Here are some papers that might provide a useful starting point for looking at both the current state of college science education and “best practices” for learning science, based on education research. All of the reform documents (e.g. Bio 2010, Glenn commission) agree that bio education needs reform. There is less consensus on exactly what/how to change.


Hoskins G., Stevens L,M., Nehm R.(2007) Selective use of primary literature transforms the classroom into a virtual laboratory. Genetics 176: 1381-1389 This outlines the CREATE approach—you might find the student interview excerpts interesting.


Tanner, K., and Allen, D., (2003) Approaches to cell biology teaching: Mapping the journey—concept maps as signposts of developing knowledge structures. Cell Biology Education 2: 133-136. There is a lot of info online about concept mapping, including free software

The journals Cell Bio Ed/Life Sciences Ed and Journal of Undergraduate Neuroscience Education and Evolution Education and Outreach are also worth scanning from time to time—they are free online and often publish “how to do it” articles on methods that have been tested in the college classroom. CBE/LSE also has an ongoing series of articles by Deborah Tanner and Kimberley Allen that I have found quite useful