J. F. Trey Smith

Curriculum Vitae – February 2019

Northwestern University
School of Education and Social Policy
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EDUCATION

2016 – present	**PhD, Learning Sciences** Northwestern University, Evanston, IL
2009	**MSEd, Secondary Science Education** University of Pennsylvania, Philadelphia, PA
2006	**BA, Political Science with College Honors** **BA, Communication Studies** Louisiana State University, Baton Rouge, LA

RESEARCH

2017 – present	**Graduate Research Assistant** Next Generation Science Project, PI: Brian Reiser School of Education and Social Policy, Northwestern University, Evanston, IL
2017 – present	**Graduate Research Assistant** Learning Through Youth Community Tinkering Project, PI: Shirin Vossoughi School of Education and Social Policy, Northwestern University, Evanston, IL
2012	**Lab Assistant, Research Experiences for Teachers (RET)** Fluorescence of p-Cyano-Phenylalanine in the Presence of Hofmeister Ions Project, Gai Group, Department of Chemistry, School of Arts & Sciences, and Laboratory for Research on the Structure of Matter, University of Pennsylvania, Philadelphia, PA
2011	**Research Intern** Evaluation of Philadelphia's Renaissance Schools Initiative Research For Action, Philadelphia, PA
2008 – 2010	**Teacher Researcher** Philadelphia Writing Project and Urban Teacher Master's & Certification Program, Graduate School of Education, University of Pennsylvania; and Morrison Elementary, School District of Philadelphia, PA

TEACHING

2019 – present	**Adjunct Instructor, Independent School Teacher Residency Program** Graduate School of Education, University of Pennsylvania, Philadelphia, PA
2018	**Teaching Assistant, Learning and Organizational Change Program** School of Education and Social Policy, Northwestern University, Evanston, IL
2010 – 2016	**Adjunct Instructor, Urban Teacher Master's & Certification Program** Graduate School of Education, University of Pennsylvania, Philadelphia, PA
2010 – 2014	**Science Department Chair** **Biology, Chemistry, and Engineering Teacher, Grades 9 and 10** Boys' Latin of Philadelphia Charter School, Philadelphia, PA

2007 – 2010 **Social Studies and General Science Teacher, Grades 7 and 8**
Morrison Elementary, School District of Philadelphia, PA

FELLOWSHIPS, AWARDS, AND HONORS

2017 – present **Multidisciplinary Program in Education Sciences (MPES) Fellow**
Institute of Education Sciences, US Department of Education, Washington, DC;
School of Education and Social Policy, Northwestern University, Evanston, IL

2015 – 2016 **Science Teacher-in-Residence**
Library of Congress, Washington, DC

2014 – 2015 **Albert Einstein Distinguished Educator Fellowship Program Capitol Hill Fellow**
US Senate and US Department of Energy, Washington, DC

2014 **Teacher as Hero Award**
National Liberty Museum, Philadelphia, PA

2014 **Philadelphia Social Innovations Lab Fellow**
Fels Institute of Government, University of Pennsylvania, Philadelphia, PA

2012 **Outstanding Science Teacher Award**
Philadelphia Chapter, Pennsylvania Society of Professional Engineers, Philadelphia, PA

2007 **June Martin and Walter Rudd Outstanding Undergraduate Honors Thesis Award**
Honors College, Louisiana State University, Baton Rouge, LA

GRANTS

2018 – 2019 **Teacher inquiry: Exploring primary sources through the lenses of civics, history, science, & community**
Co-Lead with D. Waff & L. Whitfield, Philadelphia Writing Project, Graduate School of Education, University of Pennsylvania; Library of Congress Teaching with Primary Sources (TPS) Eastern Region Regional Grant, $20,000 over 1 year

2014 – 2016 **Game On! Philadelphia: Science, literacy, and the pursuit of happiness**
Co-Lead with D. Waff, S. Fecher, A. Krish, & M. Romaninsky, Philadelphia Writing Project, Graduate School of Education, University of Pennsylvania, in partnership with the Academy of Natural Sciences of Drexel University; Intersections Grant from Association of Science-Technology Centers (ASTC) and National Writing Project (NWP), $60,000 over 2 years

PUBLICATIONS

Book Chapter

Smith, J. F., & Teisan, J. (2018). Building community partnerships and integrating arts and social studies to strengthen STEM learning. In T. Spuck, L. Jenkins, T. Rust, & R. Dou (Eds.), *Best practices in STEM education: Innovative approaches from Einstein Fellow alumni* (2nd Ed., pp. 421-444). New York: Peter Lang.

