



## **Scholarly communications, EOS-SEI, 2007 - 2014**

These works carried out primarily (although not exclusively) under the auspices of CWSEI (<http://www.cwsei.ubc.ca/>).

### **Publications**

1. DesLauriers, Louis, Sara Harris, Erin Lane, and Carl Wieman, 2012, "Transforming the lowest performing students: an intervention that worked", *Journal of College Science Teaching*, 41(6), 76-84. [http://www.cwsei.ubc.ca/SEI\\_research/files/Harris\\_Intervention\\_JCST2012.pdf](http://www.cwsei.ubc.ca/SEI_research/files/Harris_Intervention_JCST2012.pdf)
2. Dohaney, J., E. Brogt, and B. Kennedy, 2012, "Successful Curriculum Development and Evaluation of Group Work in an Introductory Mineralogy Laboratory", *Journal of Geoscience Education*, 60:1, pp. 21-33. (<http://nagt-ige.org/toc/jgee/60/1>)
3. Jones, F., S. Harris, 2012, "Benefits and Drawbacks of Using Multiple Instructors to Teach Single Courses", 2012, *College Teaching*, Vol. 60, No. 4, pp. 132-139. [http://www.cwsei.ubc.ca/SEI\\_research/files/Geo\\_Ocean/Jones-Harris\\_MultipleInstructors\\_CollegeTeaching2012.pdf](http://www.cwsei.ubc.ca/SEI_research/files/Geo_Ocean/Jones-Harris_MultipleInstructors_CollegeTeaching2012.pdf)
4. Jones, F., "Industry Input Contributes to Geology Curriculum Review", *Innovation, the Journal of the Association of Professional Engineers and Geoscientists of BC*, Pg 16-17, March/April 2012. (Complete report at: <https://circle.ubc.ca/handle/2429/37246> , 2010. (Contributors: K. Ko, J. Caulkins, D. Tompkins, S. Harris.)
5. Jolley, Alison, Erin Lane, Ben Kennedy, and Tom-Pierre Frappé-Sénéclauze, "SPeSS: A New Instrument for Measuring Student Perceptions in Earth and Ocean Science", 2012, *Journal of Geoscience Education*, 60:1, 83-91 (<http://nagt-ige.org/toc/jgee/60/1>)
6. Alison Jolley, Francis Jones, and Sara Harris (2013) [Measuring Student Knowledge of Landscapes and Their Formation Timespans](#). *Journal of Geoscience Education*: May 2013, Vol. 61, No. 2, pp. 240-251.
7. Smith, M. K., F. H.M. Jones, S. L. Gilbert and C. E. Wieman, 2013, "The Classroom Observation Protocol for Undergraduate STEM (COPUS): a New Instrument to Characterize University STEM Classroom Practices", *CBE Life Sci Educ* vol. 12 no. 4 618-627, <http://www.lifescied.org/content/12/4/618.full> .
8. Wieman, C., Deslauriers, L., and Gilley, B., "Use of research-based instructional strategies: How to avoid faculty quitting" *Phys. Rev. ST Phys. Educ. Res.* 9, 023102 (2013), <http://prst-per.aps.org/abstract/PRSTPER/v9/i2/e023102>
9. Gilley, B. and Clarkston, B. "Collaborative testing: evidence of learning in a controlled in-class study of undergraduate students", *Journal of College Science Teaching*, Vol. 43, No. 3, January 2014. PDF at [http://www.zoology.ubc.ca/files/Group\\_Exam.pdf](http://www.zoology.ubc.ca/files/Group_Exam.pdf).
10. Erin Lane and Sara Harris, "A New Tool for Measuring Student Behavioral Engagement in Large University Classes", *Journal of College Science Teaching*, accepted Sept. 3, 2014, in press.

