

Analyzing the Next Generation Science Standards

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The Next Generation Science Standards (NGSS) have several standards that align with problem solving and engineering design. On the NGSS website, each of the standards is listed along with a “Science or Engineering Practice” or SEP for short. The SEPs tell the educator what problem solving skill(s) their student would be able to use demonstrate for a particular standard(s).

As mentioned above, each standard on the NGSS website contains an SEP, as well as a Disciplinary Core Ideas, and Cross-Cutting Concepts. The SEPs provide the educator with the ability to explain to students the nature of science. There also some disciplinary core ideas which are the basic ideas that students are exploring in that standard. The final component that is similar throughout the NGSS are the Cross Cutting Concepts. This is where teachers can see how best to integrate this lesson into other parts of their day. The largest difference I noted is that each grade has a variety of standards and skills to choose from in order to incorporate other subject areas into the science classroom.

I believe that engineering design is a unifying concept/skill because students are able to see how a particular skill can be explored and used in real life. This helps student achievement overall because they are able to relate to the skill on a deeper and a more personal level.