

Gillian Margaret Puttick

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PROFESSIONAL PREPARATION

1972	University of Cape Town	B.Sc. Honours in Zoology
1971	University of Cape Town	B.A. in Social Anthropology
1979	University of Cape Town	Ph.D. in Zoology
1980–1	Stanford University	Dept. of Biological Sciences
1983–6	Harvard University	Museum of Comparative Zoology

APPOINTMENTS

TERC

2005 – present Senior Scientist

1997 – 2004 Project Director

1991 – 1996 Research Assistant

- *Research on teaching and learning*
- *Curriculum development: Elementary, middle and high school life science curricula*
- *Teacher professional development programs*

Current Grants:

PI on NSF/DRL-1542954 Building systems from Scratch

Co-PI on NSF/DRL-1417202 The Climate Lab

Co-PI on NSF/DRL-1742127 Designing Biomimetic Robots

Lesley University

Adjunct Professor, Department of Education

2003 – 2010 Professor for Biology and Ecology graduate courses

University of Minnesota and Northeastern University

1986 – 1990 Research Scientist, Principal Investigator

- *Investigated the co-evolution of leaf beetles and goldenrods*

Harvard University

1983 – 1985 Postdoctoral Research Fellow

- *Investigated the chemical ecology and co-evolution of several plant-insect interactions*

Stanford University

1981 – 1982 Postdoctoral Research Fellow

- *Investigated plant-insect interactions in Mediterranean-type ecosystems*

University of Cape Town

1978 – 1979 Postdoctoral Research Fellow

1974 – 1977 Lecturer

- *Investigated the behavioral ecology of migrating shorebirds*
- *Lecturer in invertebrate biology and ecology*

PRODUCTS

Puttick, G. & Tucker-Raymond, E. (2018). Building systems from Scratch: An exploratory study of students learning about climate change. *Journal of Science Education and Technology*
<https://doi.org/10.1007/s10956-017-9725-x>

Puttick, G., Bernstein, D. & Edwards, T. (2018). Design Based Research Study of a Girl Scout Program Focused on Energy Conservation. *Educational Designer* 3 (10).

Puttick, G. and Drayton, B. (2017). Biocomplexity: Aligning an “NGSS-ready” curriculum with NGSS

- Performance Expectations. *American Biology Teacher* 79 (5), 344-349.
- Puttick, G., Tucker-Raymond, E. & Barnes, J. (2017). Environmental attitudes in youth-created computer games about climate change. *Proceedings of Games, Learning and Society 12 conference*.
- Puttick, G. and Tucker-Raymond, E. (2017). Building Systems from Scratch: An exploratory study of students learning about climate change. Accepted with revisions, *Journal of Science Education and Technology*.
- Drayton, B. and Puttick, G. (2016). Digital design of “smart images:” A design story. *Educational Designer* 3(9).
- Puttick, G., Drayton, B. and Karp, J. (2015) Digital curriculum in the classroom: Authority, control, and teacher role. *International Journal on Emerging Technologies in Learning* (Dec issue).
- Puttick, G., Drayton, D. and Cohen, E. (2015). A study of the literature on lab-based instruction in Biology. *American Biology Teacher*, 77 (1).
- Puttick, G., Bernstein, D., Kies, K. and Garibay, C. (2015) Learning and behavior change in a Girl Scout program focused on energy conservation: Saving energy to ‘save the planet.’ *Journal of Sustainability Education*, 8.
- Puttick, G. and Mutch-Jones, K. (2015). Supporting science access for all students: Using content enhancements to create pathways to the big ideas. *Science Scope* 38, 31-37.
- Puttick, G., Strawhacker, A., Bernstein, D. and Sylvan, E. (2014). It’s not as bad as using the toaster all the time. Trade-offs in a Scratch game about energy use. *Proceedings of the International Conference on the Learning Sciences 2014*, 3, 1485-6.
- Bernstein, D. and Puttick, G. (2014). Seeding social norms among girl scouts. *Applied Environmental Education and Communication* 13(3), 171-182.

OTHER PRODUCTS

- Puttick, G., Drayton, B., Pickett, S. and Berkowitz, A. (2015) *Environmental Science and Biocomplexity*. Mt. Kisco, NY: Its About Time Publishers.
- Jablonski, L., Klemow, K. and Puttick, G. (2015). Achieving energy and ecological literacies for all: Linking ecology and energy education. Perspectives from sessions at Ecological Society of America 2014 Annual Meeting. *Journal for Sustainability Education*, 45 (1).
- Drayton, B., G. Puttick, A. Drayton, and T. Lloyd-Evans (2015) Co-inventing the Climate Lab: First lessons from an innovative partnership. *Hands On!* Spring 2015, pp. 3-5.
- Drayton, B., Puttick, G. & Donovan, M. (2013) Under the Microscope: Review of the research on biological lab experiences 1987-2007. A research white paper. <https://www.terc.edu/display/Library/Research+Library>
- Puttick, G., Tucker-Raymond, E. & Barnes, J. (2017). Young people designing games about climate change. *Hands On!* November, 2017, pp.7-9.

SYNERGISTIC ACTIVITIES

1. Advisor to NSF-funded science education projects, including *InSPECT* at Concord Consortium, *iSWOOP*, *English Learners and Science Tests* and *Using the Energy Lens* at TERC.
2. Served on NSF peer review panels: Teacher Enhancement, Informal Science Education, Discovery Research K-12, Cyber-enabled Discovery and Innovation.
3. Peer reviewer for *American Biology Teacher*, *Science Education*, and the *International Journal on Emerging Technologies in Learning*.
4. Invitee, CT Summit, 2017, Education Development Center, Waltham MA.
5. Presenter at Sustainability convening, 2012, sponsored by NSF/CAISE.

COLLABORATORS

Miyoko Chu, Cornell University; Kristen Wendell, Tufts University; Trevor Lloyd-Evans, Manomet Inc.; Leona Schauble, Vanderbilt University; Tina Grotzer, Harvard University; Susan Yoon, Yasmin Kafai, U. Pennsylvania; Casper Hartevelt, Northeastern University; Gillian Smith, Worcester Polytechnic Inst.; Juliette Rooney-Varga, U. Massachusetts Lowell; Jill Denner, ETR.