

JACOB PLEASANTS

OVERVIEW

My disciplinary expertise is in science education. I spent four years teaching physics and physical science in the public high school setting. At the college level, I work to prepare pre-service secondary science teachers and conduct professional development work with elementary and secondary teachers. My scholarship focuses on the incorporation of engineering and technology into science education, with an emphasis on conveying the disciplinary relationships between science, engineering, and technology.

EDUCATION

2018 Ph.D. in Education – Science Education Emphasis

Minor in Statistics
Iowa State University
515 Morrill Road
Ames, IA 50011

2011 M.A.T. Secondary Science Education

Iowa State University
515 Morrill Road
Ames, IA 50011

2010 B.A. Psychology (major), Physics (minor)

Graduated with Honors
Washington University in Saint Louis
1 Brookings Drive
St. Louis, MO 63130

PROFESSIONAL EXPERIENCE

2021-Present Assistant Professor, Science Education

University of Oklahoma
Instructional Leadership & Academic Curriculum Department
Instructor for science education methods courses & supervisor of field experiences

2019-2021 Assistant Professor of STEM Education

Keene State College – Physics Department
Coordinator of secondary science education programs
Instructor for science education methods courses & supervisor of field experiences
Developer and instructor of core courses in the STEM for Educators program

2018-2019 Post-Doctoral Researcher - Funded through NSF STEM-C grant

Iowa State University – College of Engineering
Responsibilities: Managing and coordinating grant research activities
Facilitating professional development workshops
Writing manuscripts for grant-related research

2015-2018 Graduate Research Assistant - Funded through NSF STEM-C grant

Iowa State University
Responsibilities: Managing data collection and analysis for research project
Assisting in facilitation of professional development workshops

2015-2017 Student Teacher Supervisor

Iowa State University
Supervised student teaching experiences of 15 elementary student teachers

2013-2015 High School Teacher
Ames High School
Ames Community School District, Ames, IA
Courses taught: Physics

2014, Spring Middle School Extended Learning Program Coordinator (2/5-time)
Ames Middle School
Ames Community School District, Ames, IA
Grades taught: 6-8 Talented and Gifted Students

2011-2013 High School Teacher
Portage High School
Portage Community School District, Portage, WI
Courses taught: General Science, Physics

COLLEGE-LEVEL TEACHING

Course	Description	Dates Taught
University of Oklahoma		
EDSC 5523: Science of Learning Theories (3 cr.)	For Masters and Doctoral students across ILAC; an exploration of major theoretical perspectives on learning and development of an empirical study of learning.	Fall 2023
EDSC 5960: Guided Readings (1-3 cr.)	Guided reading course focused on the nature of science in science education	Spring 2023
ILAC 6233: Implications of Diversity (3 cr.)	For doctoral students in ILAC; an introduction to major lines of research on diversity in education.	Spring 2023
EDSC 6910: Practicum in Education (1 cr.)	Monthly seminar for doctoral students in science education, providing professional preparation specific to the field.	Fall 2022 Fall 2023
EDUC 4060: Secondary Science Internship (10 cr.)	Supervision of secondary science student internship experience (16-week placement)	Spring 2022 Spring 2023 Fall 2023
EDSC 4513/5513: Teaching Science in Secondary Schools (3 cr.)	First full methods course for undergraduate and masters-level students seeking secondary science licensure.	Spring 2022
EDSC 4533/5533: Advanced Methods in Science Teaching (3 cr.)	Second full methods course for undergraduate and masters-level students seeking secondary science licensure. Includes field experience.	Fall 2021 Fall 2022 Fall 2023
EDSC 6333: Research Paradigms for Scientific Investigations (3 cr.)	An introduction to research traditions within science and mathematics education research for Masters and Doctoral students.	Fall 2021
Keene State College		
INSTEM 142: Discovering STEM (4 cr.)	Content course with an emphasis on interdisciplinary problem-solving. Geared toward future elementary and middle school teachers.	Fall 2019 Spring 2020 Fall 2020 Spring 2021 Summer 2021
STEM 342: STEM Explorations I (4 cr.)	An introduction to interdisciplinary STEM pedagogies. Geared toward future elementary and middle school teachers.	Spring 2021
EDUC 131: Issues in Secondary Education (2 cr.)	For students across all secondary programs. Addresses the history and purpose of secondary schooling as well as adolescent learning and development.	Spring 2021
EDUC 331: Secondary Science Methods I (4 cr.)	First full methods course for undergraduate students seeking secondary science licensure. Includes field experience.	Fall 2019 Fall 2020

EDUC 431: Secondary Science Methods II (4 cr.)	Second full methods course for undergraduate students seeking secondary science licensure. Includes field experience.	Fall 2019 Fall 2020
EDUC 400: Student Teaching (12 cr.)	Supervision of student teaching experience for secondary teachers. Includes three day-length seminars in addition to a semester-long placement.	Spring 2020 Spring 2021
Iowa State University		
ABE 590: Education and Public Outreach for STEM Professionals (1 cr.)	Course for engineering graduate students in STEM-C project, focused on supporting their ability to contribute to planning and teaching science and engineering in elementary classrooms	Fall 2018 Spring 2019
CI 419/519: Secondary Science Methods II (3 cr.)	Second full methods course for MAT & undergraduate students seeking secondary science licensure	Spring 2017
CI 280M: Introduction to the Complexities of Learning and Teaching Science (2 cr.)	Introductory course for undergraduate students seeking secondary science licensure; includes field placement	Spring 2017
CI 547: The Nature of Science in Science Education (3 cr.)	Course for MAT & undergraduate students focused on understanding the nature of science and accurately communicating it in the science classroom	Fall 2016
CI 418/518: Science Methods I (3 cr.)	First full methods course for MAT & undergraduate students seeking secondary science licensure	Fall 2016
CI 514: Introduction to the Purposes and Complexities of Science Teaching (2 cr.)	Introductory course for students in secondary science MAT licensure program	Summer 2016

