

Think-Pair-Share (Peer Instruction) Resources

Books – with conceptual questions

- astronomy
 - Duncan, Douglas (2006), *Clickers in the Astronomy Classroom*, Pearson.
 - Green, Paul J. (2003), *Peer Instruction for Astronomy*, Pearson.
 - Slater, Timothy F. & Adams, Jeffrey P. (2003), *Learner-Centered Astronomy Teaching: Strategies for Astro 101*, Pearson.
- physics
 - Mazur, Eric. (1997), *Peer Instruction: A User's Manual*, Pearson.
- all disciplines
 - Bruff, Derek (2009), *Teaching with Classroom Response Systems: Creating Active Learning Environments*, Jossey-Bass. Web site at http://derekbruff.org/?page_id=2

Web Resources

- general research on interactive engagement
 - Hake paper on IE – <http://www.physics.indiana.edu/~sdi/ajpv3i.pdf>
- specific research on Peer Instruction
 - website for the Mazur group at Harvard – <http://mazur.harvard.edu>
- general overview of method
 - Carl Wieman Science Education Initiative – <http://www.cwsei.ubc.ca/>
 - Clicker Resource Guide (36 pages) – http://www.cwsei.ubc.ca/resources/files/Clicker_guide_CWSEI_CU-SEI.pdf
 - videos under “Clickers in the Science Classroom” – http://www.cwsei.ubc.ca/resources/SEI_video.html
 - Science Education Resource Center at Carleton College – <http://serc.carleton.edu>
 - classroom response systems – <http://serc.carleton.edu/sp/library/classresponse/index.html>
 - FLAGuide site – <http://archive.wceruw.org/cl1/flag/default.asp>
 - Prather/Brissenden instructor apprenticeship article – https://astronomy101.jpl.nasa.gov/files/Situated%20Apprentice_AER.pdf
- resources for conceptual questions
 - <http://astro.unl.edu/classaction> – Nebraska, astronomy & some physics
 - <http://www.colorado.edu/physics/EducationIssues/cts/index.htm> – Colorado, physics
 - <https://galileo.seas.harvard.edu/login/> – Harvard, physics
 - <http://www.physics.ohio-state.edu/~physedu/clicker/index.html> – Ohio State, physics
- resources for conceptual questions in other disciplines
 - http://serc.carleton.edu/NAGTWorkshops/teaching_methods/conceptests – geoscience
 - <http://serc.carleton.edu/introgeo/justintime> – geoscience
 - <http://serc.carleton.edu/introgeo/interactive/conctest.html> – geoscience
 - <http://www.jce.divched.org/JCEDLib/QBank/collection/ConceptTests/> – chemistry
 - <http://people.brandeis.edu/~herzfeld/conceptests.html> – chemistry
 - <http://www.math.cornell.edu/~GoodQuestions/> – math