### **Undergraduate honors geoscience theses**

1. Isabel Shinnick-Gordon; *Student thinking about systems dynamics related to carbon cycling in climate science*, 2014. Poster online at [http://www.cwsei.ubc.ca/Files/EOY/EOY2014/Posters/Shinnick\\_ClimateScienceEd\\_CWSEI-EOY2014.pdf](http://www.cwsei.ubc.ca/Files/EOY/EOY2014/Posters/Shinnick_ClimateScienceEd_CWSEI-EOY2014.pdf)
2. Wong, Carrie; *Performance on the Geologic Spatial Visualization Survey: A Comparison Between Junior and Senior Undergraduate Students*, 2011, <https://circle.ubc.ca/handle/2429/34237> .
3. Jolley, Alison; *Measuring Knowledge & Confidence of Landscape Identification & Formation*, 2010, <https://circle.ubc.ca/handle/2429/23321>
4. Rhajjak, Jamil; *Understanding Geological Time: A Proposed Assessment Mechanism for Beginner and Advanced Geology Students at UBC*, 2009, <https://circle.ubc.ca/handle/2429/6655>

### **Conference presentations**

#### **2014**

1. Jones, F., Geidy Baldeon, Erik Eberhardt, "Improving and Assessing Research, Design and Reporting Skills of STEM Students", The 2014 University of Calgary Conference on Postsecondary Learning and Teaching, May 13-14, 2014. [Presentation link](#).
2. Jones, F., S. Harris, B. Gilley, "Comparing Student, Instructor and Observer Data to Assess a 7-Year Department-wide Education Initiative", presented at the International Improving University Teaching conference, Vancouver BC, July, 2014. <http://eos.ubc.ca/research/cwsei/resources/research/FJones-poster-140720.pdf>
3. Jones, F., T. Scott, "Videos for Supporting Faculty Adoption of Research Based Instructional Strategies in science courses", Interactive presentation at the International Improving University Teaching conference, Vancouver BC, July, 2014. <http://eos.ubc.ca/research/cwsei/resources/research/Handouts-video.pdf>



4. Jones, Francis, Scoates, James S., Sutherland, Stuart, Mindell, Randal, And Gilley, Brett, "Assessing Improvements Of Learning Outcomes In Transformed Geoscience Classes", 2014 GSA Annual Meeting in Vancouver, British Columbia, Paper No. 276-15, <https://gsa.confex.com/gsa/2014AM/webprogram/Paper248459.html> . (Presentation PDF.)
5. Gilley, Brett H., Scoates, James S., "Transforming An Upper-Year Mineral Deposits Class Through Interactive Engagement", 2014 GSA Annual Meeting in Vancouver, British Columbia, Poster No. 304-10, <https://gsa.confex.com/gsa/2014AM/webprogram/Paper250222.html> . (Poster PDF.)
6. Harris, Sara E., Schoonmaker, Jane E., Taylor, Stephen V., "University Students' Ideas About Climate Concepts Lack Systems Dynamics Thinking", 2014 GSA Annual Meeting in Vancouver, British Columbia, Paper No. 245-13, <https://gsa.confex.com/gsa/2014AM/webprogram/Paper246939.html> (Presentation PDF.)
7. Joshua Caulkins, Kenneth Hickey, James Scoates and Sara Harris, "Mapping For Mastery: Evolution of the University of British Columbia Oliver Field School, Okanagan, British Columbia", 2014 GSA Annual Meeting in Vancouver, British Columbia, Paper No. 183-11, <https://gsa.confex.com/gsa/2014AM/webprogram/Paper246638.html> (Presentation PDF.)

## 2013

8. Harris, Sara E. and Anne U. Gold. "Student Mental Models of the Greenhouse Effect: Retention Months After Interventions". American Geophysical Union Fall Meeting. San Francisco, California, United States. ED31D-08 (2013). [http://eos.ubc.ca/research/cwsei/resources/research/HarrisGold\\_AGU2013\\_retention\\_distribute.pdf](http://eos.ubc.ca/research/cwsei/resources/research/HarrisGold_AGU2013_retention_distribute.pdf)
9. Anne U. Gold and Sara E. Harris. "Measuring University students' understanding of the greenhouse effect – a comparison of multiple-choice, short answer and concept sketch assessment tools with respect to students' mental models". American Geophysical Union Fall Meeting. San Francisco, California, United States. ED32A-04 (2013). [http://eos.ubc.ca/research/cwsei/resources/research/DBER\\_GHE\\_Gold\\_Harris\\_Dec32013.pdf](http://eos.ubc.ca/research/cwsei/resources/research/DBER_GHE_Gold_Harris_Dec32013.pdf)
10. Harris, Sara and Anne Gold. "University students' mental models of the greenhouse effect: A comparison of two learning activities in moving students toward expert thinking". Geological Society of America Abstracts with Programs, Vol. 45, No. 7, p. 728 (2013). [http://eos.ubc.ca/research/cwsei/resources/research/T116\\_GHE\\_GSA2013\\_HarrisGold\\_USE.pdf](http://eos.ubc.ca/research/cwsei/resources/research/T116_GHE_GSA2013_HarrisGold_USE.pdf)
11. Jones, F., "Integrated Activities and Challenges of Assessing 'Higher level' Thinking Skills" [presentation](#) at the two-day workshop "Engineering, Sustainability, and the Geosciences", Colorado School of Mines, March 6-8, 2013.
12. Gilley, Brett, Jones, Francis, And Harris, "Changing The Teaching Culture In A Large Research Oriented Department", Paper No. 142-6, GSA Abstracts with Programs Vol. 45, No. 7. <http://eos.ubc.ca/research/cwsei/resources/research/GSA-131021.pdf>
13. Gilley, Brett, Jenéa Tallentire, "George Mercer Dawson: The "Little Giant" of Canadian Geology", Paper No. 147-9, GSA Abstracts with Programs Vol. 45, No. 7. <http://eos.ubc.ca/research/cwsei/resources/research/George%20Mercer%20Dawson.pdf>

