INNOVATION GENERATION
Making an Impact

About Innovation Generation: Making An Impact

Quick Facts

PROGRAM NAME
Innovation Generation: Making an Impact

URL
www.Innovation-Gen.com

AUDIENCE
Grades 6–10, students ages 11–16

The resources available through Innovation Generation were developed to empower student learning with a premiere, STEAM-focused initiative that invites students and educators to explore their worlds through building, making, and doing.

Innovation Generation also provides the opportunity to engage the diverse, active, and innovative community of Stanley Black & Decker employees who can volunteer their time to talk about the Maker Movement with students and afterschool programs in their local communities.

PROGRAM COMPONENTS

NATIONAL CONTEST

The Innovation Generation Contest invites educators and community adults to vote daily for a school of their choice to win a grand prize of a makerspace and other amazing prizes! The school with the most votes wins. Don's miss your chance to win.

VIRTUAL FIELD TRIP

Inspire your students to be agents of innovation. Working alongside the experts of the Stanley Black & Decker Makerspace, students will see and experience first-hand how math, science, technology, creativity and teammwork can lead to technological advancements in our everyday lives. Don't miss this one of a kind virtual experience.

EMPLOYEE ACTIVITIES

Innovation Generation activities are designed to introduce students to the Maker Movement through hands-on STEAM learning. These resources were created to support volunteers as they demonstrate how design solutions can be used to answer authentic questions and solve real-world problems.

Innovation Generation Volunteer Guide

This guide was created to help volunteers bring Innovation Generation resources to classrooms and prepare you to work with students in small and large-group settings. It provides tips and suggestions for volunteers to engage, explain, discuss, and effectively facilitate STEAM activities to support the next generation of makers and doers with turnkey activities. *Please read this volunteer guide in its entirety in advance of contacting an educator or after school program leader.

Preparing for your visit

Once you have connected with an educator or after school program leader, you will want to work together to ensure a seamless visit. Set up some time together to discuss key details that will