

Engineering Outreach for Teachers and Students



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The Outreach Equation

- ✱ 1. Find the Teachers that are Interested
 - ✱ 2. Motivate the teachers
 - ✱ 3. Motivate and Inspire the students
 - ✱ 4. Support their success
- ✱ You + Engineering = Fun + Success

Motivate the Teachers




- ✦ Contact them early in the year.
- ✦ Link your event to something they are already doing.
- ✦ Make it easy for them.
- ✦ Leave something behind.



Talking to teachers - Engineers Make a Difference

Engineers are the concept people of our designed world.

- ✱ A doctor sends a microscopic robot into a patient's artery to destroy a blood clot.
- ✱ Disneyland wants a new thrill ride.
- ✱ People want to see the yellow line when they watch a football game.
- ✱ People need electric cars.
- ✱ NASA wants to put a person on Mars.
- ✱ People want to take pictures, watch movies, check email and listen to music on their cell phones.



Engineering can also be a launching pad for other professions

- ✦ Many engineers become patent attorneys
- ✦ Biomedical engineers have the highest acceptance rate into medical school
- ✦ More engineers are CEO's of companies than any other major
- ✦ Many become financial analysts on Wall Street
- ✦ Some go into politics
- ✦ Many become teachers or writers

Many Career Options



- People who enjoy working with other people and traveling may become sales or field service engineers.
- People who enjoy life's big picture may become the systems engineers who put all the pieces together.
- Creative people or people who constantly have new ideas about everything may enjoy working as design engineers.
- People who enjoy conducting experiments or working in laboratories may enjoy working as test engineers.

The Problem with Engineering



- ✦ Engineers are terrible marketers
- ✦ Math and science scare people away/society accepts that these subjects are difficult.
- ✦ Many people don't understand what engineering is.
- ✦ Many people don't understand what engineers do.
- ✦ Many people don't understand how engineering impacts lives and how these professions can lead to rewarding careers.

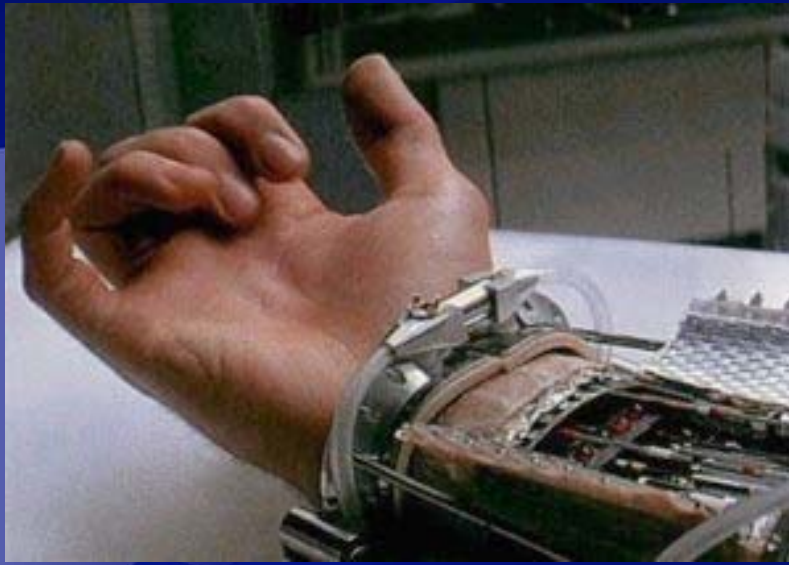
Motivate and Inspire students (You have to get creative!)



- ✦ Save the World!
- ✦ Engineering is about people and making life better.
- ✦ Create Glamorous Associations
- ✦ Find out what students like and link engineering back to it
- ✦ Get Parents Involved



People Engineering



- ★ Biomedical Engineering is now enrolling 50% women!
- ★ Satisfies the need to feel that you contribute directly to the well-being of others.

Create Hollywood or Glamorous Associations

- ★ We have to make the pop culture links
 - ★ Show students how Dr. Octopus in Spiderman was an engineer.
 - ★ Show how Willy Wonka was an engineer.
 - ★ Ben Affleck played an engineer in Paycheck.
 - ★ Jody Foster played an engineer in Flight Plan.
- ★ Marvel comics are a great place to start discussions
- ★ Other engineers include Ashton Kutcher, Cindy Crawford, Montel Williams, Neil Armstrong, Herbie Hancock