FUNDED PROJECTS (External)

- 2021 **PIs:** Anderson, B. A., Pleasants, J., Junge, D., Hays, C., & Launen, L.
Project Title: Early Research Experiences and Mentoring to Increase the Numbers of Biology and Chemistry Graduates Prepared for Careers in Science.
Program: National Science Foundation (NSF) Scholarships in Science, Technology, Engineering, and Mathematics (S-STEM); Track 1: Capacity Building.
Award Amount: \$648,397
Award Number: 2030621
Funding Dates: 4/15/2021 – 3/31/2026

FUNDED PROJECTS (Internal)

- 2022 Pleasants, J. **Project Title:** Connecting Science and Engineering in the High School Classroom. Funded by Jeannine Rainbolt College of Education Summer Faculty Research Grant. \$5,682.
- 2020 Pleasants, J. **Project Title:** Open Educational Resource Development for Core STEM Education Courses. Funded by the Keene State College STEM Open Ed Project. \$3,740.
- 2019 Pleasants, J., Parsons, C., Sturtz, J., Phillips, E., & Hawes, S. **Project Title:** Exploring the Impact of KSC Secondary Education Programs: Investigation of KSC Graduates' Experiences in the Field. Keene State College Assessment Grant. \$1,400.

OTHER INTERNAL FUNDING

- 2023 Jeannine Rainbolt College of Education Faculty Technology Funding
\$51.96 awarded for equipment to use in Science Teacher Education courses
- 2023 Faculty Travel Assistance Program Grant
\$732 awarded for travel to ASTE International Conference, January 11-14, Salt Lake City, Utah
- 2022 Jeannine Rainbolt College of Education Faculty Technology Funding
\$319.60 awarded for equipment to use in Science Teacher Education courses
- 2022 Faculty Travel Assistance Program Grant
\$1,802 awarded for travel to NARST International Conference, March 27-30, Vancouver, BC

PROJECTS UNDER REVIEW (External)

- 2023 Radloff, J. & Pleasants, J.
Project Title: Stories of Sustainable Engineering for Teacher Education
Program: ASEE Engineering One Planet Mini-Grant
Requested Amount: \$8,000

UNFUNDED PROJECTS

- 2023 Brugar, K., Feille, K., Pleasants, J., Raymond, K., & Velasco, R.
Project Title: STEM Teacher Acceleration
Program: Oklahoma State Regents for Higher Education Teacher Acceleration Programs
Requested Amount: \$2,974,250
- 2023 **PIs:** Feille, K., Pleasants, J.
Project Title: Induction Support for Science Teachers of Oklahoma
Program: Oklahoma Teacher Connection Collegiate Grant
Requested Amount: \$8,000
- 2023 **PIs:** Pleasants, J., Raymond, K., Velasco, R., Dalton, C. & Abbott, B.
Project Title: Developing Engineering Identities through a Summer Bridge Program

Program: ICAST Seed Grant

Requested Amount: \$29,999

- 2022 Clough, M. P., Pleasants, J., Herman, B. C., Rao, A., & Odeleye, O.
Project Title: Using Novel Instructional Materials to Improve Students' Trust in STEM for Decision-Making about Socially-relevant Issues
Program: National Science Foundation (NSF) Improving Undergraduate STEM Education and Human Resources (IUSE:EHR) program
Proposal Number: 8224772
Requested Amount: \$599,959.
- 2022 **PIs:** Feille, K., Pleasants, J., & Heddy, B.
Project Title: Advancing and Developing Virtual Informal Stem Engagement (ADVISE): Engaging rural Oklahoma in STEM Maker Experiences
Program: National Science Foundation (NSF) Advancing Informal STEM Learning (AISL): Pilot and Feasibility Study
Proposal Number: 2215059
Requested Amount: \$299,692
- 2021 **PIs:** Clough, M. P., Pleasants, J., Herman, B. C., Rao, A., & Odeleye, O.
Project Title: Using Novel Instructional Materials to Improve Students' Trust in STEM for Decision-Making about Socially-relevant Issues
Program: National Science Foundation (NSF) Improving Undergraduate STEM Education and Human Resources (IUSE:EHR) program
Proposal Number: 2142106
Requested Amount: \$599,977.
- 2019 Clough, M. P., Herman, B. C., Kruse, J. W., Pleasants, J., Miller, G., Stanley, M. & Perillan, J. G.
Project Title: Humanizing STEM to Improve Learning and Restore Trust
Program: Science Foundation (NSF) Improving Undergraduate STEM Education and Human Resources (IUSE:EHR) program
Proposal Number: 2013431
Requested Amount: \$1,509,046.

JOURNAL PUBLICATIONS (Peer-Reviewed)

