

Keliann LaConte

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Expertise and Skills

Project Leadership | Management & Team-building | Fundraising | Data Collection & Analysis

Direct education projects with a portfolio currently valued at over \$3 million, with leadership in 12 federally funded projects since 2009. Able motivator, facilitator, and manager/coach who brings teams together to creatively tackle the science, technology, engineering, and mathematics (STEM) education challenges of today. Recognized leader in delivering STEM education in partnership with library professionals, both in the U.S. and abroad. Data-driven decision maker with a portfolio of published research.

Curriculum Development | Free-choice STEM Learning | Facilitation & Instruction | Communication

Author and curator of 100+ STEM learning resources. Experienced facilitator of STEM learning with youth and adults on a range of topics in a variety of settings, including a park, aquariums, a museum, and university laboratory classes. Accomplished trainer for 2,000+ library professionals, with demonstrated increases in STEM content knowledge, confidence, interest, or similar factors. Effective communicator, with formal training in the communication process of heritage interpretation and certifications from the National Association for Interpretation as a Certified Heritage Interpreter (CHI) and Certified Interpretive Trainer (CIT).

Education

2003 **M.S. | Environmental Science and Engineering** | California Institute of Technology, Pasadena, CA

2001 **B.S. | Chemistry** | University of Denver, Denver, CO
Magna Cum Laude, University Honors

Leadership in STEM Learning in Libraries

2016 – PRESENT

Professional Development Manager | National Center for Interactive Learning, Space Science Institute

Lead/co-lead the design, development, and implementation of multiple projects with funding from the National Science Foundation, NASA, and Institute for Museums and Library Services, including as Principle Investigator of a project on gender equity and cultural inclusion. Coordinate partner work and connect library professionals with cutting-edge space science and exploration as associate co-director of the national NASA@ My Library initiative. Co-lead a project to engage rural communities in the Southwest on the cultural, historic, scientific, and personal importance of water. Oversee workshops, webinars, and coaching across multiple projects and covering computational thinking, civil engineering, Earth and space science, and STEM facilitation techniques. Disseminate project resources and findings through an online searchable clearinghouse as well as through reports, articles, and conference presentations. Support the Institute's mission and Center administration, including as a member of the SSI Diversity Working Group.

2018 – 2019

Fulbright Global Scholar | University of Edinburgh, United Kingdom and University of South Australia, Australia

Conducted research on the topic of STEM learning in libraries across the UK and in Australia using a mixed-method approach, collecting qualitative data from semi-structured interviews, and qualitative and quantitative data from surveys with library professionals. Designed and facilitated workshops and

webinars for library professionals. Convened symposia with library professionals, higher education professionals, and funders to identify and share promising practices in STEM learning.

2017 – PRESENT

Advisor and Reviewer | National education projects

Support the STEM education community. Advisor on Transforming Rural Communities: Virtual Instructional Coaching in Afterschool and Library Programs (NSF #1713134), Spotty Rain (NSF # DRL-1811506), and Reimagining School Readiness Toolkit expansion project (IMLS #RE-13-19-0061-19). Reviewed multiple STEM education manuscripts for the publishing industry, including the Global Family Research Project, Rowman & Littlefield Publishers, and Elsevier. Review panelist for multiple federal grant funding opportunities and for certification through the National Association for Interpretation.

2017 – 2018

Consultant | Children's National Medical Center, Washington, D.C.

Assisted in the development of the project "Discover SCIENCE with Dr. Bear." Identified and reviewed educational resources to support project goals and stakeholders. Advised workshop design.

2009 – 2016

Informal Education Lead | Lunar and Planetary Institute, Houston, TX

Led a portfolio of education projects funded by NASA and the National Science Foundation and secured funding to expand the reach and breadth of those projects. Partnered with the NASA Astrobiology Institute, Association for Rural and Small Libraries, Association for Library Service to Children, Collaborative Summer Library Program, Earth to Sky project, and American Camp Association. Facilitated interactive workshops, conference sessions, and webinars. Developed STEM activity guides in collaboration with scientists, engineers, and librarians. Engaged 1000+ informal educators in a vibrant community of practice.

