Engineering Our Future – Teaching Engineering in the High School Setting

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Why Teach Engineering

• The country needs more engineers, especially women engineers
• Engineering provides a context for teaching math and science that provides relevance and meaningful applications
• Engineering is (should be) taught in a project-based format that is fun!!
How We Got Started

• High Schools came knocking
• Reviewed existing curricula (there are some good programs)
• Developed new model
  – Affordable
  – Adaptable
  – Accessible
  – Scalable
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• Introduction to Engineering Course
  – Engineering Disciplines
  – Engineering Design Process
  – Teamwork
  – Communication
  – Problem Solving

  – Most teaching from web-based instructional videos
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• Project-Based
  – Do engineering more than talk about engineering
  – Instructor led
  – Teams
  – Projects not labs
  – Many possible solutions
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• Course Outcomes
  – Students have experiences that inform their decision to pursue (or not) engineering in college
  – Technologically literate citizens
  – Development of critical thinking, collaboration and communication skills
  – Math and science have increased relevance as tools for solving problems
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• What Does It Take?
  – The right teacher (and administrator)
  – Space
  – About $2500
  – A little training
  – Willingness to struggle the first year
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• Started with 4 schools and about 80 students

EYF Ohio
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Welcome to Engineering Our Future
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