Christine (Kit) Klein, Ph.D. Director

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Education

1994 Washington University, St. Louis, Missouri Ph.D. in Education

1987-1989 Southern Illinois University – Edwardsville, Edwardsville, Illinois Postgraduate studies in Management Information Systems

1984-1986 University of Texas School of Public Health, Houston, Texas Postgraduate studies in Human Ecology and Epidemiology

1983 George Williams College now Aurora University, Chicago, Illinois Master of Science in Environmental Education and Interpretive Services Administration

1982 Texas Christian University, Fort Worth, Texas

Bachelor of Science in Environmental Science and secondary science teacher certification

Certifications

New Games Leader (2019, no expiration)

Mental Health First Aid USA through the National Council for Behavioral Health (2014-2017)

Certified Grant Writer® through American Grant Writers Association (2011-2016)

Texas Teacher Certification, Science, grades 6-12 (1982, no expiration)

Professional and Academic Experience

2016-present	: Director, Insight for Learning Practices LLC, Kirkwood, MO
2005-2016	Principal, Klein Consulting, Kirkwood, MO
2009	Contractor (writing and editing science and math test items), Scantron
2004-2005	Senior Research Scientist, St. Louis Center for Inquiry in Science Teaching and
	Learning, National Science Foundation grant to Washington University in St. Louis
2002-2004	Principal Investigator, St. Louis Center for Inquiry in Science Teaching and
	Learning, National Science Foundation grant to Washington University in St. Louis
2001-2004	Clinical Associate, Office of Field Experiences and Student Teacher Placement,
	Department of Education, Washington University in St. Louis
2001-2002	Principal Investigator, St. Louis Center for Learning and Teaching in Informal
	Settings, National Science Foundation grant to the St. Louis Science Center
1994-2001	Schools for Thought Researcher/Principal Investigator, St. Louis Science Center
1994	Educational Consultant, Electronic Outreach Project, St. Louis Science Center
1994	Consultant and Author, Science Adventures Packets, St. Louis Science Center
1994	Adjunct Faculty, Computer Science, Fontbonne University, St. Louis, MO
1993-1994	Outside Participant/Observer, Individual Dynamic Evaluation of Assessment to
	Learn Program, Danforth Foundation and Pattonville School District, St. Louis, MO
1992-1994	Visitor Studies Assistant, St. Louis Science Center
1992-1993	Teaching Assistant, Educational Psychology, Washington University in Saint Louis
1992-1993	Computer Instructor, Futurekids, Des Peres, MO
1990	Workplace Literacy Instructor, St. Louis Community College, St. Louis, MO
1987-1991	Information Systems Manager and Human Resources Director, Custom Automated
	Plastics Systems, Fenton, MO
1986-1987	Systems Analyst, Comprehensive Rehabilitation Center – Houston, TX
1983-1984	Earth/Life Science Teacher, Grades 6-8, Houston Independent School District,
	Houston, TX

Grant-funded Roles

- 2020-2023 External Evaluator, *Thriving Together*, Detroit Zoological Society, PI Diane Miller, IMLS # MA-245850-OMS-20.
- 2019-2023 Co-PI & Researcher, Roads Taken: A Retrospective Study of Program Strategies and Long-term Impacts of Intensive, Multi-year, STEM Youth Programs, COSI, PI Deborah Wasserman, NSF #1906396.
- 2019-2022 External Evaluator, Lemelson Early Inventor Prize Program at the Society for Science
- 2020 Co-PI & Conference Coordinator, Mapping Connections Between STEM and Social-Emotional Development (SED): Innovating Assessment and Data Systems for Research and Practice, PEAR, PI Gil Noam, NSF # 1940155.
- 2016-2019 External Evaluator, Advocate Grant Program at the Society for Science and the Public
- 2016-2017 Co-Principal Investigator, Roads Taken Long-term Impacts of STEM Youth Programs: Conference, Association for Science-Technology Centers, PI Wendy Handcock, NSF #1644479
- 2014-2015 Researcher, St. Louis ArtWorks Program, St. Louis County's Children's Service Fund
- 2013-2014 External Evaluator, Encouraging Women in STEM as a Career Choice: Innovative Methods in Promoting Climate, Weather, and Math Literacy to an all-Girl Middle School, PI Timothy Eichler, St. Louis University President's Research Fund
- 2010-2013 External Evaluator and Researcher, *Community STEM Outreach Program*, St. Louis Science Center. Pl Diane Miller. Office of Naval Research
- 2005-2009 External Evaluator, *Teenage Designers of Learning Places for Children*, St. Louis Science Center, Pl Diane Miller, NSF #0515572
- 2002-2004 Principal Investigator and Project Director, St. Louis Center for Inquiry in Science Teaching and Learning, with Co-Pls B. Addelson, P. Balcerzak, J. Jordan, W Tate, Washington University in St. Louis, NSF # 0227619
- 2001-2002 Principal Investigator, *St. Louis Center for Learning and Teaching in Informal Settings*, St. Louis Science Center, NSF #0119750
- 1998-2001 Principal Investigator, Schools for Thought Curriculum Development: Expanding our Capacity to Improve Student Learning, St. Louis Science Center, James S. McDonnell Foundation
- 1997-2000 Co-PI, Schools for Thought Summer Institute 1997, with Co-PIs M. Keefer and S. Goldman, James S. McDonnell Foundation
- 1996-1999 Principal Investigator for no-cost extension, *Schools for Thought in St. Louis: A Model for Development and Dissemination*, with Co-Pl's C. Valenta, C. Ward and A. Walker, St. Louis Science Center, James S. McDonnell Foundation
- 1995-1999 Principal Investigator for no-cost extension, *Schools for Thought*, St. Louis Science Center, James S. McDonnell Foundation

