

Ana K. Houseal

Associate Professor - Outreach Science Educator
Science and Mathematics Teaching Center
Hill Hall 251, University of Wyoming
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EDUCATION & CERTIFICATION

- May 2010 Ph. D. in Secondary and Continuing Education - Science Education
University of Illinois
Dissertation title: *The Impact of a Student-Teacher-Scientist Partnership (STSP) on Students' and Teachers' Content Knowledge and Attitudes Toward Science*
Major Advisor: Fouad Abd El Khalick
Dissertation Director: Lizanne Destefano
- November 2004 National Board Certification
Young Adolescent Science
- May 1998 M.A. in Elementary Science Education
University of Northern Iowa
Thesis Title: *A Case Study of Four Fifth Grade Teachers and Their Perceptions of How and Why They Teach Science*
Major Advisor: Cherin Lee
- December 1985 B.A. in Elementary and Special Education
University of Iowa

AWARDS AND HONORS

Western National Parks Association Steward L. Udall Award (November 2020).
The Stewart L. Udall Award honors those who work to support park interpretation programs, deliver the park message to all audiences, or rally broad support for national parks. The award was named for the renowned conservationist, secretary of the interior (1961–1969), and former WNP board member (1984–1994).

Non-Fiction Author's Association Book Award – Silver for *America's Largest Classroom: What We Learn from our National Parks*. (July 2020).

Outstanding Service to the Education Profession Award (Spring 2020). University of Wyoming – College of Education.

Marvin Millgate Engaged Faculty Award (April 2020). University of Wyoming. *The Marvin Millgate Community Engagement Awards recognize individuals and groups at UW and in the community, who have rendered exceptional engagement and service to Wyoming communities.*

“Own It!” Award (April 2019). University of Wyoming EPSCoR. *This award honors women in STEM - staff, students, faculty and a community member, all of whom have made contributions to their STEM disciplines.*

Faculty Award for Outstanding Advising (May 2017). University of Wyoming – College of Education.

Inspirational Instructor Award (October 2015). University of Wyoming - Academic Affairs and Committee for Women and People of Color.

William Bagley Doctoral Scholarship (2008-2009). University of Illinois at Urbana-Champaign.

Incomplete List of Teachers Ranked as Excellent (Fall 2006, Spring 2007, Fall 2007, Spring 2008). University of Illinois at Urbana-Champaign. *(Ranked by students, instructor ratings were in top 10% two semesters).*

Gold Star Award for Outstanding Teaching (May 2005). R.J. McElroy Trust and KWWL, Black Hawk County, IA.

PROFESSIONAL EXPERIENCE

HIGHER EDUCATION TEACHING EXPERIENCE

University of Wyoming
Laramie, Wyoming

Associate Professor & Outreach Science Educator
Science and Mathematics Teaching Center and
School of Teacher Education
Summer 2017 - present

University of Wyoming
Laramie, Wyoming

Assistant Professor & Outreach Science Educator
Science and Mathematics Teaching Center and
Department of Elementary and Early Childhood Education
Fall 2011 – Spring 2017

University of Northern Iowa
Cedar Falls, Iowa

Adjunct Professor
Fall 2010-Spring 2011
Orientation to Science Teaching
Fall 2010 & Spring 2011
Teaching Elementary School Science
Fall 2010

University of Illinois
Urbana-Champaign, Illinois

Supervisor for Independent Study
Fall 2005, Summer 2006, Summer 2009, Fall 2009
Undergraduate & Graduate Students
Supervisor for University Student Teachers
Fall 2006, Spring 2007, Fall 2007, Spring 2008
Instructor
Theory & Practice in Elementary School Teaching I

Fall 2007, Spring 2008, Fall 2008, Spring 2009
Theory & Practice in Elementary School Teaching II
Fall 2007, Spring 2008, Fall 2008, Spring 2009
Elementary Science Methods
Fall 2007
Educational Practice in Elementary Education
Fall, 2006, Spring 2007, Fall 2008
Campus Honors Program: Biocomplexity in Yellowstone
(Co-developed and assisted teaching)
Fall 2006

Research Assistant for curriculum development project
(Investigating & Questioning our World through Science
Technology [IQWST])
Fall 2005, Spring 2006

University of Northern Iowa
Cedar Falls, Iowa

Adjunct Professor
Fall 2000, Fall 2001, Fall 2002, Fall 2003
Current Curricula in Middle School/Junior High Science;
an upper level methods course for science education
majors.

Graduate Assistant
Fall 1996, Spring 1997, Fall 1997, Spring 1998
Assisted in teaching responsibilities for:
Activity Based Life Science
Experiences in Elementary School Science
Current Curricula in Middle School/Junior High Science
Current Curricula in Biology

K-12 TEACHING EXPERIENCE

Hoover Middle School
Waterloo, Iowa

Eighth Grade Science Teacher
August 1998 - June 2005

Gallatin Gateway Elementary
Gallatin Gateway, Montana

Special Education Teacher
August 1991 - June 1993

Drew / Pyle Elementary
Wilmington, Delaware

*5th Grade Special/Regular Education Team Approach to
Learning (TAM) Teacher - Aug 1989 June 91*

West Park Place Elementary
Newark, Delaware

3rd Grade Special/Regular Education TAM Teacher
August 1988 - June 1989

He Dog Elementary
Parmelee, South Dakota

Special Education Teacher
August 1986 - June 1988

OTHER TEACHING EXPERIENCE

Iowa Academy of Science
Waterloo, Iowa

Project WET Facilitator
1999 – 2011

Joseph W. Jones
Ecological Research Center,
Ichauway Plantation
Newton, GA

Coordinator/Teacher
1994 – 1996 - Adult Literacy Program

PUBLICATIONS

REFEREED ARTICLES - PUBLISHED

Tarullo, C. and **Houseal, A.** (2021) Unveiling a Power Dynamic in a General Science Class through Positioning Theory. *Open Journal of Philosophy, 11*(4), 499-509. doi: 10.4236/ojpp.2021.114033.

Ruckman, R., French D., **Houseal, A. K.** (2021). An unforgettable journey: Eclipsed by student questions. *Science Scope 44*(4), 56-63.

Inouye, M. C., Gunshenan, C. I., **Houseal, A. K.**, Applequist, J., & Bath, L. (2021). Transforming local spaces with relevant perspectives. *Science Scope 44*(4), 78-86.

Gunshenan, C. I., Inouye, M. C., **Houseal, A. K.**, & Jacobs, T. (2021). Shifting Perspectives Between Teacher and Learner to Build Understanding of Complex Science Instruction. *Science and Children 58*(4), 74-80.

Inouye, M. C., **Houseal, A. K.**, & Gunshenan, C. I. (2020). Beyond the hook: What is a phenomenon and how is it used?. *The Science Teacher 87*(9), 60-63.

