



# YOU Can Make This!

**Presenter Training Module  
to accompany the classroom presentation PowerPoint  
for Engineers Who Visit Classrooms K-12**

**Goal: To Promote Careers in Design Professions**

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# Doing a classroom visit? The goal is the 4 E's:

*Explain. Engage. Educate. Excite.*

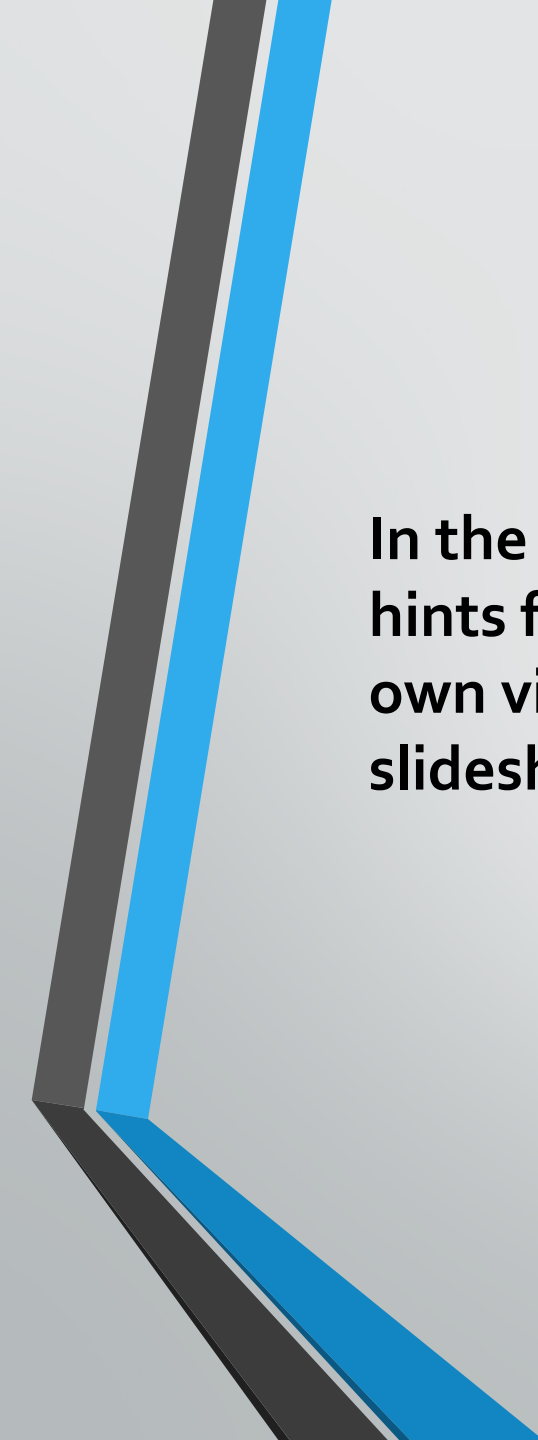
You have been invited to make a presentation about your engineering career in a classroom. Emphasis on STEM curriculum is THE opportunity to promote our important work in designing our built environment.

Maximize your classroom time! Get the kids excited to explore engineering careers!



**YOU Can Make This!** is a 45–60-minute PowerPoint presentation for you to use when you visit a K-12 classroom, either virtually or in person.

- This module is background information and instructions for how to use the PowerPoint presentation.
- It provides prep suggestions to accompany the slides for how to most effectively use this program. You will adjust it to your own personal presentation style, making your delivery conversational and engaging!



**In the actual PowerPoint show, in the notes section are additional helpful hints for many of the slides. Some slides give you the option to add your own visuals of your own projects. This is entirely up to you as the slideshow is complete as is.**

# Overview

**YOU Can Make This!** is a 45–60-minute PowerPoint presentation. You can expand or contract it, as appropriate.

1. It has 10 topic areas to discuss. It provides structure yet encourages you to chat naturally and comfortably.
2. It allows you to use it as a basic presentation structure, while customizing it to the appropriate age level or group.
3. It includes an interactive activity which you can choose to use, or you can insert your own activity at that spot.

# HINTS: How to align with the students as the engineer classroom presenter:

The ten content segments can be expanded or collapsed depending on the age and interests of the students.

- *You will change the vocabulary, examples, and level of detail/sophistication depending on the age of the students.*
- *In advance, chat with the classroom teacher for ways to adjust your remarks and activities for the specific grade level and experience level of the students. Find out the level of STEM activity the students are familiar with.*



In preparation for using **YOU Can Make This!** in the classroom, **you will need:**

- A **personal story** to tell at the outset!
- Fill in your name and firm and type of engineer (not just PE after your name) on the title slide of the PowerPoint presentation.
- **Optional: photos of your own projects.** The photos in this PowerPoint are complete, AND if you want to showcase your own projects, you are welcome to add photos of your own/your firm.

# Storytelling at the outset engages your students!

**Create** and tell a story about yourself so the kids get to know about you and see you as a regular person right from the start (not just an engineer or someone's parent).

*A successful STEM presentation must have a really interesting personal story. If we don't care about the person who is sharing the information, if we are not invested in their story or their success, the experience falls flat.*

Shelby Lees, senior editor at National Geographic Kids, for STEM books



# Hints for Storytelling

- Think about an **experience you want to share**. Plan the details to include; you want to “paint a picture” in their minds.
- **Time it** to take only 3 minutes max – you will still have an entire presentation plus an interactive activity to complete!
- **Do not think** of it as “I always wanted to be an engineer” , or “I never had any idea to be an engineer” but rather something personal, with a human touch, such as the following example . . .