26. Pleasants, J. (In Press). Analyzing classroom discourse in a science methods course: With or without ChatGPT? **In Press** in *Innovations in Science Teacher Education*.
25. Cavazos, A., & Pleasants, J. (In Press). Teaching students to think critically about technology. In press in *Social Education*.
24. Pleasants, J., Krutka, D. G., & Nichols, T. P. (2023). What relationships do we want with technology? Toward technoskepticism in school. *Harvard Educational Review*, 93(4), 486-515. <https://doi.org/10.17763/1943-5045-93.4.486>
23. Pleasants, J., & Sartin, K. (2023). Supporting informed engineering practices in the elementary classroom: Examining teachers' approaches to scaffolding. *International Journal of Technology & Design Education*. <https://doi.org/10.1007/s10798-023-09839-5>
22. Pleasants, J. (2023). Rethinking the nature of engineering: Attending to the social context of engineering. *Science & Education*, 1-18. <https://doi.org/10.1007/s11191-023-00445-4>
21. Pleasants, J., De La Cruz, I., Olson, J. K. (2023). Elementary students' representations of scientists and engineers: Disciplinary confluences and confusions before and after a semester with an engineer. *The Electronic Journal for Research in Science & Mathematics Education*, 27(1), 30-56. <https://ejrsme.icrsme.com/article/view/21765>
20. Krutka, D. Pleasants, J., & Nichols, P. (2023). Talking the technology talk. *Phi Delta Kappan*, 104(7), 42-46. <https://kappanonline.org/talking-to-students-about-technology-krutka-pleasants-nichols/>
19. Pleasants, J. (2023). Embracing the game-like character of science and engineering activities: A perspective to guide teachers' instructional decisions. *Journal of Science Teacher Education*. <https://doi.org/10.1080/1046560X.2022.2148857>
18. Parrish, J., Pleasants, J., Reid, J., Mulvey, B, Peters-Burton, E., & Recker, A. (2022). Using epistemic network analysis to explore preservice teachers' ideas about the nature of engineering. *Science & Education*. <https://doi.org/10.1007/s11191-022-00395-3>
17. McGregor, S., & Pleasants, J. (2022) Shedding Light on Boundaries: Re-sequencing Snell's Law Instruction to First Build Conceptual Understanding. *Physics Education*, 57(5), 1-11. <https://doi.org/10.1088/1361-6552/ac6eb4>
16. Pleasants, J., & Wilcox, J. (2022). Putting the Energy into Concept Development: Developing the concept of thermal energy transfer and science and engineering practices. *Science Scope*, 45(6), 40-46. <https://www.nsta.org/science-scope/science-scope-julyaugust-2022/putting-energy-concept-development>
15. Pleasants, J. (2022). Is this an authentic engineering activity? Resources for addressing the nature of engineering with teachers. *Innovations in Science Teacher Education*, 7(3), 1-19. <https://innovations.theaste.org/is-this-an-authentic-engineering-activity-resources-for-addressing-the-nature-of-engineering-with-teachers/>
14. Pleasants, J., Pleasants, J. M., & Pleasants, B. (2022). Cheating on unproctored exams: Prevalence, mitigation measures, and effects on exam performance. *Online Learning Journal*, 26(1), 268-284. <https://doi.org/10.24059/olj.v26i1.2620>
13. Pleasants, J. (2021). Development and validation of a survey instrument targeting teachers' perceptions of the scope of engineering. *Journal of Pre-College Engineering Education Research*, 11(2), 42-62. <https://doi.org/10.7771/2157-9288.1318>

12. Pleasants, J., Tank, K. M., & Olson, J. K. (2021) Conceptual connections between science and engineering in elementary teachers' unit plans. *International Journal of STEM Education*, 8, 16. <https://doi.org/10.1186/s40594-021-00274-3>
11. Pleasants, J. (2020). Inquiring into the nature of STEM problems: Implications for pre-college education. *Science & Education*, 29(4), 831-855. <https://doi.org/10.1007/s11191-020-00135-5>
10. Pleasants, J., Olson, J. K., & De La Cruz, I. (2020). Accuracy of elementary teachers' representations of the projects and processes of engineering: Results of a professional development program. *Journal of Science Teacher Education*, 31(4), 362-383. <https://doi.org/10.1080/1046560X.2019.1709295>
9. Pleasants, J., Clough, M. P., Olson, J. K., & Miller, G. (2019). Fundamental issues regarding the nature of technology: Implications for STEM education. *Science & Education*, 28(5), 561-597. <https://doi.org/10.1007/s11191-019-00056-y>
8. Pleasants, J., Olson, J. K., & Tank, K. M. (2019). What students learn from engineering instruction: Perspectives from elementary teachers. *Journal of Science Teacher Education*, 30(7), 691-715. <https://doi.org/10.1080/1046560X.2019.1595306>
7. Pleasants, J., & Olson, J. K. (2019). Refining an instrument and studying elementary teachers' understanding of the scope of engineering. *Journal of Pre-College Engineering Education Research*, 9(2), 1-18. <https://doi.org/10.7771/2157-9288.1207>
6. Pleasants, J., & Olson, J. K. (2019). What is engineering? Elaborating the nature of engineering for K-12 education. *Science Education*, 103(1), 145-166. <https://doi.org/10.1002/sce.21483>
5. Pleasants, J. (2018). Learning from "failed" experiments: Helping students understand the messy aspects of doing science. *The Science Teacher*, 85(9), 22-27. https://doi.org/10.2505/4/tst18_086_01_22
4. Pleasants, J. (2017). Connecting science and technology: Exploring the nature of science using historical short stories. *The Science Teacher*, 84(9), 39-44. https://doi.org/10.2505/4/tst17_084_09_39
3. Wang, W., Pleasants, J., Bu, W., Park, R. Y., Kuzmenko, I., & Vaknin, D. (2012). Amorphous iron-(hydr) oxide networks at liquid/vapor interfaces: In situ X-ray scattering and spectroscopy studies. *Journal of Colloid and Interface Science*, 384(1), 45-54. <https://doi.org/10.1016/j.jcis.2012.06.024>
2. Hingstrum, R., Pleasants, J., & McLaughlin, S. (2011) How do you mass what you cannot see? *Iowa Science Teachers Journal*, 38, 1 (Winter).
1. Bu, W., Flores, K., Pleasants, J., & Vaknin, D. (2008). Preferential affinity of calcium ions to charged phosphatidic acid surface from a mixed calcium/barium solution: X-ray reflectivity and fluorescence studies. *Langmuir*, 25(2), 1068-1073. <https://doi.org/10.1021/la803161a>

JOURNAL ARTICLES UNDER REVIEW

1. Olson, J. K., & Pleasants, J. (Under Review). Time to do what? Instructional time and sense-making experiences in elementary science. Under review in *The Elementary School Journal*
2. Pleasants, J., & Radloff, J. (Minor Revisions). Promoting a critical perspective on educational technology in a pre-service teacher education course. **Accepted with minor revisions in *Journal of Technology and Teacher Education*.**
3. Pleasants, J. (Under Review). Why not become a teacher? Undergraduate students' perceptions and implications for recruitment. Under review in *Teachers and Teaching: Theory and Practice*.