Uzpen, B., **Houseal, A. K.**, Slater, T., & Nuhfer, E. (2019). Scientific and quantitative literacy: A comparative study between STEM and non-STEM undergraduates taking physics. *European Journal of Physics 40*(3), 15 pages. Article reference: EJP-104148.R1

Inouye, M. C. & **Houseal, A. K.** (2019). Theory to practice: A collaborative, reflective, practical strategy supporting inservice teacher growth. *Innovations in Science Teacher Education 4*(1). Retrieved from <https://innovations.theaste.org/theory-to-process-to-practice-a-collaborative-reflective-practical-strategy-supporting-inservice-teacher-growth/>

Williams, M. & **Houseal, A. K.** (2018). Composting – a problem, place, or project? Using the PBL trifecta (PBL3) in the classroom. *Science Scope 41*(6), 36-43.

Inouye, M. C. & **Houseal, A. K.** (2018). Reawakening the Past: Capitalizing on a Swinging Pendulum. *Schools: Studies in Education 15*(1), 140-148. Retrieved from <https://www.journals.uchicago.edu/doi/pdfplus/10.1086/697098>

Houseal, A. K. (2016). A visual representation of three-dimensional learning: A model for understanding the power of the Framework for K-12 Science Education and NGSS. *The Electronic Journal of Science Education, 20*(9). Retrieved from

<http://ejse.southwestern.edu/article/view/16337>.

- Houseal, A. K.** (2015). A visual representation of three-dimensional learning: A tool for evaluating curriculum. *Science Scope*. 3(1), 58-62.
- Bourque, C., **Houseal, A. K.**, Welsh, K., & Wenger, M. (2014). Free-choice family learning: A literature review for the National Park Service. *Journal of Interpretation Research*. 19(1), 7-29. DOI:10.1177/109258721401900102
- Houseal, A. K.**, & Ellsworth, P. E. (2014). What's the Big Idea? Three big ideas from the research behind the Next Generation Science Standards. *Science and Children*. 52(4), 65-69.
- Houseal, A. K.**, Abd El Khalick, F., & Destefano, L. (2014). Impact of a Student-Teacher-Scientist Partnership on students' and teachers' content knowledge, Attitudes toward science, and pedagogical practices. *Journal of Research in Science Teaching*. 51(1), 84-115. <https://doi.org/10.1002/tea.21126> (Q-1, 5.236, H=79)
- Lee, C., & **Houseal, A. K.** (2003). Self-Efficacy, standards, and benchmarks as factors in teaching elementary school science. *Journal of Elementary Science Education*. 15(1), 37-55. <https://doi.org/10.1007/BF03174743> (Q-4, 0.129)

INVITED ARTICLES

- Petrick, E., & **Houseal A. K.** (2020). A legacy of learning at Whiskeytown Environmental School: Fieldnotes from an interview with Ellen Petrick. *Parks Stewardship Forum*. 36(2).
- Houseal, A. K.**, & Thompson, J. (2020). America's largest classroom: Expanding the role of education in our parks (introduction). *Parks Stewardship Forum*. 36(2).
- Houseal, A.**, Gillis, V., Helmsing, M., & Hutchison, L. (2016). Disciplinary literacy through the lens of the Next Generation Science Standards. *Journal of Adolescent & Adult Literacy*, 59(4), 377-384. DOI:10.1002/jaal.497 (Q-1, 0.669, H=28)

INVITED GUEST EDITOR FOR JOURNAL

- Houseal, A. K.**, & Thompson, J. (May 2020). *Parks Stewardship Forum – Special Issue: Park Learning*. 36(2). Retrieved from <https://escholarship.org/uc/psf/36/2>

BOOKS AND BOOK CHAPTERS

- Houseal, A. K.**, Fletcher, T. B., Biber, T., & Zittel, J. (in press). Scientific thinking. In T. Fletcher & A. C. DeDiego (Eds.), *Creativity in Counseling Children and Adolescents: A Guide to Experiential Activities*. Routledge.
- Thompson, J. & **Houseal, A. K.** (2020). *America's largest classroom: What we learn from our National Parks*. Edited volume – 21 chapters – 44 authors
- Bourque, C., & **Houseal, A. K.** (2020). *Lessons learned from museums: Family learning in National Parks*. In J. Thompson & A. K. Houseal (Eds.), *America's largest classroom: What we learn from our National Parks*. Chapter 18.

Houseal, A. K. (2020). *Three-dimensional learning: “Upping the Game” in citizen science projects using A Framework for K-12 Science Education*. In J. Thompson & A. K. Houseal (Eds.), *America’s largest classroom: What we learn from our National Parks*. Chapter 7.

NON-REFEREED PUBLICATIONS

Hackworth, S. J. & **Houseal, A. K.** (Winter 2017). Finding a *place* for science: Letting place guide standards-based curriculum development for grades 3 & 4. *Green Teacher*, 112, 23-26.

Houseal, A. K., Fouke, B., Sanford, R., Fuhrmann, B., & Petrick, E. (2010). Mammoth Hot Springs: Where change is constant. *Yellowstone Science*, 18(3), 7-14.

REPORTS AND THESES

Houseal, A. K. (2010). *The impact of a student-teacher-scientist partnership (STSP) on students’ and teachers’ content knowledge and attitudes toward science*. University of Illinois at Urbana-Champaign, Champaign, IL.

Houseal, A. K. (2007). *Expedition: Yellowstone! Teachers’ perceptions of effects of a residential program on science concept and stewardship knowledge acquisition*. Evaluation Report. Urbana, IL: University of Illinois at Urbana-Champaign.

Houseal, A. K. (1998). *A case study of four fifth grade teachers and their perceptions of how and why they teach science*. University of Northern Iowa, Cedar Falls, IA.

SUBMITTED MANUSCRIPTS

Inouye, M. C., Houseal, A. K., Gunshenan, C. G., McReynolds, A., & Perkins, M. (accepted with revisions 2022), Exploring collaborative professionalism as a means of virtually supporting rural teachers. Submitted April 2022 to *The Rural Educator*.

Gunshenan, C. I. & **Houseal, A. K.**, & Krasnow, K. (accepted with revisions, 2019). Learning through inquiry: Using teachers’ expertise to better research students’ non-formal science learning. Submitted in June 2019 to *the Journal of Environmental Education*.

Inouye, M. C., **Houseal, A. K.**, & Gunshenan, C. I. (revise and resubmitted, Fall, 2020) A Parallel Process: Pairing the NGSS Vision of K-12 Science Instruction with PD. Originally submitted to the *Journal of Science Teacher Education*, May 2019.

MANUSCRIPTS IN PROCESS

Houseal, A. K. & Inouye, M. C. (revised and resubmitted FA21). *Expansion of the Implications of the Vision of K-12 Science Education*. International Journal of Science Education.