Decades of Experience in Free-choice Learning

2005 – 2006	(Certified) Interpretive Naturalist Mountains Recreation & Conservation Authority, <i>Pacific Palisades, CA</i>
2004 – 2005	Key to the Sea Naturalist Heal the Bay, <i>Santa Monica, CA</i>
2003 – 2005	Education/Public Programs/Aquarist Intern Santa Monica Pier Aquarium, <i>Santa Monica, CA</i>
1999 – 2000	Docent Colorado's Ocean Journey, <i>Denver, CO</i>
1992 – 1998	Planetarium Education Volunteer Denver Museum of Nature and Science, <i>CO</i>

Science Research and Teaching

2001 – 2002

Graduate Research Assistant | California Institute of Technology and Jet Propulsion Laboratory, Pasadena, CA

Advisors: Yuk Yung & Henry Sun Performed laboratory studies of iron isotopes to develop a better understanding of the impact of biological processes on the chemistry of the environment. Created a computer model in Interactive Data Language of water loss in Antarctic rocks in order to better understand the endolithic bacterial and fungal colonies inhabiting them. Measured hydrogen isotopes in an Antarctic rock sample to corroborate the model.

1999 – 2001

Laboratory Science Instructor | University of Denver, CO

Taught and managed approximately 30 chemistry, biology, and general science college students during three-hour class periods. Developed lesson plans and lectured on key concepts for an introductory chemistry laboratory course. Graded homework and tests.

2000

Research Experience for Undergraduates | Institute of Arctic and Alpine Research/University of Colorado, Mountain Research Station, Nederland, CO

Advisor: Diane McKnight Conducted field and laboratory studies to ascertain the algal growth and pollution impacts of an alpine lake, Green Lake 4.

1998

Undergraduate Research Assistant | University of Denver, CO

Advisor: Julanna Gilbert Conducted infrared and UV absorption spectroscopy studies with low temperature Argon matrices.

