

Building the Future

Tau Beta Pi – The Engineering Honor Society

Place and Time - Iowa State University Campus – Tuesday, 15 November 2016, 9:15 am – 1:30 pm

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Building the Future is an outreach project of the Iowa Alpha Chapter of Tau Beta Pi – The Engineering Honor Society. The event brings middle school students and their teachers to the ISU campus to experience hands-on-engineering. The activities are all based around the scenario of a tornado hitting a small Iowa town and what engineers can do to help. Following a general session at the beginning of the day, the students perform 4 different activities all specially designed to introduce them to various types of engineering: (i) using popcycle sticks and brass fasteners, they built a bridge to replace one destroyed in the tornado that allows an ambulance to cross a ravine (ii) they program a search and rescue robot using Lego Mindstorms kits to search for survivors (iii) they built a wind energy generator to provide power for the emergency efforts, and using groundwater models they investigate how chemical spills or other pollution might affect the ground water and water supply for the town. The day concludes with a general session about what they learned that different engineers do.

Four groups of students rotate between the 4 activities, each of which lasts about 45 minutes. Lunch - two pieces of Pizza and a drink will be provided at a cost of \$3.00 per person.

Following are pictures taken during a previous Building the Future event.