Gunshenan, C. I., Inouye, M. C., **Houseal, A. K.**, & Jacobs, T. (in press SP21). Phenomena in professional development: Shifting perspectives between teacher and learner to build understanding of complex science instruction. *Science and Children*.

Gunshenan, C. I., Houseal, **A. K.**, Krasnow, K., & Sydlowski, M. (revising and submitting to another journal, SP21). Learning through inquiry: A mixed methods exploration of students' affective and cognitive non-formal science learning. Submitted in May 2019 to the *Journal of Research in Science Teaching*.

CREATIVE CONTRIBUTIONS

Fisher, P. L., **Houseal, A. K.**, Tuthill, D., & Shim, J. (2016). *5th grade ecology unit: A sagebrush expedition*. Books 1-12. Stored at: http://repository.uwyo.edu/sagebrush_expedition/ (Downloaded ~110 times between 8-1-16 and 9-30-16)

Schulte, K. & **Houseal, A. K.** (2014). *Yellowstone's Youth Conservation Corps (YCC) Resource Education Curriculum (REC)*. Books 1-19. Stored at: http://repository.uwyo.edu/ycc_rec/. (Downloaded more than 19,000 times)

Houseal, A. K. (2011). *Expedition: Yellowstone! STARRS curriculum for 4-8th grade students*. Yellowstone National Park, WY. Stored at: http://repository.uwyo.edu/starrs_curriculum/. (Downloaded more than 7,000)

INVITED WEBINAR PRESENTATIONS

Chen, M., **Houseal, A. K.**, & Thompson, J. (February 2021). *Youth learning through National Parks*. Spring 2021 SESAME Colloquium Series. Graduate School of Education, University of California, Berkeley, CA.

Thompson, J., **Houseal, A. K.**, Chen, M., Jarvis, J., & Medema, T. (2020, May 26). *Youth Learning Through National Parks*. Learning Revolution. Recording available at: https://www.youtube.com/watch?time_continue=63&v=vkclvaVWmQo&feature=emb_log_o

Houseal, A. K. & Luft, J. (2016, March 2). Supporting the implementation of the NGSS through research: Professional development. In *NSTA's Web Seminars*. Retrieved from http://learningcenter.nsta.org/products/symposia_seminars/NARST/webseminar7.aspx

CONFERENCE PRESENTATIONS

National/International Presentations, Papers, and Posters– Refereed

Houseal, A.K., Gunshenan, C. G. (2022, July). *Bringing 3D learning home and back to school again*. Paper presented at the National Science Teacher's Association's (NSTA) National Conference. Chicago, IL.

Houseal, A.K., Gunshenan, C. G. (2022, July). *Bringing 3D learning home and back to school again*. Paper presented at the National Science Teacher's Association's (NSTA) National Conference. Chicago, IL.

- Houseal, A.K.,** Gunshenan, C. G. (2022, July). *Using Three-dimensional Assessment Prompts to Drive Student Sense-making*. Paper presented at the National Science Teacher's Association's (NSTA) National Conference. Chicago, IL.
- Inouye, M. C., & **Houseal, A. K.** (2021, December). *Using phenomena to promote sensemaking and deepen coherence*. Paper presented at the National Science Teacher's Association's (NSTA) Regional Conference. Los Angeles, CA.
- Houseal, A. K.,** & Inouye, M. C. (2021, December). *Supporting students in engaging fully in three-dimensional instruction*. Paper presented at the National Science Teacher's Association's (NSTA) Regional Conference. Los Angeles, CA.
- Houseal, A. K.,** Inouye, M. C., & Loyd, T. (October 2021). *How Art Can Help You be a Better Scientist*. Paper presented at Full STEAM Ahead Conference. UW-Casper, Casper, WY.
- Houseal, A. K.,** Buss, A., Garramon-Merkle, B., Inouye, M.C., Leonard, A., Seeley, J., Tuthill, D., Watson, R., & Welsh, K. M. (2020, January). *Outreach and inreach: Multi-pronged science education efforts at the University of Wyoming*. Paper set presented at the Association for Science Teacher Education (ASTE) International Conference. San Antonio, TX.
- Houseal, A. K.,** & Inouye, M.C. (2020, January). *Parallel Processes: Mirroring the unit design process in professional development to build teacher experience and increase transference*. Paper presented at the Association for Science Teacher Education (ASTE) International Conference. San Antonio, TX.
- Houseal, A. K.,** & Gunshenan, C.I. (2019, December). *Engaging the youngest learners: Science and literacy as a parallel process*. Paper presented at the National Science Teacher's Association's (NSTA) Regional Conference. Seattle, WA.
- Houseal, A. K.,** & Inouye, M.C. (2019, October). *Getting beyond the "hook": Moving from engagers to phenomena*. Paper presented at the National Science Teacher's Association's (NSTA) Regional Conference. Salt Lake City, UT.
- Houseal, A. K.** & Inouye, M. C. (2019, October). *The world in which we live: Blending place-based education and NGSS for greater student engagement*. ASTE invited paper presentation at the National Science Teacher's Association's (NSTA) Regional Conference. Salt Lake City, UT.
- Houseal, A. K.,** & Inouye, M.C. (2019, January). *NGSS - shifting mindset and practice: Distinguishing between unit design and unit execution*. Paper presented at the Association for Science Teacher Education (ASTE) International Conference. Savannah, GA.
- Inouye, M. C., & **Houseal, A. K.** (2019, January). *The world in which we live: Blending place-based education and NGSS for greater student engagement*. Paper presented at the Association for Science Teacher Education (ASTE) International Conference. Savannah, GA.
- Houseal, A. K.,** & Inouye, M. C. (2018, November). *Building scientifically literate students through unit dissemination for elementary teachers*. Paper presented at the National Science Teacher's Association's (NSTA) Regional Conference. National Harbor, MD.

