We have all heard the recent calls for college biology faculty to change how we teach. Some argue that we are failing to develop our students' critical thinking skills. And funding agencies want to see proposals that transform the science classroom. Such calls for change are often based on evidence from cognitive psychology and education studies on how people learn. As scientists, we base decisions on evidence and we want our students (and our fellow citizens) to do the same -- but are the calls to change how we teach supported by compelling evidence? And can we use that same evidence to convince our students to adopt different approaches to their learning? This talk will propose (and try to demonstrate) that bringing a basic understanding of the neurobiology of learning into this conversation can provide incentive to both teachers and learners to respond to calls for change in biology education.