Teaching for Conceptual Understanding in Science

*Teaching for Conceptual Understanding in Science* is by Richard Konicek-Moran, a researcher and professor who wrote the *Everyday Science Mysteries* series, and Page Keeley, a practitioner and teacher educator who writes the *Uncovering Student Ideas in Science* series.

Page Keeley explains in an NSTA Interview how and why she first began using formative assessment probes. When Page Keeley was a middle school teacher back in the 1990’s, she read an article, “Teaching for Conceptual Change Confronting Students' Ideas,” that transformed her teaching.

She was very impressed with the teacher’s approach of taking her students through the process of confronting their strongly held PREconceptions by asking interesting, probing questions to guide her instruction and her students’ learning. It is more important to assess for student learning, not of student learning.

To view Page Keeley’s interview, please see the following link: http://youtu.be/cavz05XYWyk

**Misconceptions and Preconceptions**

There has been a dilemma facing ALL educators for many years: Why don't even the brightest students truly grasp basic science concepts? There was a documentary done in the 1980's about how everyone, no matter your education...even a Harvard education, goes through life with strongly held misconceptions, and/or preconceptions, about science content.”

Derek Muller - TED Talk
"Physics R Us"
http://youtu.be/AcX3lW00nuk
"Always start with the misconceptions."

A Private Universe
http://youtu.be/TrXaQu_qGeo

http://youtu.be/GEmuEWjHr5c
"This will revolutionize education."