- Inouye, M. C. & Houseal, A. K. (2018, November). *Fostering and maintaining curiosity through coherent storylines: Creation and execution of units*. Paper presented at the National Science Teacher's Association's (NSTA) Regional Conference. National Harbor, MD.
- Houseal, A. K., & Inouye, M. C. (2018, March). *What's next? NGSS Unit Dissemination for Elementary Teachers*. Paper presented at the National Science Teacher's Association's (NSTA) National Conference. Atlanta, GA.
- Houseal, A. K., & Inouye, M. C. (2018, March). *Now we have our curriculum, what's next? NGSS dissemination*. Paper presented at the National Science Teacher's Association's (NSTA) National Conference. Atlanta, GA.
- Houseal, A. K., Thompson, J. L., & Cook, A. M. (2017, November). *America's largest classrooms: What we learn from our National Parks – Presentation*. Paper presented at the 6th Annual Place-Based Education Conference. Eastern Michigan University, Ypsilanti, MI.
- Houseal, A. K. & Inouye, M. C. (2017, March). *NGSS 3D implementation: Tools for middle school and high school teachers*. Paper to be presented at the National Science Teacher's Association's (NSTA) National Conference. Los Angeles, CA.
- Houseal, A. K. & Inouye, M. C. (2017, March). *NGSS 3D implementation: Tools for elementary teachers*. Paper to be presented at the National Science Teacher's Association's (NSTA) National Conference. Los Angeles, CA.
- Houseal, A. K. & Mathes, C. (2016, November). *Linking the three dimensions of science education using the framework and the NGSS*. Paper presented at the National Science Teacher's Association's (NSTA) Regional Conference. Portland, OR. (Presented with Gillette, Wyoming secondary teachers)
- Houseal, A. K., Inouye, M., & Mathes, C. (2016, November). *Developing and implementing NGSS-focused curriculum in Gillette, Wyoming: Focus on earth and space science as a vehicle for mathematics and literacy integration*. Paper presented at the National Science Teacher's Association's (NSTA) Regional Conference. Portland, OR. (Presented with Gillette, Wyoming secondary teachers)
- Houseal, A. K., Inouye, M., & Crago-Wyllie, J. (2016, October) *Developing and implementing NGSS-focused curriculum in Gillette, WY: Strategies and tools for elementary science and literacy integration*. Paper presented at the National Science Teacher's Association's (NSTA) Regional Conference. Minneapolis, MN. (Presented with Gillette, Wyoming elementary teachers)
- Houseal, A. K. (2016, April). *A visual representation of Three-Dimensional Learning: A model for understanding and a tool for evaluating curriculum*. Paper presented at the National Science Teacher's Association's (NSTA) National Conference. Nashville, TN.
- Houseal, A. K. (2015, October). *A model for understanding and explaining the NRC Framework for K-12 Science Education (and the Next Generation Science Standards: An explanatory and evaluation tool)*. Paper presented at the National Science Teacher's Association's (NSTA) Regional Conference. Reno, NV.
- Houseal, A. K., Shanley, D., & Hofmann, T. (2015, June). *Schools, universities, and the National Parks: Partnering for an engaged citizenship*. Paper presented at the Kids,

Schools, and Communities that Help Them Prosper Symposium sponsored by the National Network for Educational Renewal (NNER) and Wyoming Partners. Laramie, WY.

- Houseal, A. K.,** & Bourque, C., (2014, November). *Focus on family: Research on family learning in free-choice settings*. Paper presented at the National Association for Interpretation (NAI) National Workshop. Denver, CO.
- Schulte, K., & **Houseal, A. K.** (2014, November). *Developing a curriculum framework for Yellowstone's youth conservation corps*. Paper presented at the National Association for Interpretation (NAI) National Workshop. Denver, CO.
- Houseal, A. K.** & Fulcher, T. M. (2014, October). *Taking EE curriculum to the Next (Generation Science Standards) level*. Paper presented at the North American Association of Environmental Education (NAAEE) International Conference. Ottawa, Ontario, Canada.
- Schulte, K., & **Houseal, A. K.** (2014, October). *A Framework for developing a curriculum for Yellowstone's Youth Conservation Corps*. Roundtable Discussion presented at the North American Association of Environmental Education (NAAEE) International Conference. Ottawa, Ontario, Canada.
- Houseal, A. K.,** Crago-Wyllie, J.; Howe, J.; Dickson, S.; Allerdings, T.; Mathes, C.; & Fillpot, M. (2014, September). *Developing new science curriculum in the REAL WORLD: Successes and challenges in Campbell County, Wyoming*. Poster presented at the Department of Education Mathematics-Science Partnership National Conference. Washington, DC.
- Houseal, A. K.,** Greenberg, S. A., Atchley, K., & Adwell, R. (2014, July). *Developing balanced energy curriculum for middle level students*. Paper presented at the International Workshop on Public Education, Training, and Community Outreach for CCUS. Decatur, IL.
- Houseal, A. K.,** Greenberg, S. A., Ramsey-Walters, S., Brown, H., & Reinertsen, J. (2013, October). *Developing balanced energy curriculum for middle level students*. Paper presented at the 125th annual meeting of the Geologic Society of America (GSA). Denver, CO.
- Houseal, A. K.,** Wenger, M., Bourque, C., Falk, J. H., & Dierking, L. D. (2013, April). *Crowd-sourced bibliographic review of family learning research: A viable strategy?* Paper presented at the Annual National Association for Research in Science Teaching (NARST), Rio Grande, Puerto Rico.
- Myers, J. D., Lyford, M. E., Buss, A. R., & **Houseal, A. K.** (2012, November) *Preparing teachers for the future – The redesigning science education via the energy-water-climate nexus MSP project*. Poster presented at the annual meeting of the Geologic Society of America (GSA). Charlotte, NC.
- Houseal, A. K.** & McCabe, D. (2012, October). *Comfort: A powerful force*. Paper presented at the annual meeting of the National Network for Educational Renewal (NNER) Conference. Denver, CO.
- Houseal, A. K.,** Destefano, L., & Abd-El-Khalick, F. (2011, April). *STaRRS in Yellowstone: Student outcomes from a student-teacher-scientist partnership*. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.

- Houseal, A. K.**, Abd-El-Khalick, F., & Destefano, L. (2011, April). *A Student-Teacher-Scientist Partnership: Impact on teachers' knowledge, attitudes, and instructional practice*. Paper presented at the annual meeting of the National Association for Research in Science Teaching, Orlando, FL.
- Houseal, A. K.**, Gallagher, R., Sanford, R., & Fuhrmann, B. (2010, December). *STaRRS in Yellowstone: Addressing challenges facing Student-Teacher-Scientist Partnerships*. Paper presented at the annual meeting of the American Geophysical Union, San Francisco, CA.
- Houseal, A. K.**, Sanford, R., & Fuhrmann, B. (2010, November). *Connecting students to geoscience in Yellowstone: The STaRRS STSP model and preliminary research results*. Paper presented at the annual meeting of the Geologic Society of America, Denver, CO.
- Houseal, A. K.**, Fuhrmann, B., & Petrick, E. (2008, October). *Pioneering critical evaluation for Environmental Education in Yellowstone National Park*. Paper presented at the North American Association of Environmental Education Annual Conference. Wichita, KS
- Houseal, A. K.**, Petrick, E., & Fuhrmann, B. (2008, October). *Evaluation and National Park Service education programs: A participatory, responsive, utilization approach*. Paper presented at the American Evaluation Association (AEA) National Conference. Denver, CO.
- Greenberg, S., Clementz, A. M., **Houseal, A. K.**, & Schaffer, L. (2007, November). *Three lenses: Learning to be evaluators*. Paper presented at the American Evaluation Association (AEA) National Conference. Baltimore, MD.
- State/Local Presentations and Papers- invited*
- Parker, S. D., **Houseal, A. K.**, Martha Inouye, M. C., Gunshenan, C. I., & Jacobs, T. (2020, March). *Engaging science educators through responsive, collaborative, and theory-to-practice-oriented professional development and research*. Panel presentation at the University of Wyoming's College of Education Summit. Laramie, WY.
- Inouye, M. C., **Houseal, A. K.**, & Buss, A. (2019, November, invited presentation). *Phenomenon 2.0: Workshop to Develop Engaging Phenomena to Drive Instruction for your Courses*. TNT Presentation sponsored by the Ellbogen Center for Teaching and Learning at the University of Wyoming. Laramie, WY.
- Houseal, A. K.**, & Inouye, M.C. (2019, April, invited presentation). *Supporting ELs in science classrooms with the new science standards*. Paper presented at the Wyoming ESL Conference. Casper, WY.
- Houseal, A. K.** & Nelson, Z. (2018, November). *Critical issues in citizen science: A participatory session*. Paper presented at the Rocky Mountain Citizen Science Conference, Cody, WY.
- Houseal, A. K.** (2018, November). *Three-dimensional learning: "Upping the game" in citizen science projects using A Framework for K-12 Science Education*. Poster presented at the Rocky Mountain Citizen Science Conference, Cody, WY.
- Houseal, A. K.**, Krasnow, K., Gunshenan, C., Nadelson, L., & Szydowski, M. (2018, November). *What difference does doing field research make? Part I: Comparing quantitative outcomes from field-based citizen science, inquiry research, and adventure*