4. Pleasants, J. (Minor Revisions Engineering for whom? Investigating engineering students' development and application of technoskeptical thinking. **Accepted with Minor Revisions** in *Engineering Studies*.
5. Pleasants, J., Ledford, B., Patrick, I., Fusselman, K., & Dew, D. (Minor Revisions) Using Stories of Engineering to Provide Windows to Real-World Applications of Science. **Accepted with Minor Revisions** in *The Science Teacher*.

BOOK CHAPTERS

4. Krutka, D. G., Heath, M. K., & Pleasants, J. (Forthcoming). Technoskepticism in social studies education. In B. Varga & E. Adams (Eds.), *Always-Already on the lookout: Searching for, enacting, and storying theory in social studies education*. Teachers College Press.
3. Pleasants, J., & Cavazos, A. (Forthcoming). Imagining just futures by thinking critically about technology: An approach in the informal STEM education context. In L. Bencze (Ed.), *Mobilizing critical and altruistic science education*. Book under contract for Springer.
2. Pleasants, J., Clough, M. P., & Olson, J. K. (2019). The urgent need to address the nature of technology: Implications for science education. In B. Akpan (Ed.), *Science education: Visions of the future* (pp. 31- 46). Abuja, Nigeria: Next Generation Education.
1. Pleasants, J., & Olson, J. K. (2019). Accurately communicating the nature of engineering in the science classroom. In B. Akpan (Ed.), *Science education: Visions of the future* (pp. 47-61). Abuja, Nigeria: Next Generation Education.

OTHER PRODUCTS

5. Pleasants, J. (In Press). The humans and algorithms of music recommendation: A review of Computing Taste. Review in press for *Digital Humanities Quarterly*.
4. Pleasants, J. (2022). "Stories of Engineering Work." Instructional materials available at www.rennercenter.oucreate.edu/stories-of-engineering-work
3. Olson, J. K., & Pleasants, J. (2020). *Report of results: Trinect*. Report presented to Iowa Department of Education, Des Moines Public Schools, and Grant Wood Area Education Agency.
2. Proctor, K., Pleasants, J., & Clough, M. P. (2019). Worldviews, universal gravitation, and the uneasy acceptance of action at a distance. Available at *The Story Behind the Science: Bring Science and Scientists to Life* project website, <https://www.storybehindthescience.org/pdf/universalgravitation.pdf>
1. Schombs, R., Pleasants, J., & Clough, M. P. (2019). Rejecting common sense: Science and Newton's First Law of Motion. Available at *The Story Behind the Science: Bring Science and Scientists to Life* project website, <https://www.storybehindthescience.org/pdf/firstlaw.pdf>

RESEARCH CONFERENCE PRESENTATIONS (Peer-Reviewed)

61. Heath, M., Krutka, D. G., & Pleasants, J. (2024, April). "What is technoskepticism? Drawing from media ecology and critical theory." Paper **accepted** for AERA annual conference. Philadelphia, PA, April 11-14.
60. Pleasants, J., Radloff, J., & Mueller, A. (2024, April). "Preparing pre-service teachers to think critically about educational technologies." Paper **accepted** for AERA annual conference. Philadelphia, PA, April 11-14.
59. Nichols, T. P., Magill, K., Thrall, A., Turner, K. Godina Garcia, A., Krutka, D., Heath, M., Pleasants, J., Ciccone, M., Logan, C., & Vakil, S. (2024, April). "Civic learning with, within, and against digital platforms." Symposium **accepted** for AERA annual conference. Philadelphia, PA, April 11-14.
58. Pleasants, J. (2024, March). "Exploring the Development of Students' Nature of Engineering Views and their Identification with Engineering." Poster presented at the NARST International Conference, Denver, CO, March 17-20.
57. Pleasants, J., Antink-Meyer, A., Aydin-Gunbatar, S., Roehrig, G., Barak, M., Erduran, S., Denize, H., Kaya, E., & Yesilyurt, E. (2024, March). "The Nature of Engineering: Exploring Key Questions to Move Research Forward." Symposium presented at the NARST International Conference, Denver, CO, March 17-20.
56. Pleasants, J. (2024, January). "Distinctions Between S/T/E/M: Do They Matter for Science Teachers?" Roundtable presentation at the ASTE International Conference. New Orleans, Louisiana, January 10-13.
55. Pleasants, J. & Parrish, J. (2024, January). "Is this a science lesson, or is it engineering? Helping pre-service teachers differentiate." Poster presented at the ASTE International Conference. New Orleans, Louisiana, January 10-13.
54. Pleasants, J. (2023, October). "Analyzing classroom discourse with pre-service teachers (with the help of AI??)." Workshop presented at Southwest ASTE Regional Conference. Webster, Texas, October 6-7.
53. Pleasants, J. (2023, April). "Reasoning about the technological aspects of societal issues: Insights from technology students." Paper presented at the NARST virtual conference, April 28.
52. Pleasants, J. (2023, April). "Why not become a teacher? Perspectives from undergraduate students." Poster presented at the NARST virtual conference, April 28.
51. Pleasants, J. (2023, January). "Improving Student Reasoning About Technological Issues: A New Role for the "T" in STEM." Paper presented at the ASTE International Conference, Salt Lake City, Utah, January 11-14.
50. Pleasants, J., & Sartin, K. (2022, October). "How do elementary teachers portray engineering design to their students?" Paper presented at the SSMA Annual Convention, Missoula, Montana, October 27-29.
49. Pleasants, J., Burgin, S., Feille, K., Olson, J., & Nesmith, S. (2022, October). "Helping Pre-Service Teachers Make the Conceptual Shift Toward Reform-Based Teaching Practices." Panel discussion at the Southwest ASTE Regional Conference, San Marcos, Texas, October 14-15.
48. McGregor, S., & Pleasants, J. (2022, August). "Re-sequencing Optics Instruction to First Build Conceptual Understanding in Introductory Courses". Paper presented at the SPIE Optics & Photonics Conference, San Diego, California, August 21-25. <http://dx.doi.org/10.1117/12.2632583>
47. Pleasants, J. (2022, July). "The nature of engineering in science classrooms: How do teachers portray engineering, and how should they portray it?" Paper presented at the IHPST Biennial International Conference, Calgary, Alberta, July 3-7.