Sports

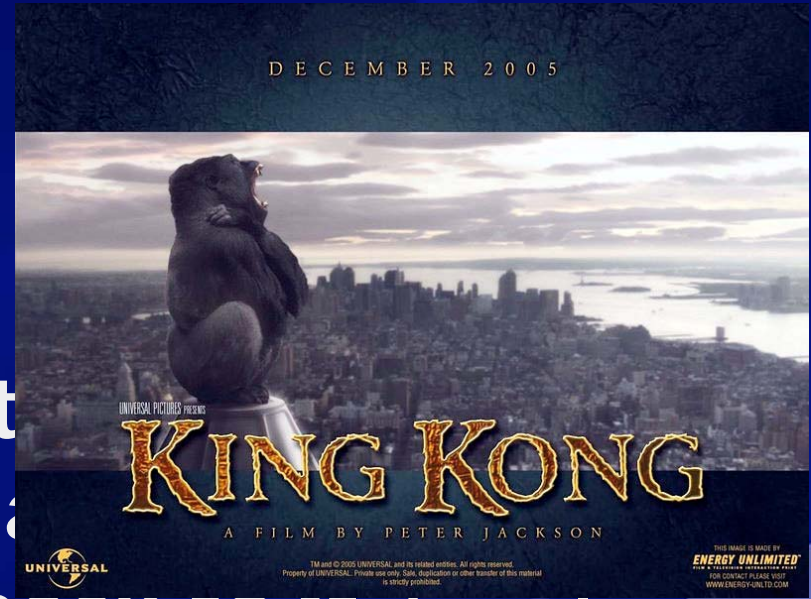


Find out what students like about engineering back to

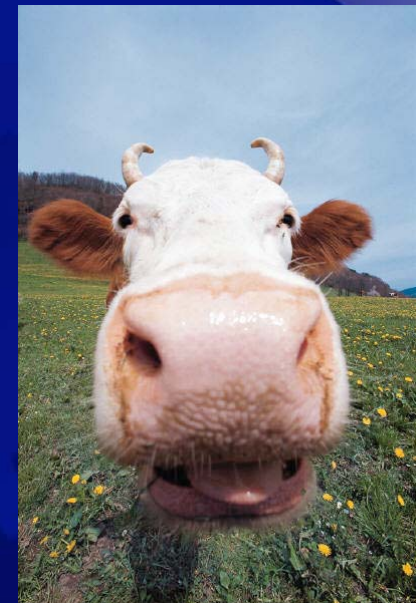
Roller Coasters



Video & Film



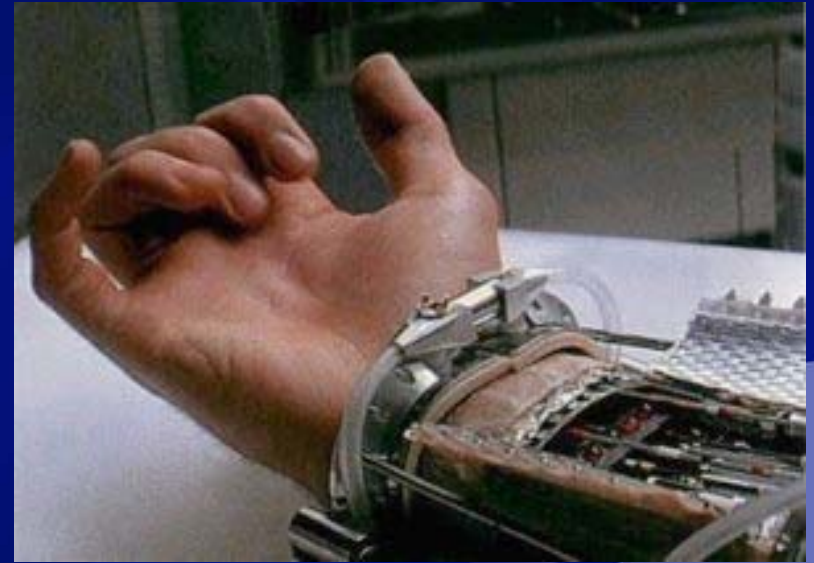
Animals



Space Exploration



Medicine



Music



★ macy's way to shop®



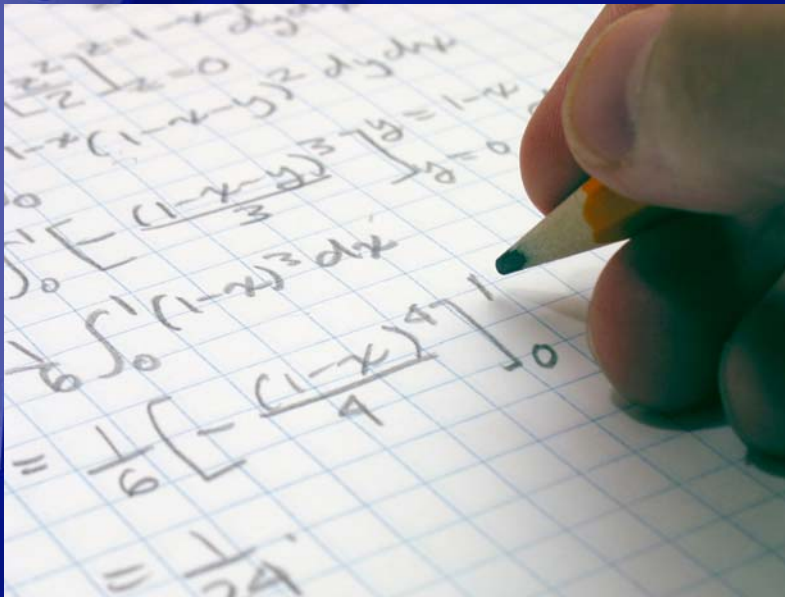
Shopping

Even Macy's hires
engineers!

Eating



Math is just one tool in the box



- ✦ Many students shy away from engineering because of the math.
- ✦ Math and science are tools to understand the world

What Makes a Good Engineer?



- ★ Technical Skills
- ★ Creativity
- ★ Passion
- ★ Energy
- ★ Communications skills
- ★ Teamwork Skills
- ★ Excitement about what you do

Do What You Love!

- ☀ Follow your dreams
- ☀ There is something for everyone in engineering.
- ☀ There are more than 25 major branches and 100 specialties.



Support their success



- ✦ Leave something behind
- ✦ Encourage them to contact you
- ✦ Offer to come back with new and improved resources
- ✦ Call to check in - it's all about relationships



You + Engineering = Fun + Success