hike experiences for middle school students. Paper presented at the Rocky Mountain Citizen Science Conference, Cody, WY.

Houseal, A. K. (2016, December – Invited keynote speaker) *Citizen Science – More than just data collection: Using the Framework for K-12 Science Education to help make projects more robust.* Presentation for the Wyoming Citizen Science Conference, Lander, WY.

Houseal, A. K. (2000). *Project WET in the gifted classroom.* Paper presented at the Conference on Talented and Gifted (CONTAG). Waterloo, IA.

Houseal, A. K. (1998). *Simple machines for grades 3-5.* Paper presented at the Science Update Conference at the University of Northern Iowa. Cedar Falls, IA.

State/Local Presentations and Papers – refereed

Inouye, M. C. & **Houseal, A. K.** (2018, October). *A “phenomenal” 3D science lesson.* Paper presented at Wyoming’s 16th Annual Math and Science Teachers' Conference, Casper, WY.

Buss, A., **Houseal, A. K.**, Inouye, M. C., & Nicholas Moon, K. (2018, March). *Rethinking science learning and teaching through the new Wyoming Science Standards.* Panel presentation session presented at the University of Wyoming’s College of Education Research Symposium, Laramie, Wyoming.

Gunshenan, C. I., & **Houseal, A. K.** (2018, March). *Exploring efficacy of methods in Residential Environmental Education (REE) science inquiry instruction research: preliminary findings.* Poster presented at the University of Wyoming’s College of Education Research Symposium, Laramie, Wyoming.

Inouye, M. C., & **Houseal, A. K.** (2018, March). *Wyoming Science Standards: Changing the Trajectory of Education.* Paper presentation session presented at the University of Wyoming’s College of Education Research Symposium, Laramie, Wyoming.

Ruckman, R. S., & **Houseal, A. K.** (2018, March). *Using storylines to enhance student understanding of space systems: A work in progress.* Poster presented at the University of Wyoming’s College of Education Research Symposium, Laramie, Wyoming.

Welsh, K. M., Brock, C. H., Buss, A., Cloud, K., Khasilova, D. F., Hall, L. A., Han, K. T., Holmes, W. T., **Houseal, A. K.**, Robertson, D., & Swarts, G. P. (2018, March). *Lessons learned in developing a writing culture within the College of Education.* Panel presentation session presented at the University of Wyoming’s College of Education Research Symposium, Laramie, Wyoming.

Winslow, K. & **Houseal, A. K.** (2018, March). *Yellowstone stories: An explanation of interpreter self-efficacy, beliefs, and their art and science of program delivery.* Poster presented at the University of Wyoming’s College of Education Research Symposium, Laramie, Wyoming.

Houseal, A. K. (2017, March). *Realizing the NGSS vision using Responsive Facilitation.* Paper presented at the University of Wyoming’s College of Education Research Symposium, Laramie, Wyoming.

Houseal, A. K. & Inouye, M. C. (2017, March). *Git ‘er done: Jump-starting the science standards.* Paper presented at the AdvancED Conference, Casper, WY.

- Houseal, A. K.** & Parker, S. D. (2017, March). *Mastering teacher leadership (and content)*. Paper presented at the AdvancED Conference, Casper, WY.
- Crago-Wyllie, J., **Houseal, A. K.**, & Inouye, M. C. (2017, March). *Making Connections – How to integrate STEM into your classroom*. Paper presented at the AdvancED Conference, Casper, WY. (Presented with Gillette, WY elementary teachers).
- Nelson, Z., **Houseal, A. K.** (2016, December). *Could applying educational frameworks to citizen science projects enhance scientific literacy?* Paper presented at the Wyoming Citizen Science Conference. Lander, WY.
- Fisher, P. L., **Houseal, A. K.**, Tuthill, D., & Shim, J. (2016, March). *Development of a 5th grade ecology unit on the Sagebrush Ecosystem using Next Generation Science Standards, Place Based Education principles, and English Language Learner best practices*. Poster presented at the University of Wyoming's College of Education Research Symposium, Laramie, Wyoming.
- Inouye, M. C. & **Houseal, A. K.** (2016, March). *Integrating NGSS and critical thinking skills through professional development*. Poster session presented at the University of Wyoming's College of Education Research Symposium, Laramie, Wyoming.
- May, S. L. & **Houseal, A. K.** (2016, March). *Next Generation Science Standards: Themes in rural implementation*. Poster presented at the University of Wyoming's College of Education Research Symposium, Laramie, Wyoming.
- Houseal, A. K.** (2015, March). *A model for understanding the Framework for K-12 Science Education (and the Next Generation Science Standards [NGSS]): An explanatory and evaluation tool*. Paper presented at the University of Wyoming's College of Education Research Symposium, Laramie, Wyoming.
- Hackworth, S. J. & **Houseal, A. K.** (2015, March). *Next Generation Science Standards and Place-Based Education*. Poster presented at the University of Wyoming's College of Education Research Symposium, Laramie, Wyoming.
- Houseal, A. K.** & Humphrey, R. (2014, October). *Research-based professional development: Partnering to provide excellent science in coal country*. Paper presented at the Linking Learning for Student Success Conference. Casper, WY.
- Barnes Johnson, J. & **Houseal, A. K.** (2014, October). *Revisiting the Framework for K-12 Science Education*. Paper presented at the Linking Learning for Student Success Conference. Casper, WY.
- Houseal, A. K.**, & Hutchison, L. (2014, October). *Are you ready for a Master's degree?* Roundtable Discussion presented at the Linking Learning for Student Success Conference. Casper, WY.
- Houseal, A. K.**, Smith, L., Hornung, J., & Taylor, J. (2013, October). *Wyoming teachers as researchers: Sharing three new research projects*. Paper presented at Wyoming's 11th Annual Math and Science Teachers' Conference, Casper, WY.
- Schulte, K. E., **Houseal, A. K.**, & Fuhrmann, B. (2013, November). *"Nerding out" Curriculum design and educational practice of the Resources Education Curriculum in Yellowstone*

Youth Conservation Corps. Paper presented at the Missouri Environmental Education Conference (MEEA), Columbia, MO.