46. Pleasants, J., Parrish, J., & Leak, A. (2022, March). "Developing Pre-Service Teachers' Understanding of the Distinctions Between Science and Engineering." Poster presented at the NARST International Conference. Vancouver, British Columbia, March 27-30.
45. Parrish, J., Mulvey, B., Pleasants, J., & Reid, J. (2022, March). "Using Card Sort Epistemic Network Analysis to Explore Preservice Teachers' Ideas about the Nature of Engineering." Paper presented at the NARST International Conference. Vancouver, British Columbia, March 27-30.
44. Olson, J. K., Amin, S., & Pleasants, J. (2022, March). "STEM Professionals in the Classroom and Elementary Teachers' Content Knowledge." Paper presented at the NARST International Conference. Vancouver, British Columbia, March 27-30.
43. Olson, J. K., De La Cruz, I., Pleasants J., Stigers, C., & Amin, S. (2022, January). "Merging Disciplines: Clarity, Confusion, or Conflation?" Paper presented at the Association for Science Teacher Education International Conference. Greenville, South Carolina, January 5-8.
42. Pleasants, J., Parrish, J., Alvarez-Briglie, S., Colonnello-Olivares, C., & Warren, M. (2022, January). "Promoting Teachers' Understanding of the Relationship and Difference Between Science and Engineering: A Novel Set of Instructional Materials." Poster presented at the Association for Science Teacher Education International Conference. Greenville, South Carolina, January 5-8.
41. Pleasants, J. (2021, October). "Successes and Challenges Encountered in a STEM Integration Course for K-8 Teachers." Presentation at the School Science and Mathematics Annual Convention. Virtual Conference, October 28-30.
40. Pleasants, J. (2021, October). "Helping Teachers Understand the Relationship and Distinction Between Science and Engineering – A Set of Novel Instructional Materials." Lesson sharing presentation at the Southwest Association for Science Teacher Education Regional Conference. Conroe, Texas, October 22-23.
39. Pleasants, J. (2021, October). "A Design Framework for Integrated STEM Instruction." Practical idea sharing session at the Northcentral ASTE Regional Conference. Virtual Conference. October 1.
38. Olson, J. K., De La Cruz, I., & Pleasants, J. (2021, April). "Conflation Issues when Teaching Integrated Science and Engineering." Paper presented at the NARST International Conference. Virtual Conference, April 7-10.
37. Pleasants, J., & Olson, J. K. (2021, April). "Elementary Teachers' Scaffolding of Engineering Practices: Issues with 'The Engineering Design Process' as Instructional Model." Paper presented at the NARST International Conference. Virtual Conference, April 7-10.
36. De La Cruz, I., Pleasants, J., Lincoln, W., & Olson, J. K. (2021, January). "When collaboration goes awry: A failure analysis of teaching triads." Paper presented at the ASTE International Conference. Virtual Conference, January 13-16.
35. Pleasants, J., & Olson, J. K. (2021, January). "Supporting the Instruction of Engineering Practices: Limitations of 'The Engineering Design Process.'" Paper presented at the ASTE International Conference. Virtual Conference, January 13-16.
34. Olson, J. K., & Pleasants, J. (2021, January). "Instructional Time and Sense-Making in Elementary Classrooms." Paper presented at the ASTE International Conference. Virtual Conference, January 13-16.

33. Pleasants, J. (2020, October). "Making Sense of the Science-Engineering Relationship: Pre-Service Teachers' Views and an Online Teacher Education Module." Presentation at the Northeast ASTE Regional Conference. Virtual Conference, October 2.
32. Parrish, J., Pleasants, J., Reid, J., Mulvey, B., & Peters-Burton, E. (2020, March). "Using Epistemic Network Analysis to Explore Preservice Teachers' connections Among Nature of Engineering Ideas." Paper accepted for presentation at the NARST International Conference. Portland, Oregon, March 15-18. (Conference Canceled)
31. Pleasants J., Olson, J. K., De La Cruz, I., & Tank, K. M. (2020, March). "Development of a Nature of Engineering Instrument: Results from Field Tests." Paper accepted for presentation at the NARST International Conference. Portland, Oregon, March 15-18. (Conference Canceled)
30. Olson, J. K., Pleasants, J., & Tank, K. M. (2020, March). "Losing Science: An Examination of NGSS and STEM in Elementary Schools." Paper accepted for presentation at the NARST International Conference. Portland, Oregon, March 15-18. (Conference Canceled)
29. Olson, J. K., Pleasants, J., & Tank, K. M. (2020, January). "A Reform Without Time: NGSS and Time for Sense-Making in Elementary Classrooms." Paper presented at the Association for Science Teacher Education International Conference. San Antonio, Texas, January 7-11.
28. Pleasants, J., De La Cruz, I., & Olson, J. K. (2020, January). "Elementary Teachers' Portrayals of the Products and Processes of Engineering." Paper presented at the Association for Science Teacher Education International Conference. San Antonio, Texas, January 7-11.
27. Tank, K. M., Pleasants, J., & Olson, J. K. (2020, January). "Exploring Factors Related to the Connections Between Science and Engineering Instruction." Paper presented at the Association for Science Teacher Education International Conference. San Antonio, Texas, January 7-11.
26. Pleasants, J. (2019, October). "Lessons Learned from an Elementary PD Project Aimed at Science and Engineering." Roundtable presentation at the Northeast Association for Science Teacher Education Conference. Burlington, Vermont, October 10-11.
25. Pleasants, J., Clough, M. P., & Olson, J. K. (2019, May). "Educating the public for informed technological decision-making: Key issues for technology education." Paper presented at the Conference of the Society for Philosophy & Technology. College Station, Texas, May 20-22.
24. Tank, K. M., & Pleasants, J. (2019, April). "Elementary teachers' attempts at integrating science and engineering over the course of a semester." Poster presented at the NARST International Conference. Baltimore, Maryland, March 31-April 3.
23. Pleasants, J., & Olson, J. K. (2019, April). "What is the nature of engineering? Toward a construct for K-12 science education." Paper presented at the NARST International Conference. Baltimore, Maryland, March 31- April 3.
22. Olson, J. K., Pleasants, J., & Tank, K. M. (2019, April). "Simultaneous preservice and inservice professional development for elementary science." Poster presented at the NARST International Conference. Baltimore, Maryland, March 31- April 3.
21. Dux, E., Pleasants, J., Dawson, A., & Olson, J. K. (2019, January). "Elementary students' images of scientists and engineers before and after a semester-length experience with a STEM professional." Paper presented at the Association for Science Teacher Education (ASTE) International Conference. Savannah, Georgia, January 3-5.

