PREPARATION ASSIGNMENT FOR ENGINEERING AMBASSADORS

**NOTE:** **It is important that each student bring a laptop to the training.  If you do not have a laptop, please ask your advisor if he or she can arrange for you to borrow one from your school.  The laptop should have PowerPoint.  Internet access will be available at the workshop.**

**Overview**
During your upcoming Ambassador training, you will be working with an assigned partner from your school.  Your task throughout the training is to create a 10-15 minute presentation to give in a middle or high school class.  This presentation should highlight an interesting engineering, technological, or innovative application and show how this application relates to engineering. The goal of this presentation is to show the audience (K-12 students) what engineering is and get them excited about engineering. Each team will give their formal presentation during the “Presentation Showcase” on Sunday afternoon.

The focus of the workshop will be the development of the presentation.  However, when you visit a classroom, you should try to combine your presentation with a hands-on activity.  You will not need to do the hands-on activity at the workshop, but you should have a relevant activity in mind and briefly explain the activity to the workshop audience. For your first presentation, it might be easier to think of an activity first, then “work backwards” to develop a presentation centered on it.  **Remember, an engaging presentation and activity will be most requested by teachers!**

**Action Items Before the Workshop**
Creating a polished and exciting presentation in such a short period of time will definitely be a challenge.  To help ensure you are successful, please complete the following steps before coming to the workshop.

**1.    Read pages 1 - 12 of the**[**Executive Summary from *Changing the Conversation***](http://www.nap.edu/read/12187/chapter/2) and 97-105, “Conclusions and Recommendations” (optional)

*Changing the Conversation* is a study done by the National Academy of Engineering and is a tool for improving the public image of engineering and outreach efforts related to engineering. The findings in this study are the types of messages that you should consider emphasizing in your presentations.

**When selecting the topic and content for your presentation, please be sure to consider and enact the themes discussed in *Changing the Conversation***.  Framing these talks with these messages is one of the distinguishing factors of Engineering Ambassadors Network programs.

**2.    Determine a topic for your presentation and submit by the following deadlines:

Friday Sept 10, 2021**

One of the most important (and difficult) parts of this process is choosing a topic.  **Begin immediately to determine two possible topic ideas with your partner, and submit these topics for feedback from the workshop instructors.**  You will need to post these on our EAN Google drive, <https://drive.google.com/drive/folders/1jKXdSsS6jpE0stoyrOZZF06wXSe2kgTg>

In the UNL Topic Proposals folder: <https://drive.google.com/drive/folders/0B1PfC8HBJeRoTURud3p3M3k4RHM?resourcekey=0-0gWlEgZws3JZBFZBPLJN2w>

Not sure who your partner is? [See the team assignments list here.](https://docs.google.com/spreadsheets/d/1aSWCRLWeFyS0y3JIf_vFmsVDFGkVjpVqpHkLiMZoD2w/edit#gid=0)

Having trouble coming up with a topic? Take a look at some [topic ideas](https://docs.google.com/document/d/1hyiFN9MS29IHCybyftCotABd8MGmGWuBazNLWMYTJOM/edit) and [topic proposal examples.](https://drive.google.com/drive/folders/1fyKL2c2B4_bkk4RcF46kv1iB0tev8Kkx) You can also see some [sample outreach presentations here](https://drive.google.com/drive/folders/1KjHPwgXZJYWWR3Vd_kUC0kKpV0gAbJs6) and some [videos here](https://www.assertion-evidence.com/outreach_models.html) or [here](https://www.youtube.com/channel/UChMmQvr_Fg9x6RWOMzTxHuw) (our NEAT-O youtube channel). For Nebraska EA’s, our existing presentations are located [here](http://engineering.unl.edu/engineering-clubs/engineering-ambassador-what-expect/#topics). Please choose a topic that is different from our existing presentations.

When you fill out the Topic Proposal Form and submit your topic ideas to the google drive, please include a brief description of your topic and what you plan to cover (5-7 sentences). Make sure you specify its relevance to engineering and engineering design.

**3.    Critical thinking about slide design and brainstorming visual evidence**
One key focus of our workshop will be the effective design of presentation slides for communicating science in an engaging and clear manner.  We will utilize the Assertion-Evidence slide design for your Ambassador presentations.  We will devote formal lecture time on the first day of the workshop to teaching this method, but we suggest you download the Assertion Evidence Template and Tutorial to your laptop:

[﻿﻿Assertion-Evidence Template for Ambassadors﻿﻿](http://www.assertion-evidence.com/templates.html)

[Watch a short introductory video to the Assertion-Evidence approach to presentations here](https://vimeo.com/191129539).

🡺Collect interesting visual evidence (images, diagrams, videos, etc.) related to your topic that could be used to explain your ideas in your presentation.  Having some visuals available will prepare you to develop your presentation at the workshop.

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Here are some useful websites that may offer ideas for presentation topics and activities:

1. <https://www.teachengineering.org/>
2. <https://www.discovere.org/our-activities>
3. <http://www.engineeringchallenges.org/>
4. <http://teachers.egfi-k12.org/category/activities/>
5. <http://www.sciencebuddies.org>
6. <https://thehomeschoolscientist.com/100-engineering-projects-kids/>
7. <http://www.mastersindatascience.org/blog/the-ultimate-stem-guide-for-kids-239-cool-sites-about-science-technology-engineering-and-math/>