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Engineering Education in K-12 Schools

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Engineers rely on physicists as well as other scientists and mathematicians to explain the world in which we live. Engineers take this knowledge of the world and use it to create the world that never was. The teaching of physics and other sciences as well as mathematics is critical to maintaining our national workforce. Science and mathematics education are inherently different, however, from engineering education. Engineering educators seek to enable students to develop the habits of mind critical for innovation. Through understanding of the engineering design process and how it differs from the scientific method, students can apply problem and project based learning to solve the challenges facing society today. In this talk, I will discuss the elements critical to a solid K-12 engineering education that integrates science and mathematics to solve challenges throughout the world.