Houseal, A. K. & Ellsworth, P. C. (2012, October). *Preparing for the Next Generation Science Standards*. Paper presented at Wyoming's 10th Annual Math and Science Teachers' Conference, Casper, WY.

Houseal, A. K. & Parker, S. D. (2012, October). *Are you ready for a Master's degree?* Paper presented at Wyoming's 10th Annual Math and Science Teachers' Conference, Casper, WY.

Non-refereed

Dwyer, S., Alexander, P, **Houseal, A. K.**, Kandianis, M., & Fouke, B. (2007). *The perfect geochemical storm: An analog for early earth microbial influences on carbonate mineralization*. Poster presented at the Sixth Annual UIUC Earth Research Review, University of Illinois at Urbana-Champaign. Champaign, IL.

Houseal, A. K., Hurst, T., Leuszler, H., & Murray-Tiedge, D. (2007). *Picking through the pieces*. Presentation presented at the Ethnography of the University Initiative Student Bi-Annual Conference. Champaign, IL.

Houseal, A. K. (2004). *Teaching for atmospheric data collection*. Paper presented at the Iowa Science Teachers' Section of the Iowa Academy of Science Fall Conference. Des Moines, IA.

Houseal, A. K., & Taylorson, L. A. (2003). *Cool science toys*. Paper presented at the Iowa Science Teachers Section of the Iowa Academy of Science Fall Conference. Des Moines, IA.

GRANT ACTIVITY - AWARDED

September 2019. *Wyoming Department of Education Title IIA funds*. (Co-PIs) Martha Inouye & **Dr. Ana Houseal**, University of Wyoming partners. \$88,000

October 2018. *Wyoming Department of Education Title IIA funds*. (Co-PIs) **Dr. Ana Houseal** & Martha Inouye, University of Wyoming partners. \$200,000

January 2016. *Campbell County School District #1 STEM MSP grant proposal (Year 4)*. Kelly Hornby, CCSD Assistant Superintendent (P.I.), **Dr. Ana Houseal, University of Wyoming partner**. \$272,222.00.

January 2015. *Campbell County School District #1 STEM MSP grant proposal (Year 3)*. Roger Humphrey, CCSD Assistant Superintendent (P.I.), **Dr. Ana Houseal, University of Wyoming partner**. \$250,000.00.

January 2014. *Campbell County School District #1 STEM MSP grant proposal (Year 2)*. Roger Humphrey, CCSD Assistant Superintendent (P.I.), **Dr. Ana Houseal, University of Wyoming partner**, Jeanie Iberlin, JCSD partner. \$381,000.00.

January 2013. *Campbell County School District #1 STEM MSP grant proposal (Year 1)*. Roger Humphrey, CCSD Assistant Superintendent (P.I.), **Dr. Ana Houseal, University of Wyoming partner**. \$300,000.00.

- August 2012. *Illinois Statue Geological Survey – University of Wyoming Curriculum Development Project*. **Dr. Ana Houseal (P.I.)**. University of Illinois at Urbana-Champaign, \$62,050.
- December 2011. *Science for the Future: Redesigning Science Education via the Energy-Water-Climate Nexus*. Dr. Alan Buss (Co-P.I.), **Dr. Ana Houseal (Co-P.I.)**, Dr. Mark Lyford (Co-P.I.), and Dr. James Myers (Co-P.I.). Wyoming State MSP, \$234,886.
- October 2009. *Transcription and Translation in a Uniquely Compartmentalized Bacterial Cell* [Broader Impact: GET Cell Biology for Teachers]. Dr. Naomi Ward (P.I.), Dr. Blaire T. Steven (Co-P.I.), and **Dr. Ana Houseal (Co-P.I.)**. NSF MCB Cellular Systems, \$474,808.
- July 2007. (Implemented May 2008 – May 2009). *Geobiology and the Emergence of Terraced Architecture During Carbonate Mineralization* [Supplemental Grant for Research Experience for Teachers]. Doctoral student – co-written by **A. Houseal**. Dr. B. W. Fouke (P.I.). NSF BE/CBC: (RET) EAR-0221743, \$150,000.
- Spring 1998. *College of Natural Sciences Grant*. **Ana Houseal (P.I.)**. University of Northern Iowa, \$500.

PROFESSIONAL AFFILIATIONS

American Educational Research Association
National Association of Research in Science Teaching
National Science Teaching Association
George Wright Foundation
The Association of Science Teacher Education
Wyoming Science Teachers Association

SERVICE

National/International

National Science Teaching Association Outstanding Science Trade Book selection committee.
Summer 2022 – Ongoing (3-year term)

Reviewer for *Journal of Research in Science Education*. Fall 2020 – ongoing

Reviewer for *Frontiers in Communication*. Fall 2017 – ongoing

Reviewer for *International Journal of Science Education*. Summer 2018 – ongoing

Reviewer for *Science Education*. Spring 2016

Consultant for/Researcher on Professional Development project for Princeton School District,
Princeton, NJ, 2015-2016 school year.

Reviewer for NARST international conference, Fall 2014, Fall 2013, Fall 2012, Fall 2010.

National Park System Advisory Board - Education Committee (NPS ABEC) – two-year term beginning August 2011. Renewed for 3 years May 2013; Renewed for 3 more years June, 2016. NPSAB dissolved in 2018 by the 45th administration.

Co-chair of the education subcommittee of the NPSABEC, Fall 2011 – May 2013

Member of Learning and Development sub-committee of the NPSABEC - May 2013 – 2018

Member of Research to Practice sub-committee – Spring 2012 – 2018

Member of Interpretation, Education, and Volunteers working group - June 2012 – 2018

Member of Learning from the Outside In, National Summit on Learning program committee – 2015-16 (Summit April 20-21, 2016 in Washington, D.C.)

Reviewer for AERA annual meeting, Fall, 2012.

State/Regional

Consultant and Science Education (NGSS) Professional Development (PD) provider – Open Enrollment virtual synchronous workshops – Spring 2020 – ongoing

Consultant and Science Education (NGSS) Professional Development (PD) provider for the following school districts: Sweetwater County School District #1; Sweetwater County School District #2; Converse County School District #1; Natrona County School District #1; Fremont County School District #1; Campbell County School District #1; Johnson County School District #1; Lincoln County School District #2; Albany County School District #1; Sheridan County School District #1; Laramie County School District #2; Carbon County School District #1 – WDE technology grant.