Paper in Published Conference Proceedings

Zivic, A., **Smith, J. F.**, Reiser, B. J., Edwards, K. D., Novack, M., & McGill, T. A. W. (2018). Negotiating epistemic agency and target learning goals: Supporting coherence from the students' perspective. In J. Kay & R. Luckin (Eds.), *Proceedings of the 13th International Conference of the Learning Sciences (ICLS) 2018* (Vol. 1, pp. 25-32). London, UK: International Society of the Learning Sciences.

Articles in Journals for K-12 Educators

Bundy, B., Dahl, J., Guiñals-Kupperman, S., Hengesbach, J., Martino, K., ... **Smith, J. F.**, ... Whitehurst, A. (2019, March). Aspiring to lead: Physics teacher leaders influencing science education policy. *The Physics Teacher*, *57*(3), 210-213.

Smith, J. F. (2016, February). Right to the Source: Exploring science and history with the Library of Congress: "Texting" in the 19th century. *The Science Teacher*, *83*(2), 60.

Selected Web-Based Publications for K-12 Educators

Smith, J. F. (2016, May 24). Primary sources in science classrooms: Severe weather and community resilience [Blog post]. Teaching with the Library of Congress blog. Retrieved from <https://blogs.loc.gov/teachers/2016/05/primary-sources-in-science-classrooms-severe-weather-and-community-resilience>

Smith, J. F. (2016, March 1). Primary sources in science classrooms: Plants, photos from Tuskegee, and planning investigations [Blog post]. Teaching with the Library of Congress blog. Retrieved from <https://blogs.loc.gov/teachers/2016/03/primary-sources-in-science-classrooms-plants-photos-from-tuskegee-and-planning-investigations>

Smith, J. F., & Sneideman, J. (2016, February 11). Primary sources in science classrooms: Electric cars, energy, and engineering [Blog post]. Teaching with the Library of Congress blog. Retrieved from <https://blogs.loc.gov/teachers/ 2016/02/primary-sources-in-the-science-classroom-electric-cars-energy-and-engineering>

Smith, J. F. (2015, December 10). Primary sources in science classrooms: Computer science and programming with punched cards (Part 2) [Blog post]. Teaching with the Library of Congress blog. Retrieved from <https://blogs.loc.gov/ teachers/2015/12/primary-sources-in-science-classrooms-computer-science-and-programming-with-punched-cards-part-2>

Smith, J. F. (2015, April 23). Building a better STEM curriculum. *SEEN Magazine*, *17*(1), 44-47. Retrieved from <http://www.seenmagazine.us/Articles/Article-Detail/ArticleId/4682/building-a-better-curriculum>

CONFERENCES

Presentations

Smith, J. F., & Reiser, B. J. (2019, April). "So, I've done a lot of talking with them...": Supporting student talk and agency in science classrooms. Paper to be presented at the American Education Research Association (AERA) Annual Meeting. Toronto, ON.

Davis, N. R., & **Smith, J. F.** (2019, April). Children's self-determination as intellectually and socially transformative in a making/tinkering program. Paper to be presented at the American Education Research Association (AERA) Annual Meeting. Toronto, ON.

Smith, J. F., & Reiser, B. J. (2019, April). Teachers' reports on successes and challenges in co-constructing direction of learning using storylines curriculum materials. Paper to be presented at the National Association for Research in Science Teaching (NARST) 2019 Annual International Conference. Baltimore, MD.

Smith, J. F., & Reiser, B. J. (2018, October). "Figuring it out" together: Problematizing as a core component of model-based learning. Paper presented at the European Association for Research on Learning and Instruction (EARLI) Joint SIG 20 and SIG 26 Meeting. Jerusalem, Israel.