Publications

- LaConte, K.** (August 6, 2020) Beyond digital literacy: STEM learning ideas from library professionals in the UK and Ireland, *Information Professional*. Retrieved from <https://www.cilip.org.uk/page/magazine>.
- LaConte, K.** (June 2020), Creativity and Active Learning in Libraries: Variations on “STEM” in the United Kingdom and Ireland, *International Leads* (pp. 17-19), vol. 34, no. 2. Retrieved from <http://www.ala.org/rt/irrt/intlleads/internationalleads>.
- LaConte, K.** Libraries & STEM Learning: Results from a Survey of Libraries Across the UK and Ireland, December 2019. Retrieved from <http://ncil.spacescience.org>.
- LaConte, K.** STEAM Up Your Library: A Guide to Energizing Your Offer. London: Libraries Connected, 2020. Retrieved from <https://www.librariesconnected.org.uk>.
- Johnson, A., Chambers, C., Fitzhugh, G., Liston, C., **LaConte, K.**, & Dusenbery, P. (September/October 2019), Virtual STEM Programs at Public Libraries Featuring Scientists. *Informal Learning Review*, no. 158. Retrieved from www.informallearning.com
- LaConte, K.** (May/June 2019), Libraries & STEM Learning: Recommendations for Future Collaborations Based on a National Survey. *INCITE* (pp. 24-25), vol. 40, no. 5/6. Retrieved from <https://www.alia.org.au/sites/default/files/documents/INCITE%20May-June%202019.pdf>
- LaConte, K.**, Mitchell, B., Fitzhugh, G., & Liston, C. (2019), Online Learning through the STAR Library Network: Resources, Networking, and Applied Practice in STEM Program Facilitation. *International Journal of Innovations in Online Education*, vol. 2. Danbury, CT: Begell House Inc. <https://doi.org/10.1615/IntJInnovOnlineEdu.2019029592>.
- Shtivelband, A., Spahr, K.S., Jakubowski, R., **LaConte, K.**, & Holland. 2019. Exploring “STEAM-readiness” in public libraries. *Journal of Library Administration*, 59:8, 854-872. doi: 10.1080/01930826.2019.1661744
- Fraknoi, A., Schatz, D., Duncan, D., Dusenbery, P., Holland, A., **LaConte, K.**, & Mosshammer, G. (2019). Eclipse 2017 in Libraries: The Impact of Providing 2.1 Million Eclipse Glasses and Support to 7,100 Libraries Nationwide. In: S. Buxner, L. Shore, and J. Jensen (Eds.), *Celebrating the 2017 Great American Eclipse: Lessons Learned from the Path of Totality*, ASP Conference Series, vol. 516. San Francisco, CA: Astronomical Society of the Pacific.
- LaConte, K.** (2018). Hands-on STEM as 21st Century Interpretation. 2018 Interpretive Sourcebook: NAI National Conference. National Association for Interpretation
- LaConte, K.**, Holland, A., Lewis, L., and Ross, M. (Jan 29, 2019), Community Relationships to Build Family Access to STEM Learning. Global Family Research Project, <https://globalfrp.org/Articles/Community-Relationships-to-Build-Family-Access-to-STEM-Learning>
- Hakala, J.S., MacCarthy, K., Dewaele, C., Wells, M., Dusenbery, P., & **LaConte, K.** 2016. “STEM in Public Libraries: National Survey Results.” Boulder, CO: University of Colorado. Retrieved from http://www.nc4il.org/images/papers/FINAL_STEM_LibrarySurveyReport.pdf.
- LaConte, K.**, & Dusenbery, P. B. (2016). STEM Learning in Public Libraries: New Perspectives on Collaboration from a National Conference. *The Informal Learning Review* (pp. 21-27), (140). Retrieved from www.informallearning.com
- LaConte, K.**, Shipp, S., Shupla, C., Shaner, A., Buxner, S., Canipe, M., & Jaksha, A. (2014), Tested Tools and Techniques for Promoting STEM Programming in Libraries: Fifteen Years of the Lunar and Planetary Institute’s Explore Program. In G. Schultz, S. Buxner, L. Shore, & J. Barnes (Eds.),

Celebrating Science: Putting Education Best Practices to Work: Proceedings of a conference held at Burlingame, CA, 2-6 August 2014 (pp. 27-35), vol. 500. San Francisco, CA: Astronomical Society of the Pacific.

- LaConte, K.** (2015), Explore! Engaging Children in Space Science in Libraries and Other Out-of-school Programming. In: National Research Council, *Sharing the Adventure with the Student: Exploring the Intersections of NASA Space Science and Education: A Workshop Summary, 2-3 December 2014* (p. 66). Washington, DC: The National Academies Press. Retrieved from www.nap.edu/catalog/21751/sharing-the-adventure-with-the-student-exploring-the-intersections-of.
- Bartolone, L., Brochu, L., Davey, B., Davis, H., Gurton, S., Jones, A., Krishnamurthi, A., **LaConte, K.**, Nelson, A., Nichols, M., Peticolas, L., Schwerin, T., Shipp, S., & Smith, D. (2014). *Science Education and Public Outreach Forums Informal Educator National Survey Results*. Retrieved from Washington, DC: <http://smdepo.org/post/7213>.
- Meinke, B. K., Thomas, C., Eyerhmann, S. Mitchell, S., **LaConte, K.**, & Hauck, K. (2014), NASA's Coordinated Efforts to Enhance STEM Education: Bringing NASA Science into the Library. In G. Schultz, S. Buxner, L. Shore, & J. Barnes (Eds.), *Celebrating Science: Putting Education Best Practices to Work: Proceedings of a conference held at Burlingame, CA, 2-6 August 2014* (pp. 85-91), vol. 500. San Francisco, CA: Astronomical Society of the Pacific.
- LaConte, K.**, Halligan, E., Shipp, S. (June 2013) *Science, Technology, Engineering, and Mathematics (STEM): Where Do They Belong in Your Library?*, www.lpi.usra.edu/education/explore/stem.
- LaConte, K.**, Halligan, E., Shipp, S. (June 2013) "You Don't Have to Be a Rocket Scientist to Bring NASA into Your Children's and Youth Programs." *Programming Librarian*: <http://www.programminglibrarian.org>.