## 2012

1. Sutherland, S., F. Jones, "Fossils, Facies and Geologic Time: Active Learning Yields More Expert-Like Thinking in a Large Class for Senior Science Students", poster presented at AGU Fall 2012. <http://eos.ubc.ca/research/cwsei/resources/research/326AGU-v2.pdf>
2. Gilley, B., B. Clarkston, "Does collaborative testing increase students' retention of concepts?" (poster), <https://gsa.confex.com/gsa/2012AM/webprogram/Paper212732.html>, GSA, Nov. 2012
3. Gilley, B., C. L. Atchison. "Lessons learned from developing workshops and programming for inclusive teaching", <https://gsa.confex.com/gsa/2012AM/webprogram/Paper213429.html>, GSA, Nov. 2012
4. Haffie, T., N. Patrito Hannon (Western University), F. Jones (UBC), T. Bernhardt (McGill), Sixty min. panel discussion: *Sustaining innovation in Canadian undergraduate education: A view from science*. See abstract at item "CS7.03"; F. Jones's "Prezi" presentation. [STLHE](#), June 2012.
5. Jones, F., G. Birol, Faculty of Science, UBC. "Cracker Barrel" Discussion: [What Kinds of Boundaries Help Students Improve Critical Thinking Skills? STLHE](#), June 2012.
6. Jones, F. (UBC EOAS) and J. Stewart (UBC Chemistry), Thirty min. workshop: *Optimizing Boundaries for Learning by Carefully Crafting Learning Goals*, ([slides](#) and [references](#)). [STLHE](#), June 2012.
7. McAlister, J.A., B. Gilley, "Teaching and learning in earth, ocean, and atmospheric sciences: preparing the next generation of post secondary educators, <https://gsa.confex.com/gsa/2012AM/webprogram/Paper212343.html>, GSA, Nov. 2012
8. Sutherland, S., F. Jones, "Fossils, Facies and Geologic Time: Active Learning Yields More Expert-Like Thinking in a Large Class for Senior Science Students" (poster), AGU, Dec 2012. <http://www.eos.ubc.ca/research/cwsei/resources/research/326AGU-v2.pdf>