Publications and Articles

- Institute for the Study of Resilience in Youth (2021). Hosting a virtual conference during the pandemic: Lessons learned. McLean Hospital and Harvard Medical School.
- Klein, C. (2011) Plate tectonics. In Greenwald, S.J. & Thomley, J.E. (Eds) <u>The Encyclopedia of Mathematics and Society</u>. Pasadena, CA: Salem Press. 773-774.
- Klein, C. (2011) Water quality. In Greenwald, S.J. & Thomley, J.E. (Eds) <u>The Encyclopedia of Mathematics and Society</u>. Pasadena, CA: Salem Press. 1053-1054.
- Klein, C. & T. Stets (2008) Teens for Science! Changing community attitudes and afterschool, <u>The Afterschool Review</u>, No. 2, Spring 2008, 22-25.
- Allen, S., Gutwill, J., Perry, D. L., Garibay, C., Ellenbogen, K. E., Heimlich, J. E., Reich, C. A., & Klein, C. (2007) Research in museums: Coping with complexity. In Falk, J. H., Dierking, L. D.,

- & Foutz, S. (Eds) In Principle, In Practice: Museums as Learning Institutions. Lanham, MD: AltaMira Press.
- Klein, C. (2006) Science teaching and learning through the zoo, aquarium, and botanical garden. In K. Tobin (Ed) <u>Teaching and Learning Science: A Handbook</u>, 365-376. Westport, CT: Praeger.
- Klein, C. (2002) Testing and the Museum-School Partnership. <u>ASTC Dimensions</u>. November/December 2002.
- Ash, D. & Klein, C. (2000) Inquiry in the informal learning environment. In Minstrell, J. & Van Zee, E. (Eds.) <u>Inquiring into Inquiry Learning and Teaching in Science</u>. Washington, DC: AAAS.
- Klein, C. (1998a) Putting theory into practice: Compton-Drew Investigative Learning Center. Journal of Museum Education. 23(2), 8-10.
- Klein, C. (1998b) Toward a new museum school. ASTC Newsletter. 26(2), 2-3.
- Hudgins, B.; Riesenmy, M.; Mitchell, S.; Klein, C.; Navarro, V. (1994) "Teaching Self-Direction to Enhance Children's Thinking in Physical Science," <u>Journal of Educational Research</u>, <u>88</u> (1), 15-27.

Evaluation Reports - Available Online

- Klein, C. & Tisdal, C. (2017) Summative Evaluation: Advocate Grant Program. Washington DC: Society for Science and the Public.
- Klein, C., Tisdal, C. & Hancock, W. (2017) Roads Taken Conference Report.
- Klein, C. and C. Tisdal (2013) Community STEM Outreach: Summative Evaluation, available at http://informalscience.org/evaluation/ic-000-000-008-506/Community STEM Outreach: Summative Evaluation
- Klein, C. and C. Tisdal (2012) Community STEM Outreach: Second Annual Evaluation Report, available at http://informalscience.org/evaluation/ic-000-000-003-540/Community STEM Outreach Second Annual Evaluation Report
- Klein, C. (2010) Teenage Designers of Learning Places for Children: Summative Evaluation, available at http://www.informalscience.org/teenage-designers-learning-places-children-summative-evaluation