Smith, J. F., & Reiser, B. J. (2018, March). "I'm just saying that's the question I have": Co-constructing investigations in a fifth-grade classroom. Paper presented at the National Association for Research in Science Teaching (NARST) 2018 Annual International Conference. Atlanta, GA.

Panels

Murphy, N., Gerencser, J., Bell, D., Marshall, L. P., Cummiskey, J., Newland, R., & **Smith, J. F.** (2016, November). How can I help you? The changing nature of reference in the 21st century. Mid-Atlantic Regional Archives Conference (MARAC), Annapolis, MD.

Fecher, S., Houston, R., Krish, A., & **Smith, J. F.** (2016, October). Game On! Philadelphia: Engaging youth and families. Mid-Atlantic Association of Museums Annual Meeting, Wilmington, DE.

Selected Presentations and Workshops at K-12 Educator Conferences

Teisan, J. L., & **Smith, J. F.** (2019, April). Making the most of project-, problem-, place-, passion-, and partnership-based learning. National Science Teachers Association (NSTA) National Conference, St. Louis, MO.

Smith, J. F. (2019, March). Interdisciplinary teaching and learning in science classrooms with historical primary sources [Poster]. ASCD Empower19 Conference, Chicago, IL.

Teisan, J. L., & **Smith, J. F.** (2018, November). Strengthening STEM learning with community partnerships that integrate arts and social studies. National Science Teachers Association (NSTA) Area Conference, National Harbor, MD.

Smith, J. F. (2018, October). Human impacts on environment and teaching with historical primary sources. Illinois Science Teachers Association (ISTA) Conference, Tinley Park, IL.

Primo, S., Rosales, A., & **Smith, J. F.** (2018, October). Teaching with historical primary sources: Healing, resilience, and resistance. Philadelphia Writing Project Celebration of Writing and Literacy. University of Pennsylvania, Philadelphia, PA.

Smith, J. F. (2018, July). Framework for teaching with historical primary sources in science classrooms [Poster]. American Association of Physics Teachers (AAPT) Summer Meeting, Washington, DC.

Smith, J. F. (2017, November). Teaching science and engineering with historical primary sources: Opportunities for cross-disciplinary learning. National Science Teachers Association (NSTA) Area Conference, Milwaukee, WI.

Reimers, A., & **Smith, J. F.** (2016, October). Sound thinking! Engineering invention and innovation with middle school youth. Frontiers in Education (FIE) Conference, Erie, PA.

Apfeldorf, M., & **Smith, J. F.** (2016, April). Science as human endeavor: Analyzing historical primary sources from the Library of Congress. National Science Teachers Association (NSTA) National Conference, Nashville, TN.

Fecher, S., Houston, R., Krish, A., Romaninsky, M, & **Smith, J. F.** (2015, November). Game On! Using game design to engage students in natural science and literacy. National Science Teachers Association (NSTA) Area Conference, Philadelphia, PA.

Smith, J. F. (2012, April). Social justice, science, and writing for change. National Writing Project (NWP) Urban Sites Network conference. Tulsa, OK.

Baker, A., Rami, M., & **Smith, J. F.** (2011, April). Meaningful student voice: What happens when student work goes public (and digital)? National Writing Project (NWP) Urban Sites Network conference. Boston, MA.

INVITED TALKS AND KEYNOTES

Cross-disciplinary inquiries and teaching with primary sources [working title]. (2019, June). Keynote address. Teaching with Primary Sources (TPS) Eastern Region Conference, Pittsburgh, PA.

Teaching with primary sources: Learning, literacy, and lenses. (2018, April). Invited talk. 21st century literacy: Research, practice, & policy, National Adolescent Literacy Coalition (NALC) spring meeting, Washington, DC.

STEM, STEAM, and teaching with primary sources. (2017, July). Invited talk. STEM to STEAM Workshop: Connecting the Arts to STEM and Local Collections, Teaching with Primary Sources Program, University of the Arts, Philadelphia, PA.

Teachers, traditions, and transformations. (2014, April). Keynote address. 9th Annual Master's Capstone Conference for the Urban Teacher Master's and Certification Program, Graduate School of Education, University of Pennsylvania, Philadelphia, PA.

