

Inspiring Engineers

Workshop for K-12 Educators

Rutgers University School of Engineering
Friday, February 24, 2017
Busch Student Center

Time	Activity
8:15 - 9:00 am	Registration, continental breakfast, log in, pre-survey
9:00 - 9:15	Welcome
9:15 - 9:45	What is engineering, and why do I need to teach it?
9:45 - 10:30	Yes but what about those NGSS?
10:30 - 11:00	Groupwork
11:00 - 11:45	Working lunch
11:45 - 12:30	Presentation of lessons
12:30 - 1:30	How we talk to our students is key
1:30 - 2:00	Reflection, post-survey, certificates, closing

Agenda

I. Welcome

II. What is engineering, and why do I need to teach it?

What do we think engineering is?

[How would you describe an engineer?](#)

[Cool engineering](#)

Marshmallow challenge, watch video

[Build a Towerhttps://www.ted.com/talks/tom_wujec_build_a_towerr_Build a Team](https://www.ted.com/talks/tom_wujec_build_a_towerr_Build_a_Team)

Engineering thinking = iterative design

[The Engineering Design Process](#)

III. Yes but what about those NGSS...

[Review of standards](#), opportunities for each

Break into groups, research opportunities for engineering design

Working Lunch 11:30-12:30

IV. Presentation of lessons 12:30-1:00

Lesson chosen, source, connection to engineering

Add best resources or favorite lessons onto Padlet. Put grade level(s) in title.

V. How we talk to our students is important

[Harvard Implicit Association Test](#) (if we are on track and have time)

Girls and engineering presentation

Break into groups, make list of things can be done in classroom to encourage equity in STEM

Changing the conversation about engineering

[Simple solutions to big problems](#)

[Engineers Without Borders](#)

[Conversation starters](#)

VI. Closing

Post-workshop survey/reflection

How can we measure changes in teacher effectiveness?

Future steps: future survey, conference call, possible follow-up