Presentations

- 2020 Panelist with D. Wasserman, N. Webster, and C. Tisdal, In prospect or retrospect: What can we learn about intensive STEM programs for youth?, Association of Science-Technology Centers Annual Conference, Virtual
- 2018 Panelist with R. Pickering and C. Tisdal, Using Evaluation to Elevate Visitor Experience, Oklahoma Museum Association, Edmond, OK
- 2009 Panelist with C. Tisdal, B. Shea and D. Miller, Evaluating Long-Term Youth Programs: It's a Whole Different Ballgame, Visitor Studies Association, St. Louis, MO
- 2005 Session Chair, Informal Learning Environments Research SIG Business Meeting and Invited Speaker, American Educational Research Association, Montreal, Quebec
- 2005 Discussant, Multiple Methods for Looking at Learning in Informal Contexts, American Educational Research Association, Montreal, Quebec
- 2005 co-author on paper presented by P. Balcerzak, with T. Astor-Jack & J. Confrey, Regional Professional Development Curriculum Research Summary, Association for the Education of Teachers of Science, Colorado Springs, CO
- 2004 Panelist with T. Astor-Jack, D. Lambing, L. Dierking, B. Beven & J. Confrey, Toward a More Useful Definition of Formal and Informal Learning, Association of Science-Technology Centers, San Jose, CA
- 2004 Co-presenter with L. Martin, S. His, D. Kanter, R. Smith & R. Duschl, Museum-School Collaborations Supporting Science Teachers, American Educational Research Association, San Diego, CA

- 2003 Invited Session, Museum/School Collaborations, Association of Railway Museums, St. Louis, MO
- 2003 Session Chair, Informal Learning Environments Research Structured Poster Session, American Educational Research Association, Chicago, IL
- 2003 Session Chair, Where Do We Go From Here? The Future of Informal Learning Environments Research, American Educational Research Association, Chicago, IL
- 2002 Session Leader and co-presenter with L. Rankin, K. Ellenbogen, P. Balcerzak, What's Your Role in Learning & Teaching?: Creative Approaches to Professional Development. Association of Science-Technology Centers, Charlotte, NC
- 2002 Co-presenter with E. van Zee, D. Roberts, et al. Inquirying into One's Own Teaching Practices, pre-conference workshop facilitator National Association for Research in Science Teaching, New Orleans, LA
- 2002 Discussant, Informal Learning Environments Research Poster Fair, American Educational Research Association, New Orleans, LA
- 2002 Co-presenter with M. Finders, S. Abel, R. Rogers, P. Balcerzak, C. Easter, Doing Science Doing Literacy: The Multiple Discourses of Scientific Literacies, American Educational Research Association, New Orleans, LA
- 2001 Co-presenter with C. Garibay, E. Bailey and L. Beaumont. Museum-School Partnerships: Lessons from the Field. Panel presentation, American Association of Museums, St. Louis, MO
- 2001 Co-presenter with C. Howard, D. Russell and D. Sides. How Partnerships Enhance Constructivist Practices. Magnet Schools of America 19th Annual International Conference on Magnet Schools, St. Louis, MO
- 2001 Co-presenter with J. Corse, V. Grigsby, S. Hardin and C. Ward. A Museum School: Building Grounded Theory as Two Cultures Meet. American Educational Research Association, Seattle, WA
- 2001 Session presider and discussant. Recontextualizing Teacher Education: Research from Museums. National Association for Research in Science Teaching, St. Louis, MO
- 2001 Co-presenter with C. Anderson and D. Heil. Using Informal Science Resources in Your Community: Keys to Success. National Science Teachers Association, St. Louis, MO
- 2000 Co-presenter with J. Corse. Whose Question Is It Anyway? Association of Science-Technology Centers Annual Conference, Cleveland, OH
- 1999 Session Chair and organizer, Multiple Perspectives of Informal Learning Environment Research. American Educational Research Association, Montreal, Quebec
- 1999 Session Chair and co-presenter with D. Ash, C. Ward, and S. Reid. Lessons Learned on the Role of Researchers in the Classroom: Teacher, Administrator, and Researcher Perspectives from the Fostering Communities of Learners and Schools for Thought Projects. American Educational Research Association, Montreal, Quebec
- 1998 Co-presenter with F. Henderson. Schools for Thought. Independent Schools Association of the Central States/St. Louis Confederation of Independent Schools Annual Regional Conference, St. Louis, MO
- 1998 Session Chair and co-organizer. Informal Learning Environments Research from Multiple Perspectives and Settings. American Educational Research Association, San Diego, CA
- 1998 Co-presenter with M. Keefer. Reflecting on Teachers' Practice: Creating Cognitive Tools for Inquiry-Based Teaching. American Educational Research Association, San Diego, CA
- 1997 Session Chair and panelist with J. Corse, W. Jones (student), H. Hayden (student), and D. Washington (parent). Kids Talk: The Museum School from the Student's Perspectives. Association of Science-Technology Centers Annual Conference, St. Louis, MO
- 1997 Co-presenter with J. Corse. Inquiry in Action at a Museum School. Association of Science-Technology Centers Annual Conference, St. Louis, MO