*“When I was in 3<sup>rd</sup> grade, I had to walk all the way around the back side of the neighborhood to get to school and then home again because there was no way to cross the little stream without getting soaking wet. It seemed to take forever. There was no school bus because our house was considered too close to the school. Sometimes my parents would drive me or pick me up at the end of the day --- it depended on their work schedule. I usually walked with my sister.*

*That long walk around the neighborhood to avoid the water made me tired even before I got to school in the morning. Sometimes I would need to eat my snack before I even got to school. I wondered why there was no bridge over the stream so the walk would be faster and easier, and I spent my walking time thinking of how I would make a passage over the stream. I had lots of great ideas (like narrowing the stream so I could jump over) and plenty of dumb ones (like putting up a zip line), and I had all of 3<sup>rd</sup> grade and 4<sup>th</sup> grade to think about this.*

*I even doodled pictures of what different bridges or walkways would look like. I showed a few to my teacher, Ms. Grayson, and she thought I had some good ideas and that I was a good artist. I think my mom kept some of those doodle drawings someplace. Nothing was ever built but I still think of all those ideas.”*

# You will also need:

- An **activity** for the classroom. You should find or create a 15-minute hands-on activity that is age-appropriate.

One is included in this PowerPoint, but if you do not prefer the one included here, go to [www.discoverE.org](http://www.discoverE.org) or contact Reed Brockman at [reed.brockman@aecom.com](mailto:reed.brockman@aecom.com).

- *Be sure to plan ahead. Whichever activity you use, make it a meaningful and MEMORABLE experience. Show enthusiasm. Give clear, specific yet simple directions.*

- In the event that performing an activity is not possible, you may consider playing the video in the link below to encapsulate the visit

<https://link.edgepilot.com/s/28342bao/PHkGhHg1WUuGjj5flr63Kw?u=https://www.youtube.com/watch?v=nMwG1wnESDA>

## *In Advance!* 8 Helpful questions for conversation before your visit:

When you are invited to speak at a school, you are not expected to know how to tailor your presentation to be age-appropriate or interest-area targeted.

THEREFORE, **IN ADVANCE**, chat with the person who organized your in person or virtual visit (likely the classroom teacher) so you can make your remarks suitable and engaging!

1. how does my presentation fit into what you are already doing in your classroom?
2. what do the students already know about STEM subject areas and careers?
3. how have you prepared the students for my visit?
4. for remote interactive instruction, do the students prefer group discussion or hands-on activities? For hands-on activity kits, coordinate with the classroom teacher for supply distribution, if applicable, before the visit.
5. in science and math, what seem to be the students' areas of interest?
6. what type of follow-up do you anticipate you will do following my school visit?
7. does your school have science fairs? Shadow-a-professional-day? After-school science, technology, math clubs or activities?
8. describe what you think is your students' level of understanding about the professions of engineering and the field of civil engineering, in particular.

## Hints for the Visit – both in person and virtual! *You're on Stage!*

- **Act like you love it!** Be comfortable as you explain the ways the profession of engineering creates all the places where we live, visit, work, study, play, hang-out.
- **Engage the students!** Stay on screen, add personality, and present the profession in an approachable manner; avoid focusing on the challenges to becoming an engineer.
- **Be lively!** Use your voice as a presentation “tool” to encourage enthusiasm for your work, for the profession, for their ideas. Add vocal emphasis and liveliness!
- **Be succinct!** More talking is *not* better – long explanations put kids in a stupor. Be aware to use short, dynamic sentences.
- **Use questions!** An engagement trick: ask yourself a question, then answer it.
- **Think big picture. You are an ambassador!** You are representing not only your own job, but also your firm and all engineering professions.

# The Virtual Visit! Presentation Hints

## *Remote Presentation Tips:*

- **Stay on Screen!** Convert the PowerPoint slides into individual Jpeg files. Use these files as your background for whichever virtual platform being used (Zoom, Teams, etc.). The background may appear as mirrored to you, but not to worry, it will look correct to the viewers. Switch “slides” by switching backgrounds. Name the backgrounds in the order of the slides so that you can easily find what comes next.
- **Keep it simple!** Don’t overestimate the students’ technology savviness. Any remote hands-on activities should be simple to use with minimal instructions required. For example, don’t expect that every student knows how to use Google My Maps if you are planning a virtual interactive activity that involves mapping out points of interest and draw various paths to and from these points.
- **Plan ahead!** Virtual classroom visits certainly present a new set of challenges relative to a traditional classroom visit. But with a bit of planning, you can achieve the same results! You can make this!



Before you go “on stage” . . .

The most important part of preparing for your virtual *or* in person classroom visit is to REHEARSE.

Review the slideshow 2-3 times to learn where you will be conversational and not read the slide.

Make the time to practice. Results of your good rehearsal:  
Smooth, friendly, succinct delivery!



Now you are ready to be the  
classroom presenter.

Think “Yay”!

Enjoy being with the kids and sharing the why &  
how your work is fulfilling and  
helps improve how we live.

You can change thinking and motivate a new  
generation of engineers!