20. Pleasants, J., Olson, J. K., Tank, K. M., & Clough, M. P. (2019, January). "Elementary teachers' portrayals of the nature of engineering when supported by a STEM professional in the classroom." Paper presented at the Association for Science Teacher Education (ASTE) International Conference. Savannah, Georgia, January 3-5.
19. Olson, J. K., Pleasants, J., & Tank, K. M. (2019, January). "The impact of an engineer: Using a triad model on student teachers' science lesson quality." Paper presented at the Association for Science Teacher Education (ASTE) International Conference. Savannah, Georgia, January 3-5.
18. Pleasants, J. (2018, October). "Pros and cons of the 'Engineering Design Process' as an instruction model: Lessons learned from four years of professional development work. Presentation given at the Northcentral Association for Science Teacher Education Conference. Porter, IN. October 4-6.
17. Pleasants, J. (2018, October). "The relationship between elementary teachers' beliefs about science teaching and lesson quality." Poster presented at the Northcentral Association for Science Teacher Education Conference. Porter, IN. October 4-6.
16. Pleasants, J., Spinler, C., & Olson, J. K. (2018, March). "Teaching about engineering versus teaching about science: Perspectives from elementary teachers." Paper presented at the NARST International Conference, Atlanta, GA, March 10-13.
15. Pleasants, J., Spinler, C., & Olson, J. K. (2018, January). "What does learning about engineering mean to teachers?" Paper presented at the Association for Science Teacher Education (ASTE) International Conference. Baltimore, MD, January 3-6.
14. Pleasants, J., Clough, M. P., & Olson, J. K. (2018, January). "Framing Technological Literacy: Questions worth exploring in STEM Education." Paper presented at the Association for Science Teacher Education (ASTE) International Conference. Baltimore, MD, January 3-6.
13. Pleasants, J. (2017, October). "Assessing Elementary Teachers' Knowledge of the Scope of Engineering." Paper presented at the Northcentral Association for Science Teacher Education Conference. Rochester, MN. October 5-7.
12. Pleasants, J., Spinler, C., & Olson, J.K. (2017, October). "How Do Elementary Teachers View Learning About Science Versus Learning About Engineering?" Poster presented at the Northcentral Association for Science Teacher Education Conference. Des Moines, IA. October 5-7.
11. Spinler, C., Pleasants, J., Olson, J.K., & Henning, J. (2017, April). "Factors Associated with the Functionality of Triads in an Alternative Student Teaching Placement." Paper presented at the NARST International Conference. San Antonio, TX. April 22-25, 2017.
10. Pleasants, J., Olson, J.K., & Spinler, C. (2017, April). "Investigating Teachers' Developing Knowledge of Engineering during a STEM Professional Development Experience." Paper presented at the NARST International Conference. San Antonio, TX. April 22-25, 2017.
9. Spinler, C., Pleasants, J., & Olson, J.K. (2017, January). "A Review of Group Functionality Levels Reached by Triads in an Alternative Student Teaching Placement." Paper presented at the Association for Science Teacher Education (ASTE) International Conference. Des Moines, IA. January 12-14.
8. Olson, J.K., Spinler, C., & Pleasants, J. (2017, January). "The Impact of a Triad-Based Student Teaching Semester using a STEM Researcher on Student Teachers' Lesson Quality." Paper presented at the Association for Science Teacher Education (ASTE) International Conference. Des Moines, IA. January 12-14.

7. Pleasants, J., Spinler, C., & Olson, J.K. (2017, January). "Teachers' Conceptions of the Nature of Engineering after a Semester-Length Triad Teaching Experience with an Engineer." Paper presented at the Association for Science Teacher Education (ASTE) International Conference. Des Moines, IA. January 12-14.
6. Pleasants, J., Spinler, C., & Olson, J.K. (2016, October). "Developing Knowledge of Engineering Through a Student Teaching Experience Supported by an Engineering Graduate Student." Presentation given at the Northcentral Association for Science Teacher Education Conference. Des Moines, IA. October 6-8.
5. Pleasants, J. (2016, October). "Technology in Standards Documents: An Analysis of Positions Taken in Relation to the Nature of Technology." Poster presented at the Northcentral Association for Science Teacher Education Conference. Des Moines, IA. October 6-8.
4. Spinler, C., Pleasants, J., & Olson, J. (2016, October). "Efficacy Beliefs and Content Knowledge of Participants in an Alternative Student Teaching Placement." Poster presented at the Northcentral Association for Science Teacher Education Conference. Des Moines, IA. October 6-8.
3. Pleasants, J., Spinler, C., & Olson, J.K. (2016, January). "Engineering in the Elementary Grades: The Current State and Future Directions." Paper presented at the Association for Science Teacher Education (ASTE) International Conference. Reno, NV. January 7-9.
2. Pleasants, J., Spinler, C., & Olson, J.K. (2015, October). "High quality elementary engineering education: What is known and what is not." Presentation given at the Northcentral Association for Science Teacher Education Conference. Peoria, IL. October 8-10.
1. Pleasants, J. (2015, October). "Toward Genuine Technological Literacy: Establishing Key Questions in the Nature of Technology." Poster presented at the Northcentral Association for Science Teacher Education Conference. Peoria, IL. October 8-10.