## 2011

9. Adams, W., B. Gilley, and C. Wieman, "Development of a Faculty Perceptions Survey" American Association of Physics Teachers Winter Meeting, Jacksonville Florida (poster), 2011.
10. Gilley, Brett, "What Do You See? Using Video For Pre/Post Assessment Of Interactive Engagement", [http://gsa.confex.com/gsa/2011AM/finalprogram/abstract\\_194488.htm](http://gsa.confex.com/gsa/2011AM/finalprogram/abstract_194488.htm) , GSA, Oct. 2011.
11. Harris, Sara., Stephen V Taylor, Jane E Schoonmaker, Erin Lane, Roger Francois, Philip Austin, "Measuring Student Improvement in Lower- and Upper-Level University Climate Science Courses". <http://adsabs.harvard.edu/abs/2011AGUFMED11B0773H> , and [http://www.eos.ubc.ca/research/cwsei/resources/research/AGU2011\\_ClimateLitPoster.pdf](http://www.eos.ubc.ca/research/cwsei/resources/research/AGU2011_ClimateLitPoster.pdf)
12. Harris, Sara, "Effective Interventions: Helping Low Performers Learn How To Learn", [http://gsa.confex.com/gsa/2011AM/finalprogram/abstract\\_195168.htm](http://gsa.confex.com/gsa/2011AM/finalprogram/abstract_195168.htm) GSA, Oct. 2011.
13. Harris, Sara and Gilley, Brett, " 'Invention' Activities In An Introductory Lab: Minerals, Rocks, Biodiversity, And Earthquakes", [http://gsa.confex.com/gsa/2011AM/finalprogram/abstract\\_195035.htm](http://gsa.confex.com/gsa/2011AM/finalprogram/abstract_195035.htm) GSA, Oct. 2011.
14. Jolley, Alison, Jones, Francis, Harris, Sara, and Rhajiak, Jamil, "Correlating Knowledge Of Landscape Formation Timescales And Geologic Time Using A New Validated Concept Test", [http://gsa.confex.com/gsa/2011AM/finalprogram/abstract\\_195482.htm](http://gsa.confex.com/gsa/2011AM/finalprogram/abstract_195482.htm) GSA, Oct. 2011.
15. Jones, Francis, Johnson, Catherine, "Assessing The Impacts Of A Highly Interactive Planetary Science Elective Course For Senior Science Students", [http://gsa.confex.com/gsa/2011AM/finalprogram/abstract\\_195046.htm](http://gsa.confex.com/gsa/2011AM/finalprogram/abstract_195046.htm) GSA, Oct. 2011.
16. Jones, F., "Teaching, learning and assessing scientific skills early in an undergraduate degree", Western Conference on Science Education, U. Western Ontario, July 6-8, 2011. <http://www.wcse.ca/wp-content/slides/d2a.pdf>
17. Petcovic, Heather L., Caulkins, Joshua L., and Stokes, Alison, "Geologists' Perceptions Of The Value Of Field Camp", [http://gsa.confex.com/gsa/2011AM/finalprogram/abstract\\_196672.htm](http://gsa.confex.com/gsa/2011AM/finalprogram/abstract_196672.htm) GSA, Oct. 2011.

## 2010

18. Jones, F., M. Jellinek, M. G. Bostock, "Promoting & Measuring Scientific Reasoning Expertise of 2nd Year Students", American Geophysical Union Fall Meeting (poster), 2010. <http://www.eos.ubc.ca/research/cwsei/resources/research/AGU2010-PosterV7.pdf>
19. Taylor, R. and B. Gilley, "Teaching and Learning in the Earth and Ocean Sciences: Adding Geoscience Education to the Graduate Student Curriculum at UBC", National Association of Geoscience teachers (Pacific Northwest Section) Annual General Meeting (poster), 2010
20. Taylor, R. and B. Gilley, "Using Experiential Learning to Develop Teaching (and Learning) Skills: Training Graduate Students to Teach Earth and Ocean Sciences", Society of Teaching and Learning in Higher Education, Toronto (poster), 2010
21. Gilley, B., and S. Harris. "Group Quizzes as a Learning Experience in an Introductory Lab". Geological Society of America Abstracts with Programs, Vol. 42, No. 5, p. 588, 2010. [http://gsa.confex.com/gsa/2010AM/finalprogram/abstract\\_182211.htm](http://gsa.confex.com/gsa/2010AM/finalprogram/abstract_182211.htm)