Products

Led the development and external review processes for over 100 hands-on activity guides and supporting teacher and family guides in collaboration with subject matter experts, library professionals, and educators. These activities have been featured by Science Friday, Lawrence Hall of Science's howtosmile.org catalogue, American Library Association, Australian Library and Information Association, and others.

- Ratcliffe, C., LaConte, K., Holland, A., and Mitchell, B. (2019) *Exploring Space Activities*. STAR Net: Science-Technology Activities & Resources for Libraries: <http://clearinghouse.starnetlibraries.org>.
- LaConte, K. and Mitchell, B. (2017) *Project BUILD Activities*. STAR Net: Science-Technology Activities & Resources for Libraries: <http://clearinghouse.starnetlibraries.org>.
- LaConte, K. and Shupla, C. (2016) *Space Science Activities*. STAR Net: Science-Technology Activities & Resources for Libraries: <http://clearinghouse.starnetlibraries.org>.
- LaConte, K., Shaner, A., Shipp, S. (2013) *Playful Building*. STAR Net: Science-Technology Activities & Resources for Libraries: <http://clearinghouse.starnetlibraries.org>.
- LaConte, K., Shaner, A., Shipp, S. (2013) *Earth Science Activities*. STAR Net: Science-Technology Activities & Resources for Libraries: <http://clearinghouse.starnetlibraries.org>.
- LaConte, K., Halligan, E., Shipp, S. (March 2013) *Marvel Moon*. NASA Science Mission Directorate: <https://science.nasa.gov/learners/wavelength>
- LaConte, K., Halligan, E., Shipp, S. (2012) *Life on Mars?* NASA Science Mission Directorate: <https://science.nasa.gov/learners/wavelength>.
- LaConte, K., Shupla, C., Shipp, S. (May 30, 2012) *Explore! Jupiter's Family Secrets*. Educational product EG-2012-04-021-JPL. NASA Science Mission Directorate: <https://science.nasa.gov/learners/wavelength>

Presentations

Led/co-led 75+ presentations at STEM, education, and library meetings in the U.S., Australia, and the UK.

Invited Presentations

- LaConte, K. *panelist*, “Partnership case study Q&As” for Carnegie UK Trust, presented at the Engaging Libraries Kickstarter, London, November 26, 2019
- LaConte, K. *speaker*, “STEM Learning in Libraries” for Libraries Connected, presented at the Universal Information and Digital Offer Meeting, London, November 12, 2019
- LaConte, K. *panelist*, “Authentic STEM Outcomes for Computing and Technology” for the National Academies Board on Science Education,” presented at The Role of Authentic STEM Learning Experiences in Developing Interest and Competencies for Technology and Computing: Committee Meeting #3, Washington D.C., November 4, 2019
- LaConte, K. *speaker*, “New Ideas for Supporting STEM Learning in Libraries” for South Australian Museum, presented at the Finding Our Way Through STEM Workshop, August 7, 2018.
- LaConte, K. *panelist*, “Putting Humpty Back Together Again: Making Sense of the Changing World Around Us” for South Australian Museum, presented at the Finding Our Way Through STEM Workshop, August 7, 2018.
- LaConte, K. *speaker*, *New Directions for Rural Libraries* for NSF/Wyn Jennings, presented at Association for Rural and Small Libraries Conference in Fargo, ND, October 29, 2016
- LaConte, K. *speaker*, “Connecting Your Library to STEM (Science, Technology, Engineering, and Math) with NASA,” presented at 2015 International Conference of Indigenous Archives, Libraries, and Museums in Washington, DC, September 9-15, 2015
- LaConte, K. *speaker*, “Celebrate Our Personal, Cultural, and Scientific Connections to the Moon with NASA Resources!,” presented at 2015 International Conference of Indigenous Archives, Libraries, and Museums in Washington, DC, September 9-15, 2015