PRACTITIONER CONFERENCE PRESENTATIONS AND WORKSHOPS

24. Pleasants, J., & Kershen, J. (2024, February). "Teaching and learning with ChatGPT... with a healthy dose of skepticism!" Presentation given at the Norman School District GET FIT conference. Norman, OK, February 24.
23. Pleasants, J., & Kershen, J. (2023, October). "Teaching and learning with ChatGPT, with a healthy dose of skepticism." Presentation given at the Norman School District GET FIT conference. Norman, OK, October 4.
22. Pleasants, J., Mueller, A., Radloff, J., & Asim, S. (2023, August). "Critical perspectives on ed tech in teacher education." Presentation at the Civics of Technology Virtual Conference, August 3-4.
21. Pleasants, J., Criswell, H., & Keith, M. (2023, June). "Strategies for Teaching the Nature of Science Across Classroom Contexts." Presentation at the OSTA summer conference. Edmond, OK, June 10.
20. Pleasants, J. (2023, June). "Did ChatGPT Write this Session? AI and Science Teaching." Presentation at the OSTA summer conference. Edmond, OK, June 10.
19. Pleasants, J., Cook, A., & Johnson, R. (2022, November). "Undergraduate Students' Perceptions of the Teaching Profession." Presentation at the OACTE Annual Conference, Norman, OK, November 3-4.
18. Pleasants, J. (2022, August). "Technology Education Introduction Workshop." Presentation at the Civics of Technology Virtual Conference. August 4-5.

17. Pleasants, J. (2022, August). "Technology Education in Schools: Science." Presentation at the Civics of Technology Virtual Conference. August 4-5.
16. Pleasants, J., & Walden, S. (2022, July) "Bringing Engineering into your classroom." Workshop delivered as part of the Kenney summer teacher experience, provided by the University of Oklahoma College of Engineering. Norman, OK, July 11.
15. Pleasants, J. (2022, June). "Teaching the "engineering" side of the science and engineering practices." Presentation at the OSTA summer conference. Edmond, OK, June 11.
14. Pleasants, J. (2022, June). "Building STEM literacy by bringing societal issues into the science classroom." Presentation at the OSTA summer conference. Edmond, OK, June 11.
13. Pleasants, J. (2022, April). "Helping Students Think Critically About Technology." Presentation given at the Norman School District GET FIT conference. Norman, OK, April 29.
12. Pleasants, J. (2022, March). "Helping Students Think Critically About Technology." Presentation given at the 2022 KEY Conference. Norman, OK, March 5.
11. Pleasants, J., & Walden, S. (2021, July) Workshop delivered as part of the Kenney summer teacher experience, provided by the University of Oklahoma College of Engineering. Norman, OK, July 19.
10. Pleasants, J. (2020, August). "Developing students' science and engineering practices in a remote environment." Workshop delivered through the Keene State College Southwest Center for Educator Support. Keene, NH, August 26.
9. Pleasants, J. (2020, February). "More than just design challenges: Alternative ways to use engineering to support students' learning of science concepts." Workshop delivered through the New Hampshire Science Teachers Association. Keene, NH, February 22.
8. Pleasants, J. (2018, October). "Using scientific explanations to assess student thinking." Presentation given at the Iowa Science Teaching Section meeting of the Iowa Academy of Science. Des Moines, IA, October 8.
7. Pleasants, J. (2018, October). "What is the nature of engineering?" Presentation given at the Iowa Science Teaching Section meeting of the Iowa Academy of Science. Des Moines, IA, October 8.
6. Pleasants, J. (2017, October). "Productive Missteps During Inquiry Science." Presentation given at the Iowa Science Teaching Section meeting of the Iowa Academy of Science. Des Moines, IA, October 9.
5. Pleasants, J. (2016, October). "Keep it Simple! Making Exploratory Science Activities Engaging Using Simple Materials." Presentation given at the Iowa Science Teaching Section meeting of the Iowa Academy of Science. Des Moines, IA, October 10.
4. Pleasants, J. (2016, October). "The Nature of Science, Engineering, and Technology – Untangling a Complex Relationship." Presentation given at the Iowa Science Teaching Section meeting of the Iowa Academy of Science. Des Moines, IA, October 10.
3. Spinler, C. & Pleasants, J. (2016, October). "Engineering Activities in the Science Classroom: Pitfalls and Opportunities." Presentation given at the Iowa Science Teaching Section meeting of the Iowa Academy of Science. Des Moines, IA, October 10.

2. Pleasants, J. (2015, September). Promoting a deeper understanding of the nature of engineering and science. Presentation given at the Iowa Science Teaching Section meeting of the Iowa Academy of Science. Des Moines, IA. September 21.
1. Pleasants, J. (2014, October). Teaching students to construct scientific models. Presentation given at the Iowa Science Teaching Section meeting of the Iowa Academy of Science. Ames, IA. October 22.

OTHER CONFERENCE PRESENTATIONS

3. Pleasants, J. (2017, April). “What do Elementary Students Think Engineers Do? The Impacts of an Elementary-Focused Teacher Education and Professional Development Model.” Presentation given at the Graduate and Professional Students’ Research Conference. Ames, IA. April 12.
2. Pleasants, J. (2017, February). “Trinet: Connecting Engineering Graduate Students with Pre-Service and In-Service Teachers.” Presentation given at the Teacher-Scientist Partnerships Meeting. Boston, MA. February 15.
1. Pleasants, J. (2016, April). “Teachers’ Changing Conceptions of Engineers and Engineering.” Presentation accepted for the Graduate and Professional Students’ Research Conference. Ames, IA. April 12.

