

## Tips for Presenting by Grade

### ELEMENTARY (K– 2<sup>ND</sup> grade)

***Students in this age group:***

- Like colorful objects, very simple participatory activities, and silliness
- Like stories and sharing their personal experiences
- Know about their immediate world, based on their own limited experiences
- Can't always judge what's real from what's not
- Cannot interpret graphs, charts or diagrams; can be led through explanations of pictures of familiar things
- Don't know about the insides of machines or how things work
- May be noisy, silly and illogical but love to have fun!

***TIPS for this grade level:***

- Include continual change of pace and activities
- Be participatory; ask questions about the children's experience, ask children to imitate or generate movements, ask them to finish sentences or guess words
- Praise all contributions
- When talking to individual kids, consider kneeling to be on their level

### ELEMENTARY (3<sup>RD</sup>– 5<sup>TH</sup> grade)

***Students in this age group:***

- Like mastering new things and feeling powerful
- Don't usually look for causal mechanisms
- Like to share personal stories
- Learn by doing things and then talking about it or acting it out
- Don't know much about how things work
- Have odd bits of information that aren't always logically connected

***TIPS for this grade level:***

- Offer prizes for students who ask questions or answer questions correctly
- Spell things out literally
- Be careful of using metaphors and analogies – they will likely not understand them
- Arrange hands-on activities with multiple solutions
- Give them a “trick” they can practice or take home
- Have them perform in teams

## Tips for Classroom Presenting

### MIDDLE SCHOOL (6<sup>TH</sup>– 8<sup>TH</sup> grade)

#### ***Students in this age group:***

- May conform to peer group; want to fit in and be cool, not different or unique
- Like demonstrating their knowledge of things
- Are interested in oddities of nature and impressed by extreme numbers
- Are highly self-involved (older middle school)
- Enjoy sarcasm

#### ***TIPS for this age group:***

- Tough age group to get their attention
- Hook 'em early - engage students right from the start by asking questions
- Use examples of engineering in their everyday lives; you could ask them what is present in the classroom that an engineer made or ask them to pick up their feet and tell you what an engineer had to do with the shoes on their feet
- Keep them involved throughout; avoid jargon and be dynamic, move around
- Encourage them to ask questions and tell them there are no stupid ones
- Assure them they are smart and can accomplish great things
- Have them perform in teams

### HIGH SCHOOL (9<sup>TH</sup>–12<sup>TH</sup> grade)

#### ***Students in this age group:***

- Are concerned about how to get from being a student to being an adult
- Are often unrealistic about careers and imagine themselves in glamorous professions
- Are highly self and peer involved
- Like to be treated seriously and responsibly
- Like arcane knowledge sets, whether it's Harry Potter trivia or video gaming strategy

#### ***TIPS for this age group:***

- Share a few of your own experiences as a student in high school and be yourself
- Get into activity as quickly as possible so students connect with engineering in a very real, hands-on way
- Use examples that are familiar to them in their everyday world
- Have them perform in teams
- Ask the students questions that create visual pictures in their mind:
  - Imagine you were doing this...
  - What would you do if...
- Model, in word and manner, that they are smart enough to do almost anything; the barriers to achievement are willingness to plan, to persevere, and to work hard