Engineering Our World (Name 1 Thing) Activity

Lesson Plan

Audience: Any age group

Time Needed: 5-10 minutes

Objective: Through this activity, participants will learn that our world is engineered.

Overview: This activity has two parts where participants can either work alone or in small groups, leading up to a large group discussion.

1. Introduction:
   Engineers are creative and collaborative problem solvers that innovate and improve our world. Think about your world and the innovations and improvements that you use everyday.
2. Activity Part 1:
   a. Challenge the participants to create a ***list of all the items they have used today that have been engineered***. Allow 60 seconds.
   b. Bonus: Offer a prize to the person that has the most items on their list.
   c. Invite the participants to share some of the items on their list. There is no wrong answer. A brief discussion on these items is great!
3. Activity Part 2:
   a. Challenge the participants to ***identify one thing used today that has NOT been engineered in some way***. You can have the participants work in small groups to think and discuss.
   b. Invite the participants to share. The answer is: EVERYTHING has been engineered in some way. If someone offers up an idea that you are unsure about, try to decompose into components, or challenge your participants to do so. For example, the most common rebuttals are:
      i. Air: Explain how air is conditioned and often purified, etc.
      ii. Art: Art is made from things that are engineered like paints, brushes, etc.
      iii. Human heart: While your participants may not have pacemakers, someone in their family likely does, or uses some other technology or medicine to make their body function properly. This has all been engineered.
      iv. Water: Purification, Pipelines, etc.
      v. Food: Many foods are engineered, or at a minimum the process by which the food reaches the consumer requires lots of engineering (machines, packaging, transportation, computer grocery sytems).
4. Summary:
   Our world is engineered. Everything, including toothbrushes, highways, smart phones, and lifesaving medical devices, depend on teams of creative and collaborative engineers that are not only making our lives easier and healthier, but are making a world of difference. The technologies that engineers create are imperative for our nation to advance and our economy to improve in the 21st century. Our country depends on a workforce that is technologically literate, and scientifically and mathematically prepared to meet growing workforce demands. Science, Technology, Engineering and Mathematics (STEM) are the core disciplines that inform our future innovations.