HONORS AND AWARDS

- 2023 OU Instructional Leadership & Academic Curriculum Department Pre-Tenure Faculty Award
- 2022 Association for Science Teacher Education Award IV: Innovation in Teaching Science Teachers
Award given to paper presented at the 2022 ASTE International Conference: Pleasants, J., Parrish, J., Alvarez-Briglie, S., & Colonnello-Olivares, C. “Promoting Teachers’ Understanding of the Relationship and Difference Between Science and Engineering: A Novel Set of Instructional Materials.”
- 2020 Association for Science Teacher Education Award: Implications of Research for Educational Practice
Award given to paper presented at ASTE International Conference: Olson, J. K., Pleasants, J., & Tank, K. M. (2020, January). “A Reform Without Time: NGSS and Time for Sense-Making in Elementary Classrooms.”
- 2018 Excellence as Ph. D. Candidate Scholarship
\$1,000 awarded for Spring 2018
Iowa State University – School of Education
- 2017 Finalist – 3 Minute Thesis Competition
Iowa State University
- 2017 Davis-Foster Graduate Student Award
Northcentral Association for Science Teacher Education
Award given for the paper: Pleasants, J. “Assessing elementary teachers’ knowledge of the scope of engineering.”
- 2017 Professional Advancement Grant Recipient
For Travel to Northcentral Associate for Science Teacher Education Conference
September 12, 2017
- 2016 Best Oral Presentation Award
Graduate and Professional Students’ Research Conference
April 12, 2016, Iowa State University

2015 Graduate Student Research Award
Northcentral Association for Science Teacher Education
Award given for the paper: Pleasants, J. "Toward genuine technology literacy: Establishing key questions in the nature of technology."

STUDENT ADVISING

Honor's Project Mentor

Katie Kerber – Spring 2023

Undergraduate Research Mentor

Shansley Glenn – UReCA project mentor, Summer 2023; Undergraduate Research Assistant, Spring 2024

Sam Crapitto – Undergraduate Research Assistant, Spring 2024

Jacob Simon – Undergraduate Research Assistant, Spring 2024

Master's Student Advisor

Edwar Fabian Sanchez Rodriguez

Madison Wondra

Logan Draper

Graduation Scheduled for May 2024

Master's Thesis Advisor

Claudia Colonnello Olivares **Graduation Scheduled for May 2024**

Doctoral Student Advisor

Hayden Criswell

PhD Dissertation Committee Member

Jason Poudrier

Amelia Cook

Ryan Smits (University of North Texas – Outside Member)

Master's Degree Non-Thesis Project Committee Member

Sofia Alvarez-Briglie

Completed May 2022

Kelsi Gulesarian

Completed May 2022

Laura Sabatelli

Completed August 2022

Trey Horn

Completed August 2022

Nate DeAngelis

Completed December 2022

Jessica Blunt

Completed December 2022

Michelli Keith

Completed May 2023

PROFESSIONAL MEMBERSHIPS

- Association for Science Teacher Education (ASTE)
- Southwest Association for Science Teacher Education (SW-ASTE)
- National Association for Research in Science Teaching (NARST)
- Oklahoma Science Teachers Association (OSTA)

REVIEWER

Editorial

<i>Electronic Journal for Research in Science & Mathematics Education</i>	Co-Editor	2024-Present
<i>Journal of Science Teacher Education</i>	Editorial Review Board member	2021-2023
<i>Journal of Science Teacher Education</i>	Associate Editor	2024-Present
<i>ASTE Innovations Journal</i>	Editorial Review Board member	2018-Present
Editorial Review Board member for Springer book series: <i>Science: Philosophy, History, and Education</i>		2021-Present

Grant Reviewer

NSF Panelist for S-STEM Program	2023
NSF Panelist for AISL Program	2021
NSF Panelist for DRK-12 Program	2021

Ad Hoc Journal Reviewer

<i>Journal of Research in Science Teaching</i>	8 Articles
<i>The International Journal of STEM Education</i>	5 Articles
<i>Science Education</i>	1 Article
<i>Journal of Precollege Engineering Education Research</i>	3 Articles
<i>Science & Education</i>	1 Article
<i>School Science & Mathematics</i>	2 Articles
<i>Contemporary Issues in Technology & Teacher Education</i>	1 Article

Conference Proposal Reviewer

NARST International Conference	2017-Present
ASTE International Conference	2016-Present
SSMA Annual Conference	2022

PROFESSIONAL ORGANIZATION SERVICE

-NARST: Chair of Engineering Education Research Interest Group	2021-2022
-NARST: Strand Coordinator (History & Philosophy of Science)	2022-2023
-Special Track Chair on Education for SPT International Conference	2019
-Northcentral ASTE: Executive Committee Member	2018-2019
-Northcentral ASTE: Graduate Student Representative	2018-2019
-Southwest ASTE: Secretary	2022-Present
-ASTE: Professional Development Committee	2017-2018
	2021-Present
-ASTE: Strand Coordinator (STEM)	2022-Present
-OSTA Board Member (College/University Director)	2023-Present

COLLEGE & UNIVERSITY SERVICE

-Keene State College Curriculum Committee	2020-2021
-EPD Committee Member	2021-Present
-Academic Programs Council	2021-Present
-Programs Subcommittee Chair	2023-Present
-CEDAR Advisory Committee Member	2022-Present

DEPARTMENTAL SERVICE

- Search Committee Member: Assistant/Associate Professor of Learning Technologies
- Search Committee Member: Instructor for ILAC Department

2021-2022
2024

COMMUNITY AND VOLUNTARY SERVICE

- Iowa State Science & Technology Fair Judge
- Passion Project Leader for Loveworks Leadership

2010; 2016-2019
2022-2023