## 2009

22. Dohaney, J., E. Brogt, and B. Kennedy, "Successful Group Work in an Introductory Mineralogy Lab Setting", Geological Society of America Abstracts with Programs, Vol. 41, No. 7, p. 92, 2009, [http://gsa.confex.com/gsa/2009AM/finalprogram/abstract\\_161496.htm](http://gsa.confex.com/gsa/2009AM/finalprogram/abstract_161496.htm) .
23. Gilley, B., S. Harris, J. Taylor, K. Smith, B. Yu, S. Wolfman, "Expert Panel: Changing the Culture of Science Education, Improving University Teaching (IUT) 34th International Conference, Vancouver, BC, Canada, 2009.
24. Gilley, B., S. Harris, G. Spiegelman, J. Taylor, S. Wolfman, B. Yu. "Changing the Culture of Science Education at a Major Research University". Proceedings of the 34th International Conference on Improving University Teaching. Vancouver, BC, 2009.
25. Harris, S.E., K. Smet, F. Jones, and D. Steyn. "Can Critical Incident Questionnaires Help Improve Metacognitive Skills?" Geological Society of America Abstracts with Programs, Vol. 41, No. 7, p. 602, 2009, [http://gsa.confex.com/gsa/2009AM/finalprogram/abstract\\_165586.htm](http://gsa.confex.com/gsa/2009AM/finalprogram/abstract_165586.htm)
26. Jolley, A., E. Lane, "A New Tool for Investigating Undergraduate Attitudes about Earth Science", Geological Society of America Abstracts with Programs, Vol. 41, No. 7, p. 94 (poster), 2009. [http://gsa.confex.com/gsa/2009AM/finalprogram/abstract\\_164998.htm](http://gsa.confex.com/gsa/2009AM/finalprogram/abstract_164998.htm)
27. Jolley, A., "Landscape Identification and Formation: the development of a test to measure student knowledge and confidence", Western Inter-University Geosciences Conference, Saskatoon, SK (poster), 2009.
28. Jones, F., "Design and Use of Midterm and End of Term Student Surveys to Improve Learning", Proceedings of the 34th International Conference on Improving University Teaching. Vancouver, BC, 2009.
29. Jones, F., S. Harris, C. Wieman, B. Gilley, E. Lane, J. Caulkins, "Emerging Geoscience Education Research (GER) at the University of British Columbia", AGU Fall Meeting (poster), 2009. <http://www.eos.ubc.ca/research/cwsei/resources/research/GERatEOS-v3.pdf>



30. Jones, F., S. Harris and D.Steyn, "Improving Metacognitive Skills of 2nd year Environmental Science Students: What to Measure?", presented at the 2 day workshop "The Role of Metacognition in Teaching Geoscience", NAGT (National Association of Geoscience Teachers), and NSF (National Science Foundation) at Carleton College, Northfield Minnesota, 2009.
31. Lane, E., and S. Harris. "Quantifying student behavioral engagement based on teaching practices in a large class". Proceedings of the 34th International Conference on Improving University Teaching. Vancouver, BC, 2009.
32. Lane, E. S., S. Harris "Quantifying student behavioral engagement based on teaching practices in a large class", Improving University Teaching (IUT) 34th International Conference, Vancouver, BC, Canada (poster), 2009.
33. Lane, E. S., "Clickers: can a simple technology increase student engagement in the classroom?" International Conference on Information Communication Technologies in Education (ICICTE), Corfu, Greece (poster), 2009.
34. Yu, B., and B. Gilley, "Benefits of Invention Activities for Cross Cultural Students", International Conference of Education, Research and Innovation, Madrid Spain, 2009.

## 2008

35. Gilley, B. and S. Harris, "Optimization of, and Measuring Student Gains in, An Introductory Geoscience lab Course", Joint Annual Meeting GSA / SSSA-ASA-CSSA / GCAGS-GCSSEPM (poster), 2008, <http://a-c-s.confex.com/crops/2008am/webprogram/Paper47438.html>
36. Kennedy, B., F. Jones, R. Stull, S. Harris, B. Gilley, T. Frappe and C. Wieman, "Maximizing student learning in an introductory level Natural Disasters Class", National Association of Geoscience Teachers – Pacific Northwest Section Annual Meeting, Yakima, Washington (poster), 2008. <http://www.eos.ubc.ca/research/cwsei/resources/research/poseter-August2008-BKennedy.pdf>
37. Kennedy, B., B. Gilley, and T. Frappe, "Does Earth and Ocean Sciences Change How Students See the World? Assessing How Earth and Ocean Sciences Courses Affect Student Attitudes". Joint Annual Meeting GSA / SSSA-ASA-CSSA / GCAGS-GCSSEPM, Houston, 2008. <http://a-c-s.confex.com/crops/2008am/webprogram/Paper47387.html>

## Workshops which EOS-SEI people have developed and/or facilitated or co-facilitated

### 2014: EOAS personnel are underlined.

- 53 *Extreme Makeover Geosciences Style; Infusing Existing Curricula with the Spirit of the New Next Generation Science Standards (NGSS): Integrating Content, Scientific and Design Practices, and Cross-Cutting Themes*. Co-sponsored by NAGT and the Geoscience Education Division of GSA, October 18, 2014. **Facilitated by:** Aida Awad, Susan Buhr Sullivan, Sara Harris, Cheryl Manning. [http://nagt.org/nagt/profdev/workshops/4pack/2014/GSA14\\_d.html](http://nagt.org/nagt/profdev/workshops/4pack/2014/GSA14_d.html)
- 52 *Research-Based Instructional Strategies for Fostering Behavioral Change*, **Facilitated by:** Kerry Knox, Brett Gilley, Tara Ivanochko, International Improving University Teaching conference, Vancouver BC, July 2014.
- 51 *A Hands-on Workshop on Evaluating Teaching Enhancement Projects*, UBC April 2014 (twice) and June 2014. Facilitated by Francis Jones, Ido Roll, Andrea Han, Gulnur Birol.
- 50 *Learning Together? Using Two Stage Exams to Reinforce Concepts*, York University, Toronto Ontario, January, 2014. **Facilitated by** Brett Gilley.
- 49 *Teaching Large Groups - Brett Gilley*, York University, Toronto Ontario, January, 2014. **Facilitated by** Brett Gilley.

### 2013:

- 48 *Bringing Active Learning into Your Classroom. American Geophysical Union/National Association of Geoscience Teachers*. 4-hour workshop at the American Geophysical Union Annual Meeting, San Francisco, CA, USA, 10 December 2013. (Sara Harris and Anne Gold)
- 47 *"Integrated Activities and Challenges of Assessing 'Higher level' Thinking Skills"* at the two-day workshop "Engineering, Sustainability, and the Geosciences", Colorado School of Mines, March 2013. (Francis Jones)
- 46 *Active Learning Teaching Strategies*, Online Workshop for Inclusive Design For Learning Class, March 2013. (B. Gilley)
- 45 *Learning Outcomes (goals, aim, purposes, objectives, etc.)*, Workshop, UBC Senate Curriculum subcommittee, March 2013. (B. Gilley and Simon Bates)
- 44 *Using Your Expertise in Class*, EOSSEI Workshop UBC, April 2013. (B. Gilley)
- 43 *Learning Together? Using Two Stage Exams to Reinforce Concepts* given at the following .... (B. Gilley)  
- Pearson Strategies for Success Conference Toronto, Ontario, May 2013



- CTLT Institute UBC, May 2013
- UBC-Okanagan Kelowna, BC, August 2013
- UBC Faculty of Science's Science Supper Series, Sept 2013

- 42 *Teaching Large Groups*, Simon Fraser University, Burnaby, BC, Sept 2013. ([B. Gilley](#))
- 41 *Instructional Skills Workshop for MAGNET*, UBC, October 2013. ([B. Gilley](#) and [J. McAlister](#))
- 40 *Active Learning Teaching Strategies*, Online Workshop for Inclusive Design For Learning Class, Oct 2013. ([B. Gilley](#))

**2012:**

- 39 Round table discussion: *"What Kinds of Boundaries Help Students Improve Critical Thinking Skills?"* at Society for Teaching and Learning in Higher Education (STLHE), Montreal, Quebec, June, 2012. ([F. Jones](#))
- 38 Workshop: *"Optimizing Boundaries for Learning by Carefully Crafting Learning Goals"* at Society for Teaching and Learning in Higher Education (STLHE), Montreal, Quebec, June, 2012. ([F. Jones](#))
- 37 *Lessons we Learned About Teaching. Teaching Orientation for New Faculty, UBC*. 20 August 2012 (S. Harris, panelist).
- 36 *Teaching Climate Complexity. Online workshop through the Climate Literacy & Energy Awareness Network (CLEAN)*. May 8-16, 2012 ([S. Harris](#))
- 35 *Active Learning*, UBC Biol 535 - January 2012. ([B. Gilley](#) and Jared Taylor)
- 34 *5 Years and Counting: An update on the Carl Wieman Science Education Initiative*, Douglas College Faculty of Science Professional Development Day, Langley, BC April 2012. ([B. Gilley](#))
- 33 *Advice for Distance Education TAs*, Earth and Ocean Science Department April 2012. ([B. Gilley](#))
- 32 *Student Reflection Panel*, CWSEI End of Year Event April 2012. ([B. Gilley](#) moderated)
- 31 *Geochemistry Made Fun!* Pacific Museum of the Earth Teacher workshop, October 2012 ([B. Gilley](#) and [Diane Hanano](#))
- 30 *Teaching Large Groups*, Pharmacy Faculty Retreat , August 2012. ([B. Gilley](#))

**2011:**

- 29 *Learning Together? Using Group Exams in your courses*, Earth and Ocean Science Dept. Feb 2011. (B. Gilley)
- 28 *Using 2 Stage (Group) Exams in Your Courses*, UBC Celebrate Learning Week Sept 2011. (B. Gilley)
- 27 *Using Clickers in Large Lectures*, Simon Fraser University Oct 2011. (B. Gilley and Jarad Taylor)
- 26 *Bringing the bottom up: An intervention that worked. Science Supper Series, UBC*, 20 January 2011.
- 25 *Targeting Challenging Geoscience Concepts with In-Class Activities*. Workshop at the BC Earth Science Articulation Meeting, 12 May 2011. (F. Jones and S. Harris)
- 24 *Bringing the bottom up: An intervention that worked. Science Supper Series, UBC*, 20 January 2011. (S. Harris and others)

**2010:**

- 23 *Using Group Exams in Your Classes – University of Vancouver Island, Nanaimo – September 2010* (B. Gilley)
- 22 *Applying Cognitive Psychology to Enhance Educational Practice Group / Science Education Initiative meeting*, Boulder Colorado, June 2010.
- 21 *Group Exams: Learning Together?* Douglas College, New Westminster, October 2010. (B. Gilley)
- 20 *Using clickers in large lectures*, Simon Fraser University, Burnaby, Nov. 2010. (B. Gilley and others)

**2009:**

- 19 *Clickers in the Classroom*. UBC Applied Science 2nd Learning Conference, 15 May 2009. (S. Harris)
- 18 *Team Based Learning in Large Classes*, UBC Applied Science 2nd Learning Conference, 15 May 2009. (F. Jones and others)
- 17 *How to use clickers effectively in your classroom*. National Association of Geoscience Teachers, Pacific Northwest Section, Annual Meeting, Vancouver, BC, Canada, 2009. (E. Lane)
- 16 *Clickers: How to Effectively Use a Simple Technology To Increase Student Engagement In Your Class*. International Conference on Information Communication Technologies in Education (ICICTE), Corfu, Greece, 2009. (E. Lane)
- 15 *Closing the loop: connecting learning goals to assessment*, workshop for the 34<sup>th</sup> annual Improving University Teaching



conference, Simon Fraser University, July 2009. (F. Jones, B. Gilley, E. Lane)

- 14 TAG Institute, May 2009: Closing the Loop: Connecting learning goals to assessment
- 13 *ISW Theme Sessions; Lesson Planning*, 1st Int'l Instructional Skills Workshop Conference, Doha, Qatar, April 2009
- 12 *ISW Theme Sessions; Learning*, 1st Int'l Instructional Skills Workshop Conference, Doha, Qatar, April 2009
- 11 *Classroom Assessment Techniques*, 1st Int'l Instructional Skills Workshop Conference, Doha, Qatar, April 2009

**2008:**

- 10 *Learning Goals* for EOS faculty, January 2008
- 9 *Learning Goals Workshop*, at the Goldschmidt Conference of the Geochemical Society and the European Association of Geochemistry, UBC, July 2008.
- 8 *Learning Goals Workshop*, at the annual Geology Articulation, Nanaimo, May 2008
- 7 *Bringing Learning Goals to Fruition*, UBC Celebrate Learning Week, Oct. 2, 2008.
- 6 *Crafting Useful Learning Goals*", Faculty of Science Skylight Supper Series, Oct. 23, 2008.
- 5 *Getting Started with clickers in the classroom*. Seminar for the UBC Psychology Department. 7 Nov 2008.
- 4 *Keeping the feedback loop active: Critical incidents for learning*. UBC Celebrate Learning Week event, 1 Oct 2008.
- 3 *Using the "Critical Incident Questionnaire" in ENVR 200*. ISoTL Network Event: Practice in Progress, Center for Teaching and Academic Growth, UBC. Vancouver, BC, April 2008.
- 2 *Getting started with clickers in the classroom*. Office of Learning Technology Reading Week e-learning Institute, UBC. Vancouver, BC, Feb 2008.

**2007:**

- 1 *The Pedagogy of Clickers*. Seminar in association with Team-based Learning workshop, UBC, Vancouver, BC, May 2007.