Engineering Discovery

EXCITE AND IGNITE

Through Engineering Discovery, students (ages 13 to 14) build awareness about and interest in engineering and what engineers do through a variety of short, exploratory sessions led by community partners alongside GE Aerospace or GE Vernova volunteers. Partners and volunteers deliver creative, hands-on activities in the classroom or community to inspire young people and to expand their and their parents'/guardians' understanding of what engineering is all about.

Overview

The purpose of Next Engineers is to increase the number of young people pursuing engineering career paths by implementing three discrete but complementary programs – Engineering Discovery, Engineering Camp, and Engineering Academy. This document describes **Next Engineers: Engineering Discovery**.

Engineering Discovery aims to make students **aware** of what engineering is by exposing them to the process of engineering, who engineers are, and the different work they do.

It also aims to ignite students' **interest** in engineering by providing short, fun experiences that promote a positive attitude towards engineering and towards engineering as a future career.

Additionally, Engineering Discovery can also act as an outreach and recruitment tool for Engineering Academy.

Discovery structure

Engineering Discovery is typically implemented as a pair of events with 13-14-year-old students in schools, although other venues like community spaces and science fairs are also possible. Events are facilitated by community partners with support from GE Aerospace or GE Vernova volunteers acting as engineering ambassadors and rewarding opportunities for volunteers to engage with students.

Events can be conducted with individual classes or an entire grade and usually include one or more of the following activities (although other types of activities may be designed and implemented in each city).

- **Tell Your Story** offers volunteers a 5-to-10-minute opportunity to share their personal story and experience of becoming an engineer, working as an engineer, or working with engineers. It can also be used to explain what engineering is, the different kinds of engineering fields that exist, and/or showcase engineering in the real world.
- **Demonstrations** allow volunteers to show, in fun and simple ways, important scientific concepts and explain their relationship to engineering and their application to solving real-world problems. Demonstrations require between 10 and 30 minutes.
- **Hands-on Activities** allow students to engage with simple, team-based engineering design challenges that step students through the engineering design process, and allow students to experience first-hand the process of engineering. They require 60 to 90 minutes to complete.

Engineering Discovery also provides opportunities for parents/guardians, teachers, and other significant and influential adults to be reached regarding the value of engineering and the pursuit of an engineering career, and the various other Next Engineers opportunities available.

Student selection

Engineering Discovery does not require student selection and is open to all 13 to 14 year olds in as wide a geographical area as possible. Community Partners typically select schools to work with each year. There is no defined limit to the number of students who can participate in an Engineering Discovery event, although demonstrations and hands-on activities are best done with groups of no more than about 30 students.

For more information about Next Engineers visit www.NextEngineers.org.

GLOBAL DISCOVERY

Engineering Discovery is not only available in Next Engineers cities. Currently, GE Aerospace volunteers in seven other cities conduct Discovery events.

See https://www.nextengineers.org/locations/global for more details.

CHALLENGE YOURSELF

Next Engineers also offers a variety of free experiments and design challenges for parents and teachers wanting to expose their students to engineering.

Check out https://www.nextengineers.org/diy for more.