Fall 2013 – ongoing

Wyoming Department of Education State Science Standards Review Committee, Summer 2015 – Summer 2016 – Standards adopted by the State of Wyoming in 2016

Consultant for Carbon County School District #2 – Science Curriculum work (Focus: K-6), Fall 2011 – 2014

Consultant for Uinta County School District #1 – Science Curriculum work (Focus: Middle-High School), Fall 2011 – 2013

Consultant for Natrona County School District #1 - Meeting with School Board (Focus: K-12 Science), Summer 2014

Reviewer for Iowa Academy of Science Junior Academy Grant proposals, Spring 2011.

University/Local

Program head for SMTC’s MS-NatSci MSC program as part of AAQEP Accreditation, University of Wyoming. Submitted Fall 2022.

Reviewer for University of Wyoming’s Trustee’s Scholarship Program
Spring 2021, Spring 2022

College of Education Faculty Mentoring Program
Fall 2020 – ongoing

Stepans Scholarship Committee – College of Education, University of Wyoming. Spring 2013 – ongoing

College of Education Search Committee – Chair for committee to hire an Elementary Science Education Assistant Professor – Fall 2019-Spring 2020. Successful search.

University of Wyoming President’s Council on Engagement and Outreach – Appointed by University of Wyoming President. May 2018 – current

SMTC Transition Committee – Appointed by Dean of the College of Education, University of Wyoming. Fall 2016-Spring 2017

NCATE/NSTA program report prepared for SMTC’s MS-NatSci MSC program as part of NCATE accreditation, University of Wyoming. Submitted Fall 2015 (NCATE returned it as it was a graduate program - Resubmitted to Wyoming PTSB Fall 2016)

Advisory Council on Graduate Education – College of Education, University of Wyoming. Chair, Fall 2014 – Fall 2015, Member Fall 2012 – Fall 2014, & Fall 2015 – Spring 2017

Earth Systems Science – Faculty Review Committee member, Haub School of Environment and Natural Resources, University of Wyoming. Spring 2014 – Fall 2015. Major approved by the Trustees November 2015

Biodiversity Institute's Faculty Advisory Committee Member – Berry Center, University of Wyoming. Fall 2012- present

College of Education Task Force for the Evaluation of the EdD Program Committee member, University of Wyoming. Spring 2014 – Spring 2015

GRADUATE COMMITTEES

COMMITTEE CHAIR

Student Name	Program	Graduated	Plan B Project/Thesis Title
Matt Bisk (co-chair with Martha Inouye)	MS-NatSci – NED	Spring 2022	<i>A Conceptual Framework for the Development of Curricular Supports for Phenomena-Based Teaching Using Geospatial Technology</i>
Libby Graves	MS-NatSci – NED	Spring 2022	<i>Graduate Students’ Perceptions of the Impact of Nature Journaling at Teton Science Schools</i>

Tracy Jacobs	MS-NatSci – NED	Summer 2021	<i>Validating an Assessment Tool to Assess Teacher Understanding on The Next Generation Science Standards</i>
Crystal Graf	MS-NatSci – MSC	Summer 2021	<i>Identifying Impactful Teaching Approaches for Students with ADHD: Reflections of Elementary School Experiences</i>
Cara Tarullo	PhD ESCI	Spring 2021	<i>What is Going on in Their Heads? Interpretations of Epistemic Science Principles in a General Science Class</i>
Clare Gunshenan	MS-NatSci – NED	Summer 2019	<i>Thesis: Learning Through Inquiry: A Mixed Methods Exploration of Learning and Research in Three Residential Environmental Education Instructional Models</i>
Lauren John	MS-NatSci – MSC	Summer 2019	<i>Developmentally Appropriate Standards: A Recommendation to Kellogg F.I.E.L.D School</i>
Tyler Loyd	MS-NatSci – MSC	Summer 2019	<i>Observation Unrecorded is Knowledge Lost: How Nature Journals Create Better Observers</i>
Kamille Winslow	MS-NatSci – NED	Spring 2019	<i>Thesis: Yellowstone Stories: An Exploration of Interpreter Attributes and their Art and Science of Program Delivery</i>
Samuel Neirman	MS-NatSci – NED	Spring 2019	<i>Creating a Context-Sensitive and Utilization-Focused Evaluative Framework for Haub School Field Courses</i>
Monica Alm	MS – C& I	Spring 2019	<i>Exploring the Ways That Developing and Using Models Support Changes in Student Thinking About Phase Changes</i>
Prem Prasad Timsina	MS-NatSci – NED	Fall 2018	<i>Investigating the Ability of Bhutanese Teachers to Understand and Carry Out Action Research in Teaching</i>
Ron Ruckman	MS-NatSci- MSC	Fall 2018	<i>Using Storylines to Enhance Student Understanding of Space Systems</i>
Zoe Nelson	MST	Fall 2017	<i>Thesis: Applying an Educational Framework to a Citizen Science Project to Evaluate Science Learning</i>
Dewayne Tillman	MS-NatSci MMA	Fall 2017	<i>It is a Feeling Problem, Not a Thinking Problem</i>
Molly Amen (co-chair w/Alan Buss)	MS-NatSci – MSC	Fall 2017	<i>Is This More Than a Field Trip? Exploring Memories of Teton Science Schools' Field Education Program</i>
Amanda Lopez	MS-NatSci – MSC	Summer 2017	<i>The Impact of Teacher Beliefs on Integrated Unit Design</i>
Angela Ochsner	MS-NatSci – MSC	Summer 2017	<i>Answering DuFour's Fourth Essential Question of PLCs in a 7th Grade Life Science Classroom</i>
Victoria Davis	MS-NatSci – MSC	Summer 2017	<i>Curriculum Alignment and Science and Engineering Practices in the Classroom</i>