- 1997 Co-presenter and organizer with J. Corse. Museum Schools in Action: Symposium. Association of Science-Technology Centers Annual Conference. St. Louis. MO
- 1997 Panelist with T. Benedict, P. Dow, C. Lydon, and S. Takahisa. Museum School Partnerships
 Models for the Future, Association of Science-Technology Centers Annual Conference, St. Louis, MO
- 1997 Co-presenter and organizer with C. Tisdal. Links Between Formal and Informal Learning Environments: A Research Agenda. Association of Science-Technology Centers Annual Conference, St. Louis, MO
- 1997 Co-presenter and organizer with C. Tisdal. Developing a Research Agenda to Examine Links Between Formal and Informal Learning Environments. American Educational Research Association, Chicago, IL
- 1996 Panelist with S. Allen, J. Esserman, L. Shore, and C. Tisdal. Constructivism: Theory into Practice. Association of Science-Technology Centers Annual Conference, Pittsburgh, PA
- 1996 Structured poster. Utilizing Community Resources: A Science Center/School Collaboration. American Educational Research Association, New York, NY
- 1996 Structured poster with E. Taylor and M. Lamon. Viral Invaders: A Complex Problem with an Interdisciplinary and Collaborative Solution. American Educational Research Association, New York, NY
- 1996 Co-presenter with K. Blanton. Integrating Science, Math and Technology Through the Schools For Thought Curriculum. National Science Teachers Association, St. Louis, MO
- 1996 Co-presenter with K. Blanton, J. Esserman, and R. Giesler. Connection and Collaboration: Bridging the Gapp Between Traditional and Informal Learning Environments. National Science Teachers Association, St. Louis, MO
- 1996 Co-presenter with K. Blanton, M. Lamon, C. Ward, and J. Williams. Schools For Thought at Mason Middle Investigative Learning Center. Association of Teacher Educators, St. Louis, MO
- 1995 Community Partnership Showcase presentation with M. Lamon. Building Learning Communities: The Schools For Thought Project. Association of Science-Technology Centers Annual Conference, San Diego, CA
- 1995 Panelist with B. Garner and K. Brown. Metability: The Dynamics of Individual and Systemic Change. International Conference on Teacher Research, Davis, CA
- 1995 Panelist with M. Lamon, C. Ward, J. Williams, and students from Mason ILC. Schools For Thought in St. Louis. Midwest Education and Technology Conference, St. Louis, MO
- 1993 Panelist with B. Garner, T. Morgan, S. Lee, M Tarlton, S. Nelson, and M. Hoekenga. Individual Dynamic Evaluation of Ability to Learn (I.D.E.A.L.). St. Louis Action Research Conference, St. Louis, MO

Navigating Evaluation Workshop Series – with Carey Tisdal – Spring 2018

Navigating Evaluation: The Basics

Navigating Evaluation: Basics for Administrators

Navigating Exhibit Evaluation Navigating Program Evaluation

Navigating Visitor Services Evaluation

Professional Organization Memberships

American Association of Museums, 1999-present
American Educational Research Association, 1994-2009
American Grant Writers Association, 2010-2016
Certified Grant Writer®, 2011-2016

Evaluation Association of Saint Louis, 2018-present
Institute for Earth Education, 1983-present
National Association for Research in Science Teaching, 2000-2011
National Science Teachers Association, 1994-2004
Society of Children's Book Writers and Illustrators, 2009-2020

Offices Held in Professional Organizations

- 2006-2008 Treasurer, Informal Learning Environments Research Special Interest Group, American Education Research Association
- 2004-2006 Chair, Informal Learning Environments Research Special Interest Group, American Education Research Association
- 2002-2003 Program Chair, Informal Learning Environments Research Special Interest Group, American Education Research Association
- 2000-2002 Co-Chair, Informal Learning Environments Research Special Interest Group, American Education Research Association
- 1999-2000 Treasurer, Informal Learning Environments Research Special Interest Group, American Education Research Association
- 1997-1998 Program Chair, Informal Learning Environments Research Special Interest Group, American Education Research Association
- 1996 Co-Founder with D. Ash, Informal Learning Environments Research Special Interest Group, American Education Research Association
- 1993-1994, Organizational Team Member, St. Louis Action Research Collaborative

Advisory Boards, Editorial Boards and Committees

- 2010-2014, Member, Advisory Board, Assessment Tools in Informal Science (ATIS) Website
- 2001-2004, Member, Grants Committee of the PTO, Robinson Elementary School
- 2001, Member, Kirkwood R-7 School District Strategic Planning Team for Strategy #6: Create a culture that embraces diversity
- 1997-1998, Member, St. Louis Public Schools Task Force on Student Achievement
- 1993-1994, *Educational Researcher* Book Review Editorial Assistant, American Educational Research Association