

Standards Analysis

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When examining the four web sites I observed that all the standards related themselves to problem solving and engineering design in one way or another. I felt that the commonality of the concepts, skills and expectations were very similar. In the www.corestandards.org the math standards all call upon problem solving skills as well as some design to support that skill. Scholars at all levels are expected to understand, represent, solve, design models, explain, and analyze as they learn and apply the skills. Next in www.nextgenscience.org the standards noted the importance of problem solving and engineering skills. Thus, mentioning similar objectives in the standards such as making observations, using tools to design, planning, conducting, analyzing data, and constructing an argument. Doing this by using models, and gathering sense of information as well as constructing, testing, and modifying designs. The www.iteea.org standards for technological literacy are very similar as well. Its objectives include developing understanding of the characteristics, effects, relationships, roles, and influence. It also states the importance of the attributes, troubleshooting, research, developing, inventing, experimenting, and problem solving of the design. Finally, www.nctm.org mentions problem solving as being the major means of learning mathematics as well as using the same objectives from above to reason, solve, explain, reflect upon, design, and develop understanding.

These standards differ from one another because of the overall goal of the standards. The standards all differ across content depending on what skill is being addressed for mastery. Whether it is science, technology, math or engineering the process of how the scholars reach that deep understanding/mastery of the concept requires similar objectives. It is the driving force of today's standards.

I believe that engineering design and problem solving go hand in hand. It is a unifying skill as it is needed as scholars develop understanding to the extent of being able to design, troubleshoot, solve, explain, construct, reflect on, improve, and apply across every content they learn. As scholars develop these skills they can move forward in their education driving towards being career or college ready.