



Why teach engineering to children?

There are many reasons to introduce children to engineering in elementary school:

- **Children are fascinated with building and with taking things apart to see how they work**, they engineer informally all the time. By encouraging these explorations in elementary school, we can keep these interests alive. Describing their activities as "engineering" when they are engaged in the natural design process can help children develop positive associations with engineering, and increase their desire to pursue such activities in the future.
- **Engineering projects integrate other disciplines.** Engaging students in hands-on, real-world engineering experiences can enliven math and science and other content areas. Engineering projects can motivate students to learn math and science concepts by illustrating relevant applications.
- **Engineering fosters problem-solving skills**, including problem formulation, iteration, testing of alternative solutions, and evaluation of data to guide decisions.
- **Engineering embraces project-based learning, encompasses hands-on construction, and sharpens children's abilities to function in three dimensions** - all skills that are important for prospering in the modern world.
- **Learning about engineering will increase students' awareness of and access to scientific and technical careers.** The number of American citizens pursuing engineering is decreasing. Early introduction to engineering can encourage many capable students, especially girls and minorities, to consider it as a career and enroll in the necessary science and math courses in high school.
- **Engineering and technological literacy are necessary for the 21st century.** As our society increasingly depends on engineering and technology, our citizens need to understand these fields.