Leadership in STEM Education

- Program committee (2019), NSF ITEST PI & Evaluator Summit 2019
- Session co-chair (2019), “What Does it Mean to be a Scientist? How Culture, Language, and Gender Affect Equity in STEM,” NSF ITEST PI & Evaluator Summit 2019
- Discussant (2017), revised process for NASA Independent Product Review
- Co-convener and Master of Ceremonies (2014 – 2016), 2015 Public Libraries & STEM Conference
- Program committee (2013), Earth and Planetary Science Joint Retreat
- Liaison (2012 – 14), NASA-American Camp Association Memorandum of Understanding
- Co-instructor (2012 – 15), Lawrence Hall of Science’s professional learning program, *Reflecting on Practice*
- Member (2010 – 14), NASA Science Mission Directorate Informal Education Working Group
- Co-instructor (2009 – 12 and 2005), K-12 educator workshops
- Lead (2009 – 16), Lunar and Planetary Institute’s *Explore* program, which was established in 1998

Funded Awards

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| 1/1/20 – 12/31/24 | PI, “Enhancing Learning Opportunities in Libraries of Rural Communities,” National Science Foundation Advancing Informal STEM Learning Program |
| 1/1/20 – 12/31/24 | Collaborative PI, “Collaborative Research: Water in the Four Corners Region: Connecting and Engaging Communities with Their Water Systems,” National Science Foundation Advancing Informal STEM Learning Program, PI: Anne Gold |
| 9/1/14 – 4/30/21 | Co-I, “Broad Implementation: Phase 2 STAR Library Education Network,” National Science Foundation Advancing Informal STEM Learning Program, PI: Paul Dusenbery |
| 4/1/17 – 3/31/21 | Co-PI, Project BUILD: Building Using an Interactive Learning Design,” National Science Foundation Innovative Technology Experiences for Students and Teachers Program, PI: Paul Dusenbery |

2/2/16 – 2/1/21	Co-I, "NASA@ My Library: A National Earth and Space Science Initiative that Connects NASA, Public Libraries and their Communities," NASA Science Mission Directorate Science Education Cooperative Agreement Notice, PI: Paul Dusenbery
6/1/18 – 8/31/20	STEM education expertise lead, "Partners for Middle School STEM," Institute of Museum and Library Services National Leadership Grants for Libraries Program, PI: Jennifer Blenkle
9/30/13 – 8/31/18	Informal education lead, "Institute for the Science of Exploration Targets," NASA Solar System Exploration Research Virtual Institute, PI: William Bottke
11/1/16 – 10/31/17	Professional development lead, Moore Foundation Support for the 2017 Solar Eclipse, PI: Paul Dusenbery
8/15/14 – 9/30/16	Co-PI, "STEM Learning in Libraries Conference," National Science Foundation Advancing Informal STEM Learning Program, PI: Paul Dusenbery
10/1/09 – 9/30/13	Informal education lead, "Planet SEPOF: Extending the Coherence and Reach of NASA Planetary Science and SMD E/PO," Science Education and Public Outreach Forums Cooperative Agreement Notice, PI: Stephanie Shipp
1/1/10 – 6/30/13	Co-I and lead author/project director, "Preparing Librarians to Engage Children in NASA Mars Science through Astrobiology," Supplemental Education Awards for ROSES Investigators, PI: Walter Kiefer
1/1/09 – 9/30/12	Informal education lead, "Center for Lunar Origin and Evolution," NASA Lunar Science Institute, PI: William Bottke