K-12 EDUCATOR PROFESSIONAL DEVELOPMENT FACILITATION

Multi-Day Workshops

AAPT/AIP master teacher policy fellowship. (2019, July). Co-facilitator with members of AAPT Master Teacher Leader Task Force. American Association of Physics Teachers (AAPT) and American Institute of Physics (AIP). College Park, MD, and Washington, DC.

Invitational summer institute on writing and literacy. (2019, July). Co-facilitator with D. Waff & L. Whitfield. Philadelphia Writing Project, Graduate School of Education, University of Pennsylvania. Philadelphia, PA.

Technology's impact on American history: NASA and Flight Technology. (2019, January). Co-facilitator with W. B. Carlson. National Council for History Education (NCHE)-Teaching with Primary Sources (TPS) program. Hosted by Astronauts Memorial Foundation, Kennedy Space Center, FL.

AAPT/AIP master teacher policy fellowship. (2018, July). Co-facilitator with members of AAPT Master Teacher Leader Task Force. American Association of Physics Teachers (AAPT) and American Institute of Physics (AIP). College Park, MD, and Washington, DC.

Invitational summer institute on writing and literacy. (2018, July). Co-facilitator with D. Waff, M. Mannix, L. Whitfield, and partners from Pulitzer Center for Crisis Reporting, Poetry Inside Out, Philly School Media Network, and West Philadelphia Collaborative History Center. Philadelphia Writing Project, Graduate School of Education, University of Pennsylvania. Philadelphia, PA.

Technology's impact on American history: Technological innovations and patents. (2018, March). Co-facilitator with W. B. Carlson & C. Szwajkowski. National Council for History Education (NCHE)-Teaching with Primary Sources (TPS) program. Hosted by US Patent and Trademark Office (USPTO), Alexandria, VA.

Summer teacher institute: Teaching science, technology, and engineering with primary sources. (2017, July). Co-facilitator with M. Apfeldorf & C. Lederle. Library of Congress, Washington, DC.

Technology's impact on American history: Technological innovations and patents. (2017, March). Co-facilitator with W. B. Carlson & C. Szwajkowski. National Council for History Education (NCHE)-Teaching with Primary Sources (TPS) program. Hosted by US Patent and Trademark Office (USPTO), Alexandria, VA.

Invitational summer institute on writing and literacy. (2016, July-August). Co-facilitator with L. Brown & M. Mannix. Philadelphia Writing Project, Graduate School of Education, University of Pennsylvania. Philadelphia, PA.

Summer teacher institute: Teaching with primary sources. (2016, June-July). Co-facilitator with M. Apfeldorf & A. Savage. Library of Congress, Washington, DC.

Selected Presentations at Schools, Districts, Libraries, Museums, and Universities

Science, technology, history, and the environment: Using digitized historical primary sources to support project- and problem-based learning in Chicago. (2018, August). Earth Force Teacher Workshop, The Field Museum, Chicago, IL.

Supporting cross-disciplinary learning with historical primary sources. (2018, January). Elementary and Middle School Field Studies Seminar, Teacher Education Program, Graduate School of Education, University of Pennsylvania, Philadelphia, PA.

Catalyzing STEAM learning with historical primary sources and student questions. (2017, November). Chicago STEM Summit, Office of Community Education Partnerships, Northwestern University, Evanston, IL.

Teatro: Artistic imagination and action as a mode of social dreaming. (2017, November). Member of Northwestern Teatro Collective led by S. Vossoughi. Annual Teen Services Workshop: Exploring Cultural Competency through the Arts, Chicago Public Library, Chicago, IL.

Unpacking power, culturally sustaining pedagogies, and primary sources. (2017, July). Mid-Career Doctoral Program in Educational Leadership, Graduate School of Education, University of Pennsylvania, Philadelphia, PA.

Exploring the nature of science, science practices, and links among science and society: Teaching with primary sources in elementary science classrooms. (2016, April). EDCI 619 course, M.Ed. in Teacher Leadership: Special Studies in STEM Education Program, The Universities at Shady Grove, MD.

