You will present a new presentation in class according to the assertion-evidence techniques taught in class. This will be a 10 minute presentation made as a pair. You will propose your topic by submitting two topic ideas on February 22\textsuperscript{nd} in an email to Abhi (adasgup4@illinois.edu). Once we get your ideas, we will sort you based on your preferred topics.

1. Determine a topic for your presentation.

One of the most important (and difficult) parts of this process is choosing a topic. You should begin immediately to determine your presentation topic with your partner. If you need help brainstorming topic ideas, see resources below.

Your topic should be cool, innovative, interesting and explainable to a middle or high school audience. It could be an interesting engineering project or concept or a technological development(s). You can spend much of your presentation time explaining and discussing the cool science/technology part, but you should also show and teach how a science/math curriculum concept is at the root of the technology or concept. It is essential that the topic is something engaging that would appeal to your high school audience and show them how science/math matter in these cool projects.

**Resources for Brainstorming Topics**

There are many places on the web where you can research new advancements in science, technology, and engineering to help you brainstorm topic ideas. In high school, you might have thought to yourself, “What will I ever use Concept X for in real life?” Based on what you know now as an engineer, do you see any applications now that you didn’t see back then? Now you’ll have the opportunity to show students what they are learning is really important (and potentially cool!). Here are a few places you might check out topic ideas:

- The [National Academy of Engineering](https://www.engineeringchallenges.org/) has identified a list of 14 Engineering Grand Challenges that will be addressed by engineers in the 21\textsuperscript{st} century.
- [http://www.wired.com/](http://www.wired.com/)
- [http://www.sciencebuddies.org](http://www.sciencebuddies.org)

**Potential Topics of Interest for Ambassador School Presentations**

**Topics:** How a 3-D TV and the Xbox Kinect can be used to create the illusion of virtual reality.

- **Science Concept:** Electronics and computer science
Topics: Nanotechnology concepts and uses in energy production (solar cells)
- **Science Concept:** Energy of the future
- **Source:** http://www.nanotech-now.com/Ineke-Malsch/IMalsch-energy-paper.htm

Topics: Implantable devices for the human bodies: Spine implants, heart pumps, etc. **Science Concept:** Body and Health, improving life with a long-term disease
- **Source:** http://www.spineuniverse.com/treatments/surgery/artificial-disc-replacement

Topics: Ethanol can be used as a form of renewable energy. It's unique due to being from the starchy part of plants. It can also reduce pollution and increase air quality.
- **Science Concept:** Diversity in Nature, energy
- **Source:** http://teachers.egfi-k12.org/class-activity-ethanol-fermentation/

Topics: How satellites enter orbit can be described through physics equations
- **Science Concept:** Space
- **Source:** http://science.howstuffworks.com/dictionary/astronomy-terms/artificial-satellite-info.htm

Topics: Design of amusement park attractions
- **Science Concept:** Energy transfer (potential, kinetic)
- **Source:** http://www.learner.org/interactives/parkphysics/coaster/

Topics: Mathematical concepts used in weather forecasting
- **Science Concept:** Meteorology
- **Source:** http://www.mathmotivation.com/science/weather.html

Topics: The way the body processes different types of nutrients/fats/proteins/other biology stuff (pharmaceuticals/enzymes)
- **Science Concept:** Metabolism and Digestion, Chemical Engineering
- **Source:** http://www.differencebetween.net/science/health/the-difference-between-tylenol-and-advil/