Dorothy Jablonski	MS-NatSci – NED	Spring 2017	<i>NGSS and Science Museums: How Learning Progressions Can Inform Field Trip Lesson Planning for Informal Science Centers</i>
Nicole Gautier	MS-NatSci – NED	Spring 2017	<i>Developing a Curriculum Framework for Field Studies Using Experiential and Environmental Educational Theory</i>
Kaitlyn Bunting	MS-NatSci – NED	Spring 2017	<i>Creating a Context-Adapted Evaluation Tool for the Outdoor Leadership Development Series of the Outdoor Program at the University of Wyoming</i>
Sophia May	MS-NatSci – NED	Spring 2017	<i>Thesis: Implementing the Next Generation Science Standards: Identifying Emergent Themes and Characteristics in Rural Middle-level Science Classrooms</i>
Martha Inouye	MS-NatSci – NED	Spring 2017	<i>The Effect of Professional Development on Integrating Critical Thinking Skills Through Teacher Perception and Classroom Observation</i>
Bekah Taylor (co-chair: April Heaney)	MS-NatSci – NED	Summer 2016	<i>First Year Seminars & Learning Communities: A Literature Review and Recommendations for the University of Wyoming's USP</i>
Paige Fisher	MS-NatSci – NED	Summer 2016	<i>Development of a 5th Grade Ecology Unit about the Sagebrush Ecosystem using Next Generation Science Standards, Place Based Education principles, and English Language Learner Best Practices</i>
Mark Williams	MS-NatSci – MSC	Summer 2016	<i>The PBL Trifecta: Practical Application of the PBL³ Model in an Elementary Classroom</i>
Jamie Litvinoff	MS-NatSci – MSC	Summer 2016	<i>Informational Writing for Research Using Common Core State Standards and Next Generation Science Standards</i>
Amy Lorenz	MS-NatSci – NED	Spring 2016	<i>The Influence of a Citizen Science Project: Student Attitudes, Sense of Place, and Understanding of Science Practices</i>
Sarah Hackworth	MS-NatSci – NED	Summer 2015	<i>Next Generation Science Standards and Place-Based Education: An Intrinsic Case Study of Teacher Experience</i>
Teddi Hofmann	MS-NatSci – NED	Summer 2015	<i>Exploring the Impact of Pura Vida on Participant Environmental Behavior and Engagement in Grand Teton National Park</i>
Samantha Swessinger	MS-NatSci – MSC	Spring 2015	<i>Slowmotion: Helping Students Address their Misconceptions in Physical Science</i>
Annie Robbins (co-chair: Dan McCoy)	MS-NatSci – NED	Spring 2015	<i>Synthesizing the Outdoor Education Literature to Create a Definition and List of Primary Objectives</i>
Tayla Fulcher	MS-NatSci – NED	Summer 2014	<i>Supplemental Curricula and Science and Engineering Practices in the Next Generation Science Standards: Developing a Tool for Identification and Alignment</i>

Kristen Schulte	MS-NatSci – NED	Summer 2013	<i>Strengthening the Curriculum Design and Enhancing the Educational Practices of the Resources Education Curriculum in Yellowstone Youth Conservation Corps</i>
Elizabeth Smith	MS-NatSci – MMA	Summer 2013	<i>No Reservations: Teachers Who Stay</i>
John Reinertsen	MS-NatSci – NED	Summer 2013	<i>Uncovering 9th Grade Understandings of Energy via Concept Sketches: A Learning Tool for Students and Educators</i>
Katie Barry	MS-NatSci – MSC	Spring 2013	<i>Middle School Science: Using Conceptual Models to Develop Molecular Genetics Concepts</i>
Colleen Bourque	MS-NatSci – NED	Fall 2012	<i>Family Learning in Free-Choice Educational Settings: A Review of the Literature for the National Park Service</i>
Angie Varca	MS-NatSci – MSC	Summer 2012	<i>Atomic-Molecular Theory: A Key to Understanding Chemistry Concepts</i>
Kerri Peil	MS-NatSci – MSC	Spring 2012	<i>Breakfast at a K-3 School: What We Are Feeding Our Children</i>
Clarissa Cole	MS-NatSci – MSC	Spring 2012	<i>A Literature Review Exploring the Effectiveness of the Use of Interactive Whiteboards on Teaching Basic Science Concepts to Special Education Students</i>

COMMITTEE MEMBER

Student Name	Program	Graduated	Project/Thesis Title
Tami Van Pelt	MS-NatSci- MSC	Spring 2022	<i>Correlation of Specific Next Generation Earth Science Standards to Citizen Science: Application in the Middle School Classroom</i>
Diana Clapp	EdD – Educational Leadership	Spring 2020	<i>Principal Evaluation: Exploring the Perceptions of the Principal Evaluation Process in Wyoming</i>
Charles Jenks	EdD – Educational Leadership	Spring 2020	<i>Principal Evaluation: Exploring the Perceptions of the Principal Evaluation Process in Wyoming</i>
Kevin Mitchell	EdD – Educational Leadership	Spring 2020	<i>Principal Evaluation: Exploring the Perceptions of the Principal Evaluation Process in Wyoming</i>
Godfrey Walwema	PhD – Curriculum and Instruction	Fall 2019	<i>An Investigation on How the CAVE Experience Helps Preservice Teachers to Build on Their Understanding of the Concept of Density at the Microscopic Level</i>
Kali Nicholas- Moon	MS - Botany	Spring 2018	<i>An Inclusive Examination of Science Literacy Level & Self-Assessment Ability of UW Students in Surveyed First Year Seminar, Life Science, Chemistry, Microbiology and Physics Courses</i>
Peggie DePasquale	MS-NatSci – NED	Spring 2018	<i>The Long-Term Effects on Conceptual Change and Affect for Preservice Teachers One Year After a Cave Automatic Virtual Environment (Cave) Experience</i>
Margaret Vest	MS-NatSci – NED	Spring 2018	<i>Impacts of Place-Based Professional Development on Teachers</i>
Debbie French	PhD – Science Ed.	Summer 2016	<i>Snapshots of Authentic Scientific Inquiry and Teacher Preparation: Undergraduate Stem Courses, Preservice and Inservice Teachers’ Experiences</i>
Charlie Vogelheim	MS-NatSci – NED	Fall 2015	<i>Service, Science, and Standards: Using Restoration Service-Learning to Meet Science Standards</i>
Dawn Anderson	MS-NatSci – MSC	Summer 2015	<i>Lunar Phases: Uncovering Misconceptions through Conceptual Change</i>
Kim Mapp	MS-NatSci – NED	Spring 2015	<i>Science and Ecological Literacy in Undergraduate Field Studies Education</i>
Lara Mann	MS-NatSci – NED	Summer 2014	<i>An Examination of the State of Science Education in Elementary Schools with a Majority of Native American Students</i>
Jennifer Hornung	MS-NatSci – MMA	Summer 2013	<i>Hands-On Mathematics: The Effects of Reinforcing Key Mathematics in a Science Class for At-Risk Students</i>
Bree Arzy- Mitchell	MS-NatSci – MSC	Summer 2013	<i>Brain-Based Learning for Adolescent Science Students – A Review of the Literature</i>

Janey Taylor	MS-NatSci – MMA	Spring 2013	<i>Translation of Function: A Study of Dynamic Mathematical Software and its Effects on Students Understanding of Translation of Function</i>
Selena Fabricious	MS-NatSci – MMA	Fall 2012	<i>Middle Level Math: Strategies to Improve Teaching Mathematics Vocabulary</i>
Brenda Jaure	MS-NatSci – MMA	Spring 2012	<i>Identifying and Evaluating Strategies for Teaching Measurement According to Student Conceptual Development</i>