Context, connections, and critical thinking: Primary sources in science classrooms. (2016, March). Advanced Academic Programs Secondary Science Institute. Fairfax County Public Schools, VA.

Workshop on college and career ready standards for Philadelphia pre-service teachers, mentors, and site directors. (2016, January). Philadelphia Teacher Residency and Drexel University, Philadelphia Education Fund, PA.

Instructional shifts, inquiry, and the *Next Generation Science Standards* in K-8 classrooms. (2015, June). Philadelphia Writing Project and American Paradigm Schools, Philadelphia, PA.

Selected Webinars

Analyzing NASA-related primary sources and launching cross-disciplinary inquiries. (2019, February). National Council for History Education, University Heights, OH, and National Humanities Center, Research Triangle Park, NC.

Considerations for selecting primary sources: Teaching with primary sources from the Library of Congress. (2017, January). Educator Innovator, National Writing Project, Berkeley, CA.

Learning at the intersections of science, literacy, gaming, and making. (2016, December). Educator Innovator, National Writing Project, Berkeley, CA.

Exploring and expanding possibilities for integrating writing in science classrooms. (2016, November). Educator Innovator, National Writing Project, Berkeley, CA.

Looking back, learning forward: Supporting project- and problem-based learning with historical primary sources. (2016, July). Educator Innovator, National Writing Project, Berkeley, CA.

Broadening conceptions of writing in the science classroom. (2015, November). AAPT eMentoring webinar, American Association of Physics Teachers (AAPT), College Park, MD.

PROFESSIONAL ACTIVITIES & SERVICE

Advisory Boards and Groups

2017 – present Teacher Advisory Group and Teacher Leader Agency and Advocacy Working Group
American Association of Physics Teachers (AAPT), College Park, MD

2016 – present Advisory Board, Philadelphia Writing Project
Graduate School of Education, University of Pennsylvania, Philadelphia, PA

2017 – 2018 Advisory Board**,** *Science* in the Classroom
American Association for the Advancement of Science (AAAS), Washington, DC

2015 – 2017 Education Alumni Association Board
Graduate School of Education, University of Pennsylvania, Philadelphia, PA

2012 – 2014 Teachers Advisory Council, Philadelphia Zoo, Philadelphia, PA

Grant Review

2017 National Oceanic and Atmospheric Administration (NOAA), Washington, DC
2017 National Writing Project (NWP), Berkeley, CA
2016 National Oceanic and Atmospheric Administration (NOAA), Washington, DC

K-12 Curriculum Review

2017 Citizen U, Barat Education Foundation, Chicago, IL, and Constitutional Rights Foundation, Los Angeles, LA

Conference Organizing

2018 – present Co-Chair, Planning Committee, 4th Annual Learning Sciences Graduate Student Conference, Evanston, IL
2018 Planning Committee, 3rd Annual Learning Sciences Graduate Student Conference, Nashville, TN
2017 Planning Committee, 2nd Annual Learning Sciences Graduate Student Conference, Bloomington, IN

Conference Proposal Review

2018 National Association for Research in Science Teaching (NARST); Learning Sciences Graduate Student Conference

UNIVERSITY COURSES TAUGHT

Graduate School of Education, University of Pennsylvania
2019 – present Secondary Science Methods
2013 – 2016 Advanced Secondary Science Methods
2012 – 2013 Issues in Urban Education
2011 – 2013 Elementary Science Methods
2010 – 2011 Summer Bridge Course: Race, Class, Power, and Building Community in the Classroom

K-12 TEACHING CERTIFICATIONS

Pennsylvania Department of Education
Biology (Instructional Level II, 7 – 12)
Chemistry (Instructional Level II, 7 – 12)
General Science (Instructional Level II, 7 – 12)
Social Studies (Instructional Level II, 7 – 12)
Technology (Instructional Level II, K – 12)

PROFESSIONAL MEMBERSHIPS

International Society of the Learning Sciences (ISLS)
American Educational Research Association (AERA)
National Association for Research in Science Teaching (NARST)
National Science Teachers Association (NSTA)
National Writing Project (NWP) / Philadelphia Writing Project
American Association of Physics Teachers (AAPT)
Illinois Science Teachers Association (ISTA)