Learning*. A presentation at the American Educational Research Association Annual Meeting, Denver, CO.
5. Yonai, E., Roy, A.\*, He, X., Luft, J.A., & **Whitworth, B. A.** (2025, April). *Newly-hired Science Teachers Noticing and Early Perceptions of Science and Engineering Practices*. A presentation at the American Educational Research Association Annual Meeting, Denver, CO.
6. Hanuscin, D., **Whitworth, B. A.**, Andrews, V., & McLean, L. (2025, March). *NSTA Research Division: Research Round Tables*. A presentation at the National Science Teaching Association Annual Meeting, Philadelphia, PA.
7. Bateman, J.M.\*, Schwendemann, M.L.\*, **Whitworth, B. A.**, Luft, J.A. (2025, March). *Investigating District Science Coordinator Professional Responsibilities*. A poster at the National Association for Research in Science Teaching Annual Meeting, National Harbor, MD.
8. Bateman, J.M.\*, **Whitworth, B. A.**, Arastoopour-Irgens, G. (2025, March). *Science leadership professional identity*. [Paper presentation] National Association for Research in Science Teaching Annual Meeting, National Harbor, MD.
9. Huang, Y., Deluca, J., Yonai, E., He, X., Ayano, E., Luft, J. A., & **Whitworth, B. A.** (2025, March). *Investigating the support for science teacher noticing on reform-based practices*. Paper presented at the 2025 NARST Annual International Conference, National Harbor, MD.
10. Luft, J.A., Deluca, J., Huang, Y., He, X., Ayano, L., Yonai, E., & **Whitworth, B. A.** (2025, March). *Science teachers and district science leaders: A complex pragmatic study of support and instruction*. A presentation at the National Association for Research in Science Teaching Annual Meeting, National Harbor, MD.
11. Roy, A.A.\*, Duncan, K.E., **Whitworth, B. A.**, & Wenner, J.A. (2025, March). *Science Teacher Leaders' Grappling with the Role of Race in Science Content Knowledge Production*. A presentation at the National Association for Research in Science Teaching Annual Meeting, National Harbor, MD.

12. Schwendemann, M. L.\*, **Whitworth, B. A.**, & Luft, J. A. (2025, March). *Examining Culturally Relevant Dispositions in District Science Coordinators and Science Teachers*. A presentation at the National Association for Research in Science Teaching Annual Meeting, National Harbor, MD.
13. Tracey, S.\*, & **Whitworth, B. A.** (2025, March). *Exploring African American Vernacular English (AAVE) in K-12 science classrooms: A culturally responsive teaching approach*. A poster at the National Association for Research in Science Teaching Annual Meeting, National Harbor, MD.
14. Wenner, J.A. & **Whitworth, B. A.** (2025, March). *Exploring Science Teacher Leaders' Professional Growth Plans*. A poster at the National Association for Research in Science Teaching Annual Meeting, National Harbor, MD.
15. Luft, J.A., Adah-Miller, E., Campbell, T., Gunning, A., Kruse, J., Kier, M., Rollnick, M., & **Whitworth, B. A.** (2025, January). *ASTE Position Statement on Early Career Science Teacher Learning*. Association of Science Teacher Education Annual Meeting, Long Beach, CA.
16. Roy, A.A.\*, Duncan, K.E., **Whitworth, B. A.**, & Wenner, J.A. (2025, January). *Science Teacher Leaders' Grappling with Racism in The Construction of Science Knowledge*. [Poster Presentation]. Association of Science Teacher Education Annual Meeting, Long Beach, CA.
17. Schwendemann, M. L.\*, **Whitworth, B. A.**, & Luft, J. A. (2025, January). *Examining district science coordinators' conceptualizations of equity*. [Paper Presentation]. Association of Science Teacher Education Annual Meeting, Long Beach, CA.
18. Singh, K.\*, Tracey, S.\*, **Whitworth, B.A.** & Luft, J.A. (2025, January). *Exploring professional development needs and support behaviors across preparedness levels among District Science Coordinators*. Paper presentation at the Association of Science Teacher Education Annual meeting, Long Beach, CA
19. Tracey, S.\*, & **Whitworth, B. A.** (2025, January). *Speaking science in their language: Empowering students with African American Vernacular English (AAVE) in STEM education*. [Poster Presentation]. Association of Science Teacher Education Annual Meeting, Long Beach, CA.
20. Bateman, J.M.\* & **Whitworth, B. A.** (2024, November). *Investigating the Identity of Science Education Leaders*. [Poster presentation] International Conference of Quantitative Ethnography, Philadelphia, PA.
21. Hodge, M. H.\*, Roy, A. A.\*, Schwendemann, M. L.\*, & **Whitworth, B. A.** (2024, November). *Is it CER or ERC? How to level up CER for sense-making*. [Hands-On Workshop]. National Science Teaching Association National Meeting, New Orleans, LA.
22. Hunter, A. D.\*, Landreth, S.\*, & **Whitworth, B. A.** (2024, November). *Asking questions IRL: Should I buy that?* [Hands-On Workshop]. National Science Teaching Association National Meeting, New Orleans, LA.



23. Tracey, S.\* & **Whitworth, B. A.** (2024, November). *Developing and using models in NGSS (Speed-sharing)*. Presentation at the National Science Teaching Association National Meeting, New Orleans, LA.
24. **Whitworth, B. A.** & Wenner, J. A. (2024, November). *Differentiating professional learning: Teachers need it too!* [Hands-On Workshop]. National Science Teaching Association National Meeting, New Orleans, LA.
25. **Whitworth, B. A.**, Wenner, J. A., & High, K. (2024, July). *Noyce Track 3: Building Leadership Among Science Teachers (BLAST) in South Carolina*. A poster for the annual Noyce PI Meeting, Washington, D.C.
26. Landreth, S.\*, Bateman, J.\*, & **Whitworth, B. A.** (2024, March). *Secondary Science Outdoors (It's not just for K-5)*. A workshop for the National Science Teaching Association, Denver, CO.
27. Roy, A.\*, Hunter, A.\*, & **Whitworth, B. A.** (2024, March). *A writing center led by science teachers? Why it works and how to implement it in your school!* A workshop for the National Science Teaching Association, Denver, CO.
28. Lindeman, P., **Whitworth, B. A.**, & Tofel-Grehl, C. (2024, March). *How to get published in NSTA Journals: Grad student edition*. A workshop for the National Science Teaching Association, Denver, CO.
29. Bateman, J.M.\*, Wenner, J. A., & **Whitworth, B. A.** (2024, March). *Implications of social network analysis on science education communities*. Poster presented at the NARST Annual International Conference, Denver, CO.
30. Luft, J. A., Yonai, E., Deluca, J., Ozen, H., Ayano, E., Huang, Y., Bateman, J.\*, & **Whitworth, B. A.** (2024, March). *The learning of science teachers within a district: Teachers' Perspectives*. Paper presentation at the National Association for Research in Science Teaching 97th Annual Meeting, Denver, CO
31. Singh, H.\*, Huang, Y., Tran, H., Luft, J., & **Whitworth, B. A.** (2024, March). *Secondary science teachers' pPCK of science and engineering practices and their implementation*. A paper presentation for the annual meeting of National Association for Research in Science Teaching Annual International Conference, Denver.
32. Singh, K.\*, Bateman, J.M.\*, Schwendemann, M.\*, **Whitworth, B. A.** (2024, March). *Exploring the formative experiences of district science coordinators*. Paper presentation at the National Association for Research in Science Teaching Annual Meeting, Denver, CO
33. **Whitworth, B. A.**, Bateman, J.M.\*, Schwendemann, M.\*, Singh, K.\*, Ozen, H., Hunter, A.\*, Luft, J.A. (2024, March). *Exploring district science coordinators learning*. Paper presentation at the National Association for Research in Science Teaching Annual Meeting, Denver, CO.
34. He, C. W.\*, Tran, H.\*, Luft, J. A, Ruiz, Y.\*, McCann, S.\*, Huang, Y.\*, & **Whitworth, B. A.** (2024, January). *Exploring science teachers' implementation of Science and Engineering Practices during the*

*pandemic*. A paper presentation for the Association for Science Teacher Education Annual International Conference, New Orleans, LA, the U.S.

35. Schwendemann, M. L.\*, Cooper, D. J.\*, Hunter, A. D.\*, Wenner, J. A., & **Whitworth, B. A.** (2023, Submitted). *Mirrors and lenses: How the relationship between science teacher and coordinator demographics impacts professional growth plans*. [Poster presentation]. Association of Science Teacher Education Annual Meeting, New Orleans, LA.
36. **Whitworth, B. A.** (2023, October). *Strategies for differentiating professional learning*. A workshop for the National Science Teaching Association, Kansas City, MO.
37. **Whitworth, B. A.**, Hilbert, J., & Trotter, G. (2023, October). *Developing a framework for multidimensional science education*. A workshop for the National Science Teaching Association, Kansas City, MO.
38. Bateman, J. M.\*, Schwendemann, M. L.\*, **Whitworth, B. A.**, & Luft, J. A. (2023, April). *Examining changes in district science coordinators communities of practice*. Poster presentation at the National Association for Research in Science Teaching Annual Meeting, Chicago, IL.
39. Huang, Y.\*, Tran, H.\*, Deluca, J.J.\*, Pavez, J. \*, Gorton, W.C. \*, Luft, J.A., & **Whitworth, B. A.** (2023, April). *Investigating science teachers' professional vision of science and engineering practices*. Paper presentation at the National Association for Research in Science Teaching Annual Meeting, Chicago, IL.
40. Singh, H. \*, Ozen-Tasdemir, H. \*, Huang, Y. \*, Deluca, J. \*, Luft, J.A., & **Whitworth, B. A.** (2023, April). *Science teachers' noticing of science and engineering practices: Does being out-of-field matter?* Paper presentation at the National Association for Research in Science Teaching Annual Meeting, Chicago, IL.
41. McCann, S. R. \*, Ruiz, Y. E. \*, **Whitworth, B. A.**, Luft, J. A., & Kum, J. \* (2023, April). *District science coordinators' promotion of equity in an organization*. In C. Haverly (Chair), Leadership for the promotion of equity in science and STEM education [Related Paper Set]. National Association for Research in Science Teaching Annual Meeting, Chicago, IL.
42. **Whitworth, B. A.**, Schwendemann, M. L.\*, & Luft, J. A. (2023, April). Professional development for district science coordinators. In S. Heredia (Chair), *Symposium on science teacher leadership from research and practice perspectives* [Symposium]. National Association for Research in Science Teaching Annual Meeting, Chicago, IL.
43. Bateman, J. M.\*, Schwendemann, M. L.\*, Hunter, A. D.\*, & **Whitworth, B. A.** (2023, March). *Does your PLC need some TLC?* Presentation at the National Science Teachers Association National Meeting, Atlanta, GA
44. Hunter, A. D.\*, Bateman, J. M.\*, Schwendemann, M. L.\*, & **Whitworth, B. A.** (March, 2023). *Who loves soda science? I do, I do, I do-oo!* [Hands-On Workshop]. Presentation at the National Science Teachers Association National Meeting, Atlanta, GA

45. Schwendemann, M. L.\*, Hunter, A. D.\*, Bateman, J. M.\*, Franks, J. T.\*, & **Whitworth, B. A.** (2023, March). *Upcycling science lessons: How to take your beloved lesson and upcycle it to 3D*. [Hands-On Workshop]. National Science Teachers Association National Meeting, Atlanta, GA.
46. **Whitworth, B. A.** & Luft, J. A. (2023, March). *Exploring the power of strategic planning*. A presentation for the annual meeting of the National Science Teaching Association, Atlanta, GA.
47. **Whitworth, B. A.** & Luft, J. A. (2023, March). *Designing personal professional learning: What do you want to be when you grow up?* A presentation for the annual meeting of the National Science Education Leadership Association, Atlanta, GA.
48. Singh, H., Ozen-Tasdemir, H., Huang, Y., Deluca, J., Luft, J.A., **Whitworth, B. A.** (2023, February). *Noticing scientific practices in a physical science classroom video: How teaching out-of-field makes a difference*. Paper presentation at 9<sup>th</sup> international symposium of the teaching across specialization collective. Virtual symposium.
49. Bateman, J. M.\*, **Whitworth, B. A.**, Schwendemann, M.\*, & Luft, J. A. (2023, January). *District science coordinators communities of practice as a professional learning model*. Paper presentation at the Association of Science Teacher Education Annual meeting, Salt Lake City, UT.
50. Huang, Y., Tran, H., Pavez, J., Deluca, J., Luft, J.A., & **Whitworth, B. A.** (2023, January). *Investigating science teachers' professional vision of argumentation*. Paper presentation at the Association of Science Teacher Education Annual meeting, Salt Lake City, UT.
51. Ozen-Tasdemir, H., Singh, K.\*, Luft, J.A., & **Whitworth, B. A.** (2023, January). *Building a learning organization: An investigation of two district science coordinators*. Paper presentation at the Association of Science Teacher Education Annual meeting, Salt Lake City, UT.
52. Pavez, J., Singh, H., Huang, Y., Gorton, W., Kum, J., Luft, J.A., & **Whitworth, B. A.** (2023, January). *The work of district science leaders over a two-year period: What did these leaders focus on?* Paper presentation at the Association of Science Teacher Education Annual meeting, Salt Lake City, UT.
53. He, C.-W., Tran, H., Ruiz, Y.\*, McCann, S., **Whitworth, B. A.**, & Luft, J. A. (2022, April). *Exploring teachers' experience and implementation of the Science and Engineering Practices in different instructional contexts*. A paper presentation for the National Association of Research in Science Teaching Annual International Conference, Vancouver, BC, Canada.
54. Luft, J.A., Huang, Y., Watson, S., Singh, H., Ozen, H., **Whitworth, B. A.**, Ruiz, Y., Tran, H., McCann, S., & Hu, N. (2022, April). *What beginning and experienced secondary science teachers notice in videos of classroom instruction*. A paper presentation for the NARST Annual International Conference, Vancouver, BC, Canada.
55. McCann, S. R., Ruiz, Y. E.\*, **Whitworth, B. A.**, & Luft, J. A. (2022, April). *Identifying the methods district science coordinators utilize to monitor and promote equity*. A poster presentation for National Association for Research in Science Teaching Annual International Conference, Vancouver, BC, Canada.

56. Singh, H., Tran, H., Ozen-Tasdemir, H., Huang, Y., Luft, J., & **Whitworth, B. A.** (2022, April). *Supporting Science Teachers Teaching out of their Context During the COVID-19 Pandemic: An International Study*. A paper presentation for the annual meeting of National Association for Research in Science Teaching Annual International Conference, Vancouver, BC, Canada.
57. Singh, H., Tran, H., Ozen-Tasdemir, H., Huang, Y., Luft, J., & **Whitworth, B. A.** (2022, April). *Experiences of School Science Coordinators During the COVID-19 Pandemic: An International Perspective*. A poster presentation at the Basu Scholar Symposium for the annual meeting of National Association for Research in Science Teaching Annual International Conference, Vancouver, BC, Canada.
58. Tran, H., Huang, Y., He, C., **Whitworth, B. A.**, Ruiz, Y.\*, McCann, S., & Luft, J., (2022, April). *Science teaching practices and student engagement in hyflex learning environments*. A paper presentation for the 2022 NARST Annual International Conference, Vancouver, BC, Canada.
59. Luft, J.A., Huang, Y., Watson, S.\*, Singh, H., Ozen, H., **Whitworth, B.**, Ruiz, Y\*., Tran, H., McCann, S., & He, C.-W. (2022, January). *Using video to elicit the professional knowledge of a teacher: A pilot study*. A paper for the annual meeting of the Association for Science Teacher Education, Greenville, SC.
60. Pavez, J., Singh, H., Huang, Y., Luft, J., & **Whitworth, B. A.** (2022, January). *How do district science coordinators lead the districts during the pandemic?* A paper for the annual meeting of the Association for Science Teacher Education, Greenville, SC.
61. Ruiz, Y. E.\*, McCann, S. R., Luft, J. A., & **Whitworth, B. A.** (2022, January). *Identifying District Science Coordinators' strategies to promote equity*. A paper for the annual meeting of the Association for Science Teacher Education annual meeting, Greenville, SC.
62. **Whitworth, B. A.**, Huang, Y., Singh, H., Watson, S.\*, Ozen-Tasdemir, H., & Luft, J.A. (2022, January). *Designing the differentiation of online professional development*. A paper for the annual meeting of the Association for Science Teacher Education, Greenville, SC.
63. **Whitworth, B. A.**, Tran, H., McCann, S., He, C.-W., Ruiz, Y.\* & Luft, J.A. (2022, January). *Examining the Science and Engineering Practices implemented by teachers through multiple instructional formats*. A poster for the annual meeting of the Association for Science Teacher Education, Greenville, SC.
64. Luft, J.A., **Whitworth, B. A.**, Ozen-Tasdemir, H., Singh, H., McCann, S. Watson, S.\*, Huang, Y., Ruiz, Y.\* & Tran, H. (2021, October). *Supporting science teacher leaders through a web-based program: Aligning program and participants*. A paper for the annual meeting of the European Science Education Research Association, Virtual.
65. **Whitworth, B. A.**, Wenner, J., & Tubin, D. (2021, October). *Science teacher leadership: The current landscape and paths forward*. A paper for the annual meeting of the European Science Education Research Association, Virtual.

66. Rubino-Hare, L., **Whitworth, B. A.**, Bloom, N., Nolan, E.\*, & Manone, M. (2021, July). *Power of Data: Impact of scale up on teachers and students and next steps*. A presentation for the Esri Education Summit, San Diego, CA.
67. **Whitworth, B. A.** & Simpson, L. A.\* (2021, April). *Utilizing physical science Educative Curriculum Materials and situated learning to impact Preservice Elementary Teachers*. A paper for the annual meeting of the American Educational Research Association, Virtual.
68. **Whitworth, B. A.**, Simpson, L.\*, Jackson, W., James, J. & Steimle, A. (2021, April). *Everything is connected: Building preservice elementary teachers' content knowledge through educative curriculum materials*. A poster for the annual meeting the National Association of Research in Science Teaching, Virtual.
69. **Whitworth, B. A.**, Luft, J.A., Watson, S.\*, Huang, Y., Singh, H., & Worth, E. (2021, April). *A professional development module focused on teaching science equitably*. A presentation for the annual meeting of the National Science Teaching Association, Chicago, IL. (Cancelled)
70. Huang, Y., Singh, H., Ozen-Tasdemir, H., Watson, S. A.\*, **Whitworth, B. A.**, & Luft, J.A. (2021, January) *Supporting district science coordinators: Designing online professional learning modules*. A presentation for the annual meeting of the Association for Science Teacher Education, Virtual.
71. Singh, H., Huang, Y., Tran, H., Ozen-Tasdemir, H., Worth, E., Watson, S.\*, Luft, J., & **Whitworth, B.** (2021, January). *Resilience in the Face of the COVID-19 Pandemic: Knowledge and Practices of School Science Coordinators in the Asian Context*. A paper presentation for the annual meeting of the Association for Science Teacher Education Annual International Conference. Virtual.
72. **Whitworth, B. A.**, Simpson, L.\*, Steimle, A., Jackson, W., & James, J. (2021, January). *Impacting higher education faculty's teaching practices in the physical sciences*. A poster for the annual meeting the Association of Science Teacher Education, Virtual.
73. **Whitworth, B. A.**, Rubino-Hare, L., Bloom, N., Nolan, E.\*, Boateng, F., & Manone, M. (2021, January). *Designing Geospatial Inquiry and Geospatial Technology skill professional learning and development for secondary teachers*. A paper for the annual meeting of the Association of Science Teacher Education, Virtual.
74. Rubino-Hare, L., **Whitworth, B.**, Bloom, N., & Manone, M. (2020, July). *The Power of Data: Helping teachers enhance lessons with Geospatial Inquiry*. A presentation for the annual Esri Education User Conference, San Diego, CA. (Cancelled)
75. **Whitworth, B. A.**, Simpson, L.\*, & Wilson, S.\* (2019, April). *Strategies for Differentiating Science Practices*. A presentation for the National meeting of the National Science Teachers Association, Boston, MA. (Cancelled)
76. Watson, S.\*, Huang, Y., Singh, H., Ozen-Tasdemir, H., Worth, E., McNeil, L., Luft, J.A., & **Whitworth, B. A.** (2020, March). *Practices, attributes, and knowledge of district science coordinators: Building a trajectory*. A paper for the annual meeting of the National Association of Research in Science Teaching, Portland, OR. (Cancelled)

77. **Whitworth, B. A.**, Simpson, L.\*, Jackson, W., James, J. & Steimle, A. (2020, March). *Impacting preservice elementary teachers through physical science educative curriculum materials*. A poster for the annual meeting the National Association of Research in Science Teaching, Portland, OR. (Cancelled)
78. **Whitworth, B. A.**, Nolan, E.\*, Rubino-Hare, L., Manone, M., & Bloom, N. (2020, March). *Examining professional development designed to support geospatial inquiry implementation*. A paper for the annual meeting the National Association of Research in Science Teaching, Portland, OR. (Cancelled)
79. Wilson, S.\*, **Whitworth, B. A.** & Watson, S.\* (2020, March). *Examining teacher leadership as a model for improvement in science education*. A round table for the annual meeting the National Association of Research in Science Teaching, Portland, OR. (Cancelled)
80. Nolan, E.\*, **Whitworth, B. A.**, Manone, M., Rubino-Hare, L., & Bloom, N., (2020, January). *Exploring how the design of professional development supports geospatial inquiry implementation in the classroom*. A poster for the Association of Science Teacher Education, San Antonio, TX.
81. **Whitworth, B. A.**, Simpson, L.\*, Jackson, W., James, J. & Steimle, A. (2020, January). *Designing physical science Educative Curriculum Materials for preservice elementary teachers to impact attitudes toward science*. A poster for the Association of Science Teacher Education, San Antonio, TX.
82. Rubino-Hare, L., Bloom, N.E., Nolan, E., & **Whitworth, B. A.** (2019, December). *Empowering Secondary Teachers to Enhance Instruction through the Power of Data and Geospatial Inquiry*. A paper for the annual meeting of American Geophysical Union, San Francisco, CA.
83. Platt, S. & **Whitworth, B. A.** (2019, June). *Examining pre-service teachers' interest, attitudes, and technology integration with makerspaces*. A paper for the annual National meeting of the International Society for Technology in Education, Philadelphia, PA.
84. Lederman, J., **Whitworth, B. A.**, Bartels, S., Miller, A., Holliday, G., & Peel, A. (2019, April). *Professional citizenship: Lifetime commitments and rewards*. A symposium for the annual meeting of National Association of Research in Science Teaching, Baltimore, MD.
85. Manone, M., Rubino-Hare, L., **Whitworth, B. A.**, Nolan, E.\*, & Bloom, N., (2019, April). *Power of Data Project: Improving teaching and learning using data enhanced geospatial inquiry*. A poster for the National meeting of the American Association of Geographers, Washington, DC.
86. Wheeler, L., Navy, S., Maeng, J.L., & **Whitworth, B. A.** (2019, April). *Classroom Observation Protocol for Engineering Design (COPED): Instrument development, validation, and implications for use*. A paper presented at the annual meeting of National Association of Research in Science Teaching, Baltimore, MD.
87. Maeng, J. L., & **Whitworth, B. A.** (2019, April). *Debunking classroom myths: Learning styles edition*. A presentation for the National meeting of the National Science Teachers Association, St. Louis, MO.



88. **Whitworth, B. A.** & Maeng, J. L. (2019, April). *Is it engineering or not?* A presentation for the National meeting of the National Science Teachers Association, St. Louis, MO.
89. **Whitworth, B. A.**, Luft, J. A., & Maeng, J. L. (2019, April). *Growing as a teacher: What do I want to be when I grow up?* A presentation for the National meeting of the National Science Teachers Association, St. Louis, MO.
90. Rubino-Hare, L., Bloom, N. & **Whitworth, B. A.** (2019). Implications from a Scale Up of Geospatial Technology Professional Development Program for Secondary Teachers. In K. Graziano (Ed.), *Proceedings of Society for Information Technology & Teacher Education International Conference* (pp. 1673-1678). Las Vegas, NV, United States: Association for the Advancement of Computing in Education (AACE). Retrieved June 4, 2019 from <https://www.learntechlib.org/primary/p/207868/>.
91. Riley, A. R., **Whitworth, B. A.**, Zangori, L, Biggers, M., & Walsh, M. D.\* (2019, January). *Exploring (mis)alignment in inservice and preservice science teacher mentoring relationships with respect to standards-based reform*. A paper for the annual meeting of the Association of Science Teacher Education, Savannah, GA.
92. Bloom, N. E., Rubino-Hare, L., & **Whitworth, B. A.** (2018, August). *Findings from a scale-up of geospatial technology-integrated professional development*. A paper for the annual meeting of the National Council for Geographic Education at the International Geographical Union Regional Conference, Quebec City, Canada.
93. Miller, A. R., Zangori, L., **Whitworth, B. A.**, & Biggers, M. (2018, March). *Mind the gap: Exploring (mis)alignment in inservice and preservice science teacher mentoring relationships*. A paper for the annual meeting of the National Association for Research in Science Teaching, Atlanta, GA.
94. Luft, J. A. & **Whitworth, B. A.** (2018, January). *Supporting teacher development: Science teacher trajectories*. A paper for the annual meeting of the Association of Science Teacher Education, Baltimore, MD.
95. Maeng, J., Bell, R.L., St. Clair, T., Gonczi, A.L., & **Whitworth, B. A.** (2018, January). *Elementary Teachers' Classroom Nature of Science Instruction following PD: Results of a RCT*. A paper for the annual meeting of Association for Science Teacher Education, Baltimore, MD.
96. Wheeler, L.B., Navy, S., Maeng, J.L., & **Whitworth, B. A.** (2018, January). *Development and Validation of the Classroom Observation Protocol for Engineering Design (COPED)*. A paper for the annual meeting of the Association for Science Teacher Education, Baltimore, MD.
97. **Whitworth, B. A.**, Bloom, N. E., Walker, M. C.\*, & Rubino-Hare, L. (2018, January). *Training the trainers: Designing the Power of Data Facilitation Academies*. A poster for the annual meeting of the Association of Science Teacher Education, Baltimore, MD.
98. Rubino-Hare, L., Bloom, N., & **Whitworth, B. A.** (2017, July). *Using the Power of Data to increase student engagement with geospatial technology and careers*. A poster for the annual meeting of the International Cartographic Conference, Washington, D.C.

99. **Whitworth, B. A.**, Bloom, N. E., Walker, M. C.\* & Rubino-Hare, L. A. (2017, April). *Power of Data Facilitation Academy: Designing facilitator professional development*. A paper for the annual meeting of the National Association for Research in Science Teaching, San Antonio, TX.
100. **Whitworth, B. A.**, Meredith, J. & Hutter, A. (2017, April). *Engineering practices in the life sciences*. A presentation for the National meeting of the National Science Teachers Association, Los Angeles, CA.
101. **Whitworth, B. A.**, Luft, J. A., Kind, V., Berry, A., & Dubois, S. L. (2017, March). *What can I do and how do I get there? Trajectories of science teacher learning*. A presentation for the National meeting of the National Science Teachers Association, Los Angeles, CA.
102. Berry, A., Luft, J. A., **Whitworth, B. A.**, Dubois, S. L., & Kind, V. (2016, June). *From carnival to coherence: Conceptualizing trajectories of science teacher learning*. A paper for the annual meeting of the Australasian Science Education Research Association, Canberra, Australia.
103. **Whitworth, B. A.**, Maeng, J. L., Wheeler, L. B., & Chiu, J. L. (2016, April). *A foundational study of the district science coordinators' role in supporting science instruction*. A paper for the annual meeting of the National Association for Research in Science Teaching, Baltimore, MD.
104. Maeng, J. L., Bell, R. L., St. Clair, T., **Whitworth, B. A.**, & Gonczi, A. L. (2016, April). *From professional development to practice: Elementary teachers' understandings and enactment of nature of science instruction*. A paper for the annual meeting of the National Association for Research in Science Teaching, Baltimore, MD.
105. Luft, J. A., **Whitworth, B. A.**, Dubois, S. L., Berry, A., & Kind, V. (2016, April). *A trajectory of science teacher learning: Charting the course for policy makers, researchers, educators, and teachers*. A paper for the annual meeting of the National Association for Research in Science Teaching, Baltimore, MD.
106. **Whitworth, B. A.**, Maeng, J. L., & Chiu, J. L. (2016, April). *Investigating the roles and responsibilities of district science coordinators*. A paper for the annual meeting of the American Education Research Association, Washington, DC.
107. **Whitworth, B. A.** & Maeng, J. L. (2016, April). *Exploring engineering practices*. A presentation for the annual meeting of the National Science Teachers Association, Nashville, TN.
108. Maeng, J. L. & **Whitworth, B. A.** (2016, April). *Differentiating scientific practices through inquiry-based instruction*. A presentation for the annual meeting of the National Science Teachers Association, Nashville, TN.
109. **Whitworth, B. A.**, Edmondson, E., & Mannarino, A. (2016, March). *Creating instructional programs that engage students: The VISTA way*. A presentation for the annual meeting of the National Science Educational Leaders Association, Nashville, TN.
110. **Whitworth, B. A.**, Wheeler, L. B., Maeng, J. L. & Bell, R. L. (2016, January). *The relationship between science coordinator professional development and teacher change*. A paper for the annual meeting of the Association for Science Teacher Education, Reno, NV.

111. **Whitworth, B. A.** (2015, October). *Cooking up a research agenda: What comes next?* A paper for the annual meeting of the Science Education at the Crossroads Conference, Cleveland, OH.
112. Bell, R. L., Maeng, J. L., Konold, T., & **Whitworth, B. A.** (2015, April). *Professional development to support elementary teachers' understanding and implementation of reforms-based science: Randomized controlled trial.* A paper for the annual meeting of the American Education Research Association, Chicago, IL.
113. Bell, R. L., Maeng, J. L., Konold, T., & **Whitworth, B. A.** (2015, April). *The effect of professional development of elementary teachers' understanding and implementation of reforms-based science instruction.* A paper for the annual meeting of the National Association for Research in Science Teaching, Chicago, IL.
114. Wheeler, L. B., Maeng, J. L., & **Whitworth, B. A.** (2015, April). *Assessing a professional development for teaching assistants in a Project-Based Guided Inquiry General Chemistry lab.* A paper for the annual meeting of the National Association for Research in Science Teaching, Chicago, IL.
115. **Whitworth, B. A.**, Maeng, J. L., & Bell, R. L. (2015, April). *An exploration of science coordinator practices following professional development.* A paper for the annual meeting of the National Association for Research in Science Teaching, Chicago, IL.
116. Maeng, J. L., Bell, R. L., & **Whitworth, B. A.** (2015, January). *The effect of professional development on elementary science teachers' understanding and classroom implementation of reforms-based science instruction: A randomized controlled trial.* A paper for the annual meeting of the Association for Science Teacher Education, Portland, OR.
117. **Whitworth, B. A.**, Maeng, J. L., Wheeler, L. B., & Chiu, J. L. (2015, January). *Critical factors impacting the role of a district science coordinator.* A paper for the annual meeting of the Association for Science Teacher Education, Portland, OR.
118. Wheeler, L. B., Maeng, J. L., & **Whitworth, B. A.** (2014, July). *Teaching assistant role and perceptions: Assessment of professional development to support Project-Based, Guided Inquiry approach in General Chemistry labs.* A presentation for the IUPAC International Conference on Chemistry Education, Toronto, Canada.
119. **Whitworth, B. A.**, Maeng, J. L., Wheeler, L. B., & Chiu, J. L. (2014, April). *Understanding the critical role of a district science coordinator.* A poster for the annual meeting of National Association of Research in Science Teaching, Pittsburg, PA.
120. Gonczi, A. L., Bell, R. L., & **Whitworth, B. A.** (2014, January). *Analysis of two computer simulation professional development models.* A paper for the annual meeting of the Association of Science Teacher Educators, San Antonio, TX.
121. **Whitworth, B. A.**, Maeng, J. L., Bell, R. L., & Gonczi, A. L. (2013, April). *Supporting the supporters: A case study of professional development for science coordinators.* A poster for the annual meeting of the National Association of Research in Science Teaching, San Juan, PR.

122. Wheeler, L. B., Maeng, J. L., Bell, R. L., & **Whitworth, B. A.** (2013, April). *Understanding and scaffolding inquiry: A tale of three teachers*. A poster for the annual meeting of National Association of Research in Science Teaching, San Juan, PR.
123. **Whitworth, B. A.**, Maeng, J. L., & Gonczi, A. L. (2013, January). *Science coordinators experiences with VISTA professional development*. A paper for the annual meeting of the Association of Science Teacher Educators, Charleston, SC.
124. Wheeler, L. B., Bell, R. L., & **Whitworth, B. A.** (2013, January). *Three teachers' implementation of inquiry in the secondary science classroom*. A paper for the annual meeting of the Association of Science Teacher Educators, Charleston, SC.
125. Maeng, J. L., Bell, R. L., & **Whitworth, B. A.** (2012, March). *Alternatives to dissection in the digital age*. A paper for the annual meeting of the National Science Teachers Association, Indianapolis, IN.

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### REGIONAL, STATE, AND LOCAL PRESENTATIONS

1. Schwendemann, M. L., **Whitworth, B. A.**, & Luft, J. A. (2024). *Understanding how to cultivate culturally relevant perspectives among district science coordinators and science teachers*. [Poster Presentation]. North Central Region-Association of Science Teacher Educators Conference, Cedar Falls, IA.
2. Luft, J.A., **Whitworth, B. A.**, Huang, Y., DeLuca, J., & Bateman, J. (2023, July). Measuring teacher change through a two-year professional development program for district science coordinators. A poster for the Annual National Science Foundation DRK-12 meeting, Washington, DC.
3. Singh, K. \*, Ozen-Tasdemir, H. \*, Luft, J.A., & **Whitworth, B. A.** (2022, October). Mental models of District Science coordinators: A collective case study. Southeastern Association for Science Teacher Education, Gulf Shores, AL.
4. Kum, J. \*, McCann, S. \*, Ruiz, Y. \*, **Whitworth, B. A.**, & Luft, J.A. (July, 2022). *Identifying the impact of professional development on how district science coordinators facilitate equity in education*. REU Symposium at the University of Georgia, Athens, GA.
5. Watson, S.A.\*, Huang, Y., Singh, H., Ozen-Tasdemir, H., Worth, E., McNeil, L., McCann, S., Tran, H. H., Luft, J. A., **Whitworth, B. A.** (2020, October). *A model of district science coordinator knowledge*. A paper for the annual meeting of the Southeastern Association for Science Teacher Education, Virtual Conference.
6. **Whitworth, B. A.**, Simpson, L. \*, Jackson, W., James, J. & Steimle, A. (2020, October). *Impacting the practices of higher education faculty in the physical sciences*. A presentation for the annual meeting of the Southeastern Association for Science Teacher Education, Virtual Conference.
7. **Whitworth, B. A.**, Simpson, L. \*, Jackson, W., James, J. & Steimle, A. (2020, April). *Utilizing physical science educative curriculum materials to impact preservice elementary teachers*. A poster for the annual meeting of the Scholarship of Teaching & Learning Conference, Oxford, Mississippi. (Cancelled)

8. Simpson, L.\*, **Whitworth, B. A.**, Jackson, W., James, J. & Steimle, A. (2020, March). *Designing educative curriculum materials for physical science to impact preservice elementary teachers*. A poster for the annual meeting of the Graduate Student Council Research Symposium, Oxford, Mississippi. (Cancelled)
9. **Whitworth, B. A.** (2020, February). *Science fair portfolios: Assessing students in different ways*. A presentation for the regional meeting of the Mississippi Science Teachers Association, Oxford, MS.
10. Simpson, L.\*, Watson, S.\*, & **Whitworth, B. A.** (2019, October). *Differentiation strategies for science practices*. A presentation presented at the annual meeting of the Mississippi Science Teachers Association, Biloxi, MS.
11. Watson, S.\*, Comstock, N.\*, & **Whitworth, B. A.** (2019, October). *Backyard Ecology: Student created google tours*. A presentation presented at the annual meeting of the Mississippi Science Teachers Association, Biloxi, MS.
12. **Whitworth, B. A.**, Wilson, S.\*, & Simpson, L.\* (2019, October). *What do you want to be when you grow up?* A presentation presented at the annual meeting of the Mississippi Science Teachers Association, Biloxi, MS.
13. Wilson, S.\*, Comstock, N.\*, & **Whitworth, B. A.** (2019, October). *Patterns and creativity: Exploring the Nature of Science*. A presentation presented at the annual meeting of the Mississippi Science Teachers Association, Biloxi, MS.
14. **Whitworth, B. A.** & Wilson, S.\* (2019, January). *Understanding Nature of Science*. A presentation presented at the annual teachers conference of the NASA/Mississippi Space Grant Consortium, Oxford, MS.
15. **Whitworth, B. A.**, Simpson, L.\* & Wilson, S.\* (2018, October). *Engineering practices in the K-12 classroom*. A presentation presented at the annual meeting of the Mississippi Science Teacher Association, Biloxi, MS.
16. **Whitworth, B. A.** (2018, October). *Myths of learning: What matters in teaching and learning?* A presentation presented at the annual meeting of the Mississippi Science Teacher Association, Biloxi, MS.
17. **Whitworth, B. A.** & NAU NSTA & ASTA Student Chapter\* (2017, October). *Myths of Learning: Dispelling Common Ideas about Learning*. A presentation presented at the annual meeting of the Arizona Science Teacher Association, Phoenix, AZ.
18. **Whitworth, B. A.** & NAU NSTA & ASTA Student Chapter\* (2016, November). *The might of metacognition and mindsets*. A presentation presented at the annual meeting of the Arizona Science Teacher Association, Phoenix, AZ.
19. Luft, J. A., **Whitworth, B. A.**, & Dubois, S. L. (2016, October). *A trajectory of science teacher learning: Charting the course path for researchers, educators, and teachers*. A paper for the Regional meeting of the National Science Teachers Association, Minneapolis, MN.

20. Rubino-Hare, L. & **Whitworth, B. A.** (2016, January). *The Power of Data: Preparing the Geospatial workforce for tomorrow*. A presentation presented for the annual meeting of the Arizona STEM Collaborative, Phoenix, AZ.
21. **Whitworth, B. A.** (2015, November). *Engaging with engineering practices*. A presentation presented at the annual meeting of the Arizona Science Teacher Association, Phoenix, AZ.
22. **Whitworth, B. A.**, & Ross, D. (2014, November). *Inquiry and differentiation*. A presentation presented at the annual meeting of the Arizona Science Teacher Association, Phoenix, AZ.
23. Gonczi, A. L., & **Whitworth, B. A.** (2014, February). *Situating computer simulation professional development*. A poster presented at the annual Curry Research Conference, Charlottesville, VA.
24. Wheeler, L. B., Maeng, J. L., & **Whitworth, B. A.** (2014, February). *Assessing a professional development for teaching assistants implementing a project-based guided-inquiry approach to general chemistry laboratories*. A poster presented at the annual Curry Research Conference, Charlottesville, VA.
25. **Whitworth, B. A.**, Hodges, D.\*, Mandzak, M.\*, Parks, G.\*, & Snell, P.\* (2013, November). *Investigating inquiry: Scaffolding inquiry instruction*. A presentation presented at the annual meeting of the Virginia Association of Science Teachers, Norfolk, VA.
26. **Whitworth, B. A.**, Gonczi, A. L., Bell, R. L., & Maeng, J. L. (2013, February). *A case study of VISTA science coordinators*. A poster presented at the annual Curry Research Conference, Charlottesville, VA.
27. Wheeler, L. B., Maeng, J. L., Bell, R. L., & **Whitworth, B. A.** (2013, February). *Secondary science teachers' understanding and practices of the levels of inquiry*. A poster presented at the annual Curry Research Conference, Charlottesville, VA.
28. **Whitworth, B. A.**, Wheeler, L. B., Maeng, J. L., & Bell, R. L. (2012, November). *Differentiating inquiry*. A presentation presented at the annual meeting of the Virginia Association of Science Teachers, Williamsburg, VA.
29. Maeng, J. L., **Whitworth, B. A.**, Shaikh, I.\*, Rock, C.\*, Stewart, W.\*, & Bell, R. L. (2011, November). *Digital alternatives to hands-on dissection*. A presentation presented at the annual meeting of the Virginia Association of Science Teachers, Roanoke, VA.

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#### INVITED KEYNOTES, PANELIST, PRESENTATIONS, & TALKS

1. **Whitworth, B. A.** (2025, February 17). *Bridging the Research-Practice Gap*. Keynote Address. Missouri Association of Colleges for Teacher Education Spring Conference, Columbia, MO.
2. **Whitworth, B. A.** (2024, October 18). *Becoming a Resilient Science Teacher and Leader*. Keynote Address. Midwest Regional NOYCE Teacher Scholarship Program, St. Louis, MO.
3. **Whitworth, B. A.** (2024, May 21). *ASTE Mini-in-May: Grant Writing*. Invited Panelist. ASTE Virtual Event.



4. **Whitworth, B. A.** (2023, December 4). *Graduate Student Committee Series: Writing Practitioner Articles*. Invited Panelist. NARST Virtual Event.
5. **Whitworth, B. A.** (2023, August 8). *Call to Action: Developing inquisitive, collaborative learners*. Keynote Address. Fort Worth Independent School District, Fort Worth, TX.
6. **Whitworth, B. A.** (2023, March 15). *The Science Teacher Special Issue on Immunology and COVID-19*. Invited Panelist. NSTA Webinar. Online.
7. **Whitworth, B. A.** (2023, February 15). *Grant Writing & Fellow Panel*. Invited Panelist. REAL Lunch Series, Clemson University.
8. **Whitworth, B. A.** (2023, February 4). *Grant Writing*. Invited Workshop. Graduate Student Research Conference, Clemson University.
9. **Whitworth, B. A.** (2022, December 12). *Graduate Student Committee Series: Grant Writing*. Invited Panelist. NARST Virtual Event.
10. **Whitworth, B. A.** (2022, August 27). *Renew and Reset*. Invited Speaker. Clemson United Methodist Church Women's Retreat.
11. **Whitworth, B. A.** (2022, April 14). *Building Tomorrow's Science Teachers: New Directions for Science Leaders, Researchers, and Educators*. Invited Panelist. NSTA/ASTE Web Seminar. Online.
12. **Whitworth, B. A.** (2022, February 17). *Teaching secondary science methods courses*. Invited Presentation. Advanced Science Methods Course, University of Missouri.
13. **Whitworth, B. A.** (2021, December 1). *Writing to the Reviewer*. Invited Panelist. Office of Research & Development Webinar, Clemson University.
14. **Whitworth, B. A.** (2021, November 11). *Grant Fellow Discussion*. Invited Presentation. REAL Lunch Series, Clemson University.
15. **Whitworth, B. A.** (2021, April 5). *Early Career Faculty Forum*. Invited Panelist. National Association for Research in Science Teaching.
16. **Whitworth, B. A.** (2020, October 6). *Undergraduate Teacher Education*. Invited Presentation. Whine & Cheese: Council of State Science Supervisors.
17. **Whitworth, B. A.** (2020, July 23). *Alternative assessments in science classrooms*. Invited Presentation. Twitter Chat: National Science Teacher Association.
18. **Whitworth, B. A.** (2020, February 26). *Scholarship of Teaching and Learning: An Introduction*. Invited Presentation. Oxford, MS: University of Mississippi, School of Journalism and New Media.
19. **Whitworth, B. A.** (2020, January 6). *Power of Grading and Assessment*. Invited Presentation. Oxford, MS: Lafayette High School.

20. **Whitworth, B. A.** (2019, October 31). *Effective Science Teaching Practices*. Invited Presentation. Oxford, MS: University of Mississippi Chemistry Department.
21. **Whitworth, B. A.** (2019, January 16). *Developing a Career Trajectory: What do I want to be when I grow up?* Invited Presentation. Oxford, MS: Lafayette High School.
22. **Whitworth, B. A.** (2017, September 28). *Considering the Role of the District Science Coordinator*. Invited Talk. Athens, GA: University of Georgia.
23. **Whitworth, B. A.** (2016, November 4). *Thesis and Dissertation: Planning, Researching, and Writing*. Graduate College Workshop. Invited Talk. Flagstaff, AZ: Northern Arizona University.
24. **Whitworth, B. A.** (2014, November 24). *Job Interviews and the First Year of Teaching*. TIPS Seminar. Invited Talk. Flagstaff, AZ: Northern Arizona University.
25. **Whitworth, B. A.** (2003, April 23). *Third Culture Kids*. Faculty Colloquium. Invited Talk. Winston-Salem, NC: University North Carolina School of the Arts.

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#### HOSTED FORUMS

1. **Whitworth, B. A.** (2022, May 16). *Mid-Career Faculty of Color Forum*. A forum hosted as a Virtual Event for the National Association for Research in Science Teaching, Online.
2. **Whitworth, B. A.** (2022, March 10). *Mid-Career Faculty Forum*. A forum hosted as a Virtual Event for the National Association for Research in Science Teaching, Online.
3. **Whitworth, B. A.**, Miller, A. & Mensah, F. (2019, April). *Early Career Faculty Forum*. A forum hosted for the annual meeting of the National Association for Research in Science Teaching, Baltimore, MD.
4. **Whitworth, B. A.** & Martin, S. (2018, March). *Early Career Faculty Forum*. A forum hosted for the annual meeting of the National Association for Research in Science Teaching, Atlanta, GA.
5. **Whitworth, B. A.** (2017, April). *Early Career Faculty Forum*. A forum hosted for the annual meeting of the National Association for Research in Science Teaching, San Antonio, TX.
6. **Whitworth, B. A.** & Martin, S. (2016, April). *Early Career Faculty Forum*. A forum hosted for the annual meeting of the National Association for Research in Science Teaching, Baltimore, MD.
7. Wright, C. & **Whitworth, B. A.** (2015, April). *Early Career Faculty Forum*. A forum hosted for the annual meeting of the National Association for Research in Science Teaching, Chicago, IL.

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#### PROFESSIONAL LEARNING FACILITATION – TOTAL OF 1385 HOURS

- **SCILEADPRO Cohort 2**, National, Virtual, 40 hours, August 2024 – May 2025
- **Building Leadership Among Science Teachers (BLAST) – A 5-year Program**, South Carolina, Face to Face and Virtual, 58 hours, March 2024 – Present
- **Dynamic Earth Content Institute**, Regional, In-Person, 16 hours, July 18-19, 2024
- **Greenville Summer Professional Learning Institute**, Greenville County, SC, 6 hours, June 10, 2024
- **Energy Content Institute**, Regional, In-Person, 16 hours, July 8-9, 2024

- **SCILEADPRO Cohort 1**, National, Virtual, 40 hours, August 2023 – May 2024
- **Introduction to SC Science Standards**, Anderson 1 County, SC, 6 hours, February 14, 2024
- **Multidimensional Assessment & Follow-up Sessions**, Pickens County, SC, 12 hours, January 29 & February 22, 2024
- **Digging Deeper with the Standards & Curriculum Alignment**, Florence 3 County, SC, 14 hours, February 12-13, 2024
- **Introduction to SC Science Standards**, Pickens County, SC, 18 hours, January 18, 19, 22, 2024
- **Science Matters Facilitation Academy**, Mississippi Department of Education, Jackson, MS, 46 hours, November 13-17 & December 5, 6, & 14, 2023
- **Multidimensional Assessment Follow-up Sessions**, Laurens County 56, SC, 12 hours, November 3, 6 & December 18, 2023
- **Multidimensional Assessment & Engineering**, Florence 3 County, SC, 6 hours, November 8, 2023
- **Introduction to SC Science Standards**, Florence 3 County, SC, 6 hours, October 23, 2023
- **Introduction to Multidimensional Assessment Sessions**, Laurens County 56, SC, 9 hours, October 17 & 20, 2023
- **A Framework for Multidimensional Science Instruction & Assessment**, Fort Worth Independent School District, 6 hours, August 7-8, 2023
- **Supporting Science Instruction**, Newberry County, SC, 6 hours, June 29, 2023
- **Assessment & Curriculum Alignment**, Greenwood 52 County, SC, 7 hours, June 27, 2023
- **Building Capacity for Leadership & Professional Learning**, Northern Arizona University, 8 hours, May 13, 2023
- **Call to Action**, Wipro Science Leadership Conference, Virtual, 2 hours, May 1, 2023
- **SCAFFOLD Project Cohort 2**, National, Virtual, 44 hours, October 2021-May 2023
- **High Leverage STEAM Strategies: An Engineering Lens**, Fort Mill School District, Fort Mill, SC, 14 hours, April 11-12, 2023
- **Introduction to SC Science Standards**, Greenwood 52 County, SC, 3 hours, April 10, 2023
- **Introduction to SC Science Standards**, Laurens County 56, SC, 3 hours, March 29, 2023
- **High Leverage STEAM Strategies: A Science Lens**, Fort Mill School District, Fort Mill, SC, 14 hours, March 27-28, 2023
- **Introduction to SC Science Standards**, Laurens County 56, SC, 6 hours, March 15, 2023
- **Supporting Science Instruction**, Laurens County 56, SC, 6 hours, March 8, 2023
- **Introduction to SC Science Standards**, Anderson, SC, 8 hours, February 7, 2023
- **Promoting Achievement in Writing & Science**, Greenwood 50 County, SC, 8 hours, August 12, 2022
- **Promoting Achievement in Writing & Science**, Union County, SC, 8 hours, August 10, 2022
- **Science Matters**, Mississippi Department of Education, Jackson, MS, 40 hours, July 11-15, 2022
- **Building Capacity for Leadership & Professional Learning**, Texas Science Education Leadership Association, Dallas, TX, 8 hours, June 23, 2022
- **Building Capacity for Leadership & Professional Learning**, Rockwall Independent School District, Rockwall, TX, 8 hours, June 22, 2022
- **Building Capacity for Leadership & Professional Learning**, Texas Science Education Leadership Association, Virtual, 8 hours, June 20, 2022
- **Building Capacity for Leadership & Professional Learning**, Northern Arizona University, Flagstaff, AZ, Virtual, 8 hours, May 21, 2022
- **Building Capacity for Leadership & Professional Learning**, Rockdale County Public Schools, Conyers, GA, 8 hours, April 27, 2022

- **Introduction to Science Standards**, Greenville School District, Greenville, SC, 12 hours, August 2021-February 2022
- **Science and Engineering Practices**, Cobb County School District, GA, Virtual, 3 hours, January-July 2022
- **SCAFFOLD Project Cohort 1, GA**, Virtual, 52 hours, September 2020-May 2022
- **Building Capacity for Leadership & Professional Learning**, Douglas County, GA, Virtual, 6 hours, January 26, February 2, 2021
- **Building Capacity for Leadership & Professional Learning**, Making Sense of Science, Oklahoma Department of Education, Virtual, 6 hours, January 22, 2021
- **Building Capacity for Leadership & Professional Learning**, Making Sense of Science, New Mexico Department of Education, Virtual, 24 hours, October-December, 2020
- **Supporting Science Instruction**, Principal Professional Learning, Oxford, MS, 16 hours, November 14-15, 2019
- **Science Teacher Leader Academy 2**, Oxford, MS, 56 hours, June 2019-April 2020
- **Building Capacity for Leadership & Professional Learning**, Making Sense of Science, WestEd, Berkeley, CA, 8 hours, February, 28, 2019
- **Multidimensional Science Education**, Oxford School District, Oxford, MS, 8 hours, February 18, 2019
- **Building Capacity for Leadership & Professional Learning**, Principal Professional Learning Oxford, MS, 16 hours, November 29-30, 2018
- **Mississippi Region VII Science Fair Teacher Workshop**, University of Mississippi, Oxford, MS, 3 hours, October 23, 2018
- **Mississippi Education Teacher Program Residential Institute**, University of Mississippi, Oxford, MS, 3 hours, August 7, 2018
- **Building Capacity for Leadership & Professional Learning**, Principal Professional Learning, Oxford, MS, 16 hours, June 25-26, 2018
- **Science Teacher Leader Academy**, Oxford, MS, 56 hours, June 2018-March 2019
- **Dynamic Earth, Weather and Climate Grant**, Peoria, AZ, 120 hours, March 2017-February 2018
- **Force And Matter Unify Science Grant**, Globe, AZ, 120 hours, February 2017-March 2018
- **Building Capacity for Leadership & Professional Learning**, Peoria Unified School District, Peoria, AZ, 8 hours, October 20, 2017
- **Arizona Science Coordinator Collaborative**, Phoenix, AZ, 28 hours, February-October 2017
- **Alliance for Investigating Motion, Force, and Energy Grant**, Dysart, AZ, 120 hours, June 2016-February 2017
- **Northern Arizona University Faculty Professional Development Series**, Flagstaff, AZ, 10 hours, February 2016
- **Gila County Energy and ORGanisms Grant**, Payson, AZ and Globe, AZ, 150 hours, April-November 2015
- **Flagstaff Arts and Leadership Academy**, Flagstaff, AZ, 8 hours, February 27, 2015
- **Charlottesville City Public Schools**, Charlottesville, VA, 2 hours, September 21, 2012
- **Prince William County Public Schools**, Fairfax, VA, 8 hours, August 31, 2011

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## CONSULTING

**Advisory Board Member**, 2024-2029

Sustainable and Inclusive STEM (SISTEM), National Science Foundation NOYCE Track 3 Grant, The College of New Jersey, New Jersey

**Advisory Board Member, 2022-2026**

PLAY Project, National Science Foundation DRK-12 Grant, Bowdoin College, Brunswick, Maine

**Science Education Consultant & Reviewer, 2024-2025**

National Geographic Learning, Virtual

**Grant Consultant, 2024**

Noyce Track 3 Project, University of Nevada – Reno, Elizabeth de los Santos, Virtual

**EiR Review Panel, 2022, 2023, 2024**

Department of Education, Virtual

**Harvard Publishing, 2022, 2024**

Book Reviewer, Virtual

**Research Consultant, 2023**

Wipro Science Leadership Project, University of Massachusetts at Boston

**Science Instructional Framework Consultant & Writer, 2023**

Fort Worth Independent School District, Fort Worth, TX

**NSF Review Panel, 2020, 2022**

National Science Foundation, Virtual

**Evaluation Consultant, 2020**

ESTITCH Project, Utah State University, Logan, Utah

**Advisory Board Member, 2019-2022**

Making Engineering Real (ME Real), National Science Foundation ITEST Grant, University of Virginia, Charlottesville, VA

**Evaluation Consultant, 2018-2019**

GEMS Project, University of Georgia, Athens, GA

**Evaluation Consultant, 2018**

Rust College, Holly Springs, MS

**Arizona Science Standards Revision Committee, 2017**

Department of Education, Phoenix, AZ

**Presidential Awards for Excellence in Mathematics and Science Teaching Selection Committee, 2017**

Department of Education, Phoenix, AZ

**STEM Instead Director, 2015**

Waimea Middle School, Waimea, HI

**Advisory Board Member, 2015**

Project SOSA, University of Connecticut, Storrs, CT

**Research Consultant**, 2014-2015

VISTA Grant, University of Virginia, Charlottesville, VA

**Subject Matter Expert for Discovery TechBooks**, 2012

Paladin Media Consulting, Charlottesville, VA

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## PROFESSIONAL SERVICE AND LEADERSHIP

### Secretary-Treasurer

- *National Association for Research in Science Teaching*, Elected, 2023-2026

### Board of Directors

- *National Association for Research in Science Teaching*, Board of Directors, Director at Large, Elected, 2020-2023

### Editor

- *National Science Teaching Association*, The Science Teacher, 2024-2027

### Interim Editor

- *National Science Teaching Association*, The Science Teacher, Summer 2024

### Associate Editor

- *Association for Science Teacher Education*, Journal of Science Teacher Education, 2024-2028

### Conference Program Coordinator

- *Association for Science Teacher Education*, 2020-2022

### Committee Service & Leadership

- *Association for Science Teacher Education*, Equity Committee, Member, 2025-2028
- *National Science Teachers Association*, Finance Committee, Member, 2025-2028
- *Association for Science Teacher Education*, Oversight Committee, Member, 2023-2025
- *Association for Science Teacher Education*, Science Teacher Preparation Position Statement Development Team, Co-Chair, 2022-2023
- *Association for Science Teacher Education*, Local Conference Planning Committee, Member, 2021-2022
- *Association for Science Teacher Education*, Science Teacher Preparation Position Statement Review Panel, Co-Chair, 2021
- *National Science Teachers Association*, Committee on Research in Science Education, 2020-2023
- *Association for Science Teacher Education*, Membership and Participation Committee, Member, 2018-2021
- *National Association for Research in Science Teaching*, Membership Committee, Chair, 2017-2020
- *National Science Teachers Association*, Task Force Member, Student Chapter Program, 2017
- *Association for Science Teacher Education*, Graduate Student Committee, Co-Chair, 2014
- *National Association for Research in Science Teaching*, Membership and Elections Committee, Member, 2014-2017



- *Association for Science Teacher Education*, Long Range Conference Planning Committee, Graduate Student Representative, 2013

### Editorial Review Board

- *Contemporary Issues in Technology and Teacher Education*, 2016-2022
- *Journal of Research in Science Teaching*, 2017-2023
- *Journal of Science Teacher Education*, 2015-2021

### Manuscript Reviewer

- *American Association of Physics Teachers*, The Physics Teacher, 2011-Present
- *American Society for Cell Biology*, CBE – Life Sciences Education Journal, 2015-Present
- *National Association for Research in Science Teaching*, Journal of Research in Science Teaching, 2015-Present
- *National Science Teachers Association*, Science Scope, 2019-Present
- *National Science Teachers Association*, The Science Teacher, 2011-Present
- *School of Science and Mathematics Association*, School of Science and Mathematics, 2011-Present
- *Science Education*, 2015-Present
- *National Science Education Leader Association*, Science Educator, 2021-Present
- *Teaching and Teacher Education*, 2018-Present
- *Virginia Association of Science Teachers*, Journal of Virginia Science Education, 2011-2014

### Proposal Reviewer

- *American Educational Research Association*, Division K – Section 1 & 8, 2015-2018
- *Association for Science Teacher Education*, Annual Meeting, 2012-2016
- *National Association for Research in Science Teaching*, Annual Meeting, 2012-2017

### Presider

- *Association for Science Teacher Education*, Annual Meeting, 2012-2016
- *National Association for Research in Science Teaching*, Annual Meeting, 2013-2015, 2018-2019

### Strand Coordinator

- *Association for Science Teacher Education*, Pre-service Science Teacher Preparation, 2016-2018

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## UNIVERSITY SERVICE AND LEADERSHIP

### Clemson University

- Teaching & Learning Assistant Department Chair, 2024-Present
- Teaching & Learning Doctoral Program Coordinator, 2020-Present
- Secondary Science Program Coordinator, 2020-Present
- Vice Provost for Research Faculty Advisory Committee, 2023-Present
- Graduate Academic Integrity Committee, 2022-Present
- Academic Grievance Committee, 2022-Present
- Tenure and Promotion Committee, 2021-Present
- Tenure & Promotion Document Workgroup, 2024
- Faculty Associate for Graduate Center for Transformational Mentorship, 2024
- Merit Rubric Review Ad-Hoc Committee, 2023-2024
- Search Committee Member: Quantitative Methodology Professor, 2021

- Search Committee Chair: Associate Professor of Science Education, 2020-2021
- Undergraduate Academic Integrity Committee, 2020-2021

### The University of Mississippi

- Academic Discipline Committee, University Wide, 2018-2020
- Ph.D. Program Redesign Committee Co-Chair, 2019-2020
- Wrote Reaccreditation Report for Science Program, 2019
- Mississippi Teacher Education Program Residential Institute Sessions, 2018
- Masters Students Capstone Reader, 2018, 2020
- Doctoral Program Interviewer, 2018, 2019
- Mississippi Teacher Education Program Committee, 2017-2020
- Secondary Science Program Coordinator, 2017-2020

### Northern Arizona University

- Colleague to Colleague Mentor Program, Mentor, 2016-2017
- Productive Beginnings Planning Committee, 2016-2017
- Faculty Council on Learning Committee, 2016-2017
- Faculty Advisor, National & Arizona Science Teacher Association Student Chapter, 2015-2017
- Faculty Rights & Responsibilities Council, 2015-2017
- Faculty Senate, 2015-2017
- Academic Integrity Hearing Board, 2014-2017
- CSTL Writing Group Chair, 2014-2016
- Science Foundation of Arizona, Change the Equation Application Committee, 2014

### University of Virginia

- Curry Research Conference Chair, 2013-2014
- Curry Research Conference Program Coordinator, 2012-2013
- Curry Research Conference Presider, 2012-2013
- Curry Research Conference Proposal Reviewer, 2012-2014

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## COURSES TAUGHT

### Clemson University

- EDSC 4270 Teaching Secondary Science: Fall 2020, 2021, 2022
- EDSC 4570 Secondary Science Capstone Seminar: Spring 2022, 2023
- EDSC 8480 Literature in Science Teaching: Fall 2024
- ED 9030 Doctoral Seminar 1: Fall 2021, 2022, 2023, 2024
- ED 9040 Doctoral Seminar 2: Spring 2023, 2024, 2025
- ED 9910 Scaffolded Dissertation Hours: Fall 2024

### The University of Mississippi

- EDCI 101 Introduction to STEM Teaching: Fall 2019
- EDCI 352 Education, Society & K-12 Learner: Fall 2017, 2018
- EDCI 353 Planning and Teaching Strategies for Effective Classroom Practice: Spring 2018
- EDCI 419 Classroom Assessment: Spring 2019
- EDSE 400 Principles of Education: Fall 2018, 2019
- EDSE 400 Supervision of Secondary Science Field Placement: Fall 2017, 2018, 2019
- EDSE 446 Special Methods I: Science: Fall 2017, 2018, 2019

- EDSE 456 Special Methods II: Science: Spring 2018, 2019
- EDSE 480 Student Teaching: Secondary Education: Spring 2018, 2019, 2020
- EDSE 636 Teaching Secondary School Science: Fall 2018
- EDSE 646 Advanced Methods of Teaching Science: Spring 2018, 2019, 2020
- EDSE 690 Seminar in Secondary Education: Spring 2018
- EDUC 555 History and Nature of Science: Fall 2019
- PHYS 107 Introduction to Physics: Fall 2019

### Northern Arizona University

- TSM 300 Knowing and Learning: Spring 2015
- TSM 303 Knowing and Learning in Science: Fall 2015, 2016
- TSM 595 Secondary Science Internship: Fall 2014
- SCI 610 Advanced Science Teaching and Learning: Fall 2014, 2015, 2016
- SCI 612 Using Science Assessments to Facilitate Instructional Change: Spring 2015, 2016, 2017
- SCI 613 History and Nature of Science: Fall 2014
- SCI 630 Survey of Literature in Science Education: Fall 2015, 2016
- SCI 689 MAST Portfolio: Fall 2014, 2015, 2016, Spring 2015, 2016, 2017

### University of Virginia

- ASTR 6340 Astronomy Concepts in the Classroom: Summer 2012
- EDIS 4885 Secondary Science Field Placement: Fall 2012
- EDIS 5050 Teaching Secondary Science I: Fall 2012
- EDIS 5051 Teaching Secondary Science II: Spring 2013
- EDIS 5875 Student Teaching Seminar: Fall 2011, Fall 2012, Spring 2013

### Punahou School

- High School Physics
- High School Chemistry
- High School Honors Chemistry
- High School Algebra I

### University North Carolina School of the Arts

- High School Physics
- High School Chemistry
- High School Physical Chemistry
- Yearbook

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## PROFESSIONAL AFFILIATIONS

- American Association of Physics Teachers (AAPT), 2011-Present
- American Chemical Society (ACS), 1999-2004, 2011-Present
- American Educational Research Association (AERA), 2011-Present
- Association of Supervisors and Curriculum Developers (ASCD), 2014-Present
- Arizona Science Teacher Association (ASTA), 2014-2017
- Association for Science Teacher Education (ASTE), 2011-Present
- Kappa Delta Pi (KDP), 2018-Present
- Mississippi Science Teacher Association (MSTA), 2018-2020
- National Association for Research in Science Teaching (NARST), 2011-Present
- National Science Education Leadership Association (NSELA), 2014-Present

- National Science Teaching Association (NSTA), 2001-Present
- Professional and Organizational Development (POD) Network in Higher Education, 2016-2017
- School of Science & Mathematics Association (SSMA), 2011-2014
- Virginia Association of Science Teachers (VAST), 2011-2014

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## DISSERTATION, THESES, NON-THESES, AND GRADUATE STUDENT SUPERVISION

### Doctoral Dissertation Committee Chair

- Kathrine Moore, Science Education, Clemson University, 2025-Present
- Elena Guedes da Silva, Teacher Education, Clemson University, 2024-Present
- Sarah Smith, Teacher Education, Clemson University, 2024-Present
- Nathaniel Vann, Teacher Education, Clemson University, 2024-Present
- Ashley Palermo-Levesque, Teacher Education, Clemson University, 2024-Present
- Rachel Hall, Teacher Education, Clemson University 2023-Present
- Augustine Owusu Achiaw, Science Education, Clemson University, 2023-Present
- Althea Roy, Science Education, Clemson University, 2023-Present
- Stephanie Tracey, Science Education, Clemson University, 2023-Present
- Megan Hodge, Science Education, Clemson University, 2023-Present
- Ashley Hunter, Science Education, Clemson University, 2022-Present
- Karla Freeman, Teaching and Learning, Clemson University, 2022-2025
- Akhenaton Wilbourn, Math Education, Clemson University, 2022-2025
- Meredith Schwendemann, Science Education, Clemson University, 2021-2025
- Khushbu Singh, Science Education, Clemson University, 2022-2024
- Jennifer Bateman, Science Education, Clemson University, 2021-2024

### Doctoral Dissertation Committee Member

- Jeremiah Akhigbe, Learning Sciences, Clemson University, 2025-Present
- Sarah Sanders, Arts Education, Clemson University, 2024-Present
- Kristin Fink, History Education, Clemson University, 2024-Present
- Summer Landreth, Science Education, Clemson University, 2023-Present
- Kristin Ambrose, Science Education, Clemson University, 2022-2025
- Devan Jones, Science Education, Clemson University, 2021-2024
- Hatice Ozen-Tasemir, Science Education, University of Georgia, 2021-2024
- Yamil Ruiz, Secondary Science Education, Clemson University, 2020-2023
- Savannah Draud, Biology, University of Mississippi, 2019-2021
- Akacia Halliday, Biology, University of Mississippi, 2019-2022
- Jordan Heiman, Biology, University of Mississippi, 2019-2022
- Carly Rock, Chemistry, University of Mississippi, 2020-2021
- Jacquelyn Moseley, Chemistry, University of Mississippi, 2020-2021

### Masters Thesis Committee Member

- Timothy Jaynes, Chemistry, Northern Arizona University, 2015-2017
- Peter Holloway, Science Education, Northern Arizona University, 2014-2015

### Masters Non-Thesis Committee Chair

- Audrey Baird, Science Education, Northern Arizona University, 2016-2017
- Bailey Mahlum, Science Education, Northern Arizona University, 2016-2017
- Angelica Buenrostro, Science Education, Northern Arizona University, 2015-2017

- Joan Hedman, Science Education, Northern Arizona University, 2015-2017
- Heather Orozco, Science Education, Northern Arizona University, 2015-2016
- Stephanie Beyea, Science Education, Northern Arizona University, 2015

#### **Masters Non-Thesis Committee Member**

- Shawn Jones, Science Education, Northern Arizona University, 2016-2017
- Amanda Davis, Science Education, Northern Arizona University, 2016-2017
- Kaitlin Sovinski, Science Education, Northern Arizona University, 2016-2017
- Jeffrey Hines, Science Education, Northern Arizona University, 2015
- Amanda Grimes, Science Education, Northern Arizona University, 2014

#### **Graduate Student Supervision**

- Summer Landreth, Clemson University, Doctoral Graduate Assistant, 2023-Present
- Althea Roy, Clemson University, Doctoral Graduate Assistant, 2023-Present
- Stephanie Tracey, Clemson University, Doctoral Graduate Assistant, 2023-Present
- Ashley Hunter, Clemson University, Doctoral Graduate Assistant, 2022-Present
- Meredith Schwendemann, Clemson University, Doctoral Graduate Assistant, 2022-Present
- Khushbu Singh, Clemson University, Doctoral Graduate Assistant, 2022-2024
- Jasmyne Franks, Clemson University, Masters Graduate Assistant, 2022-2023
- Jennifer Bateman, Clemson University, Doctoral Graduate Assistant, 2021-2024
- Yamil Ruiz, Clemson University, Doctoral Graduate Assistant, 2020-2021
- Shelby Watson, University of Mississippi, Doctoral Graduate Assistant, 2019-2020
- Nicole Comstock, University of Mississippi, Masters Graduate Assistant, 2019-2020
- Eric Nolan, Northern Arizona University, Doctoral Graduate Assistant, 2018-2020
- Lauren Simpson, University of Mississippi, Masters Graduate Assistant, 2018-2020
- Sheree Wilson, University of Mississippi, Masters Graduate Assistant, 2018-2020
- Phillip Laney, University of Mississippi, Doctoral Graduate Student, 2017-2019
- Kelsey LeMon, University of Mississippi, Masters Graduate Assistant, 2017-2018
- Tia Raught, Northern Arizona University, Masters Graduate Assistant, 2017-2018
- Megan Walker, Northern Arizona University, Doctoral Graduate Assistant, 2016-2018
- Kayla Arendt, Northern Arizona University, Masters Graduate Assistant, 2016-2018
- Tonya DeBerg, Northern Arizona University, Masters Graduate Assistant, 2015-2016
- Chris Atwood, Northern Arizona University, Masters Graduate Assistant, 2014-2015

#### **Undergraduate Student Supervision**

- Thomas Ross, Clemson University, UPIC, 2024-Present
- Emma Frohnepfel, Clemson University, UPIC, 2024

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#### **PERSONAL PROFESSIONAL LEARNING**

- Double Gemini Stack, Pulse, Vision & Unite Workshops, 2024
- Women in Science Writing Retreat, 2024
- Teaching & Learning Writing Retreat, 2024
- Women in Science Writing Retreat, 2023
- Strength on Stages, 2023
- Women in Science Writing Retreat, 2022
- Effective Online Teaching for Student Engagement, 2020
- Camp Making Sense of Science, 2019
- OpEd Program, University of Mississippi, 2019

- Applied Multilevel Models for Longitudinal and Clustered Data, 2019
- Women in Science Writing Retreat, 2019
- Camp Making Sense of Science, 2018
- Women in Science Writing Retreat, 2018
- Camp Making Sense of Science, 2017
- Arizona Science Standards Revision Committee, Arizona Department of Education, 2017
- Matter Facilitation Academy, Making Sense of Science, 2017
- Dynamic Earth Facilitation Academy, Making Sense of Science, 2017
- Women in Science Writing Retreat, 2017
- Force & Motion Facilitation Academy, Northern Arizona University, 2016
- Women in Science Writing Retreat, 2016
- Now what? A workshop for developing your research agenda and identifying funding to support your scholarship, Northern Arizona University, 2015
- Energy Facilitation Academy, Making Sense of Science, 2015
- Argument Driven Inquiry Workshop, Arizona Science Teachers Association, 2014
- Scholarly Writing Workshop, Northern Arizona University, 2014
- NGSS Practices in Action, National Science Teacher Association, 2014
- Presenting Data and Information, Edward Tufte, 2013
- PE4Life Resource Conference, PE4Life, 2009
- Personal Learning Network Seminar, Punahou School, 2009
- Learning Differences Conference, Punahou School, 2009
- LifeTouch Yearbook Workshop, LifeTouch, 2008
- Flinn Chemistry Demonstration Training, Appalachian State University, 2007
- Physics Course for Educators, Montana State University, 2006
- Southern Association of Colleges and Schools Accreditation Training, SACS, 2005
- Physics Modeling Workshop, University of Hawaii, 2004
- Forces and Motion Teaching & Learning Course, JASON Academy, 2004
- Teaching Project-Based Science Teaching & Learning Course, JASON Academy, 2004
- Chemical Safety Seminar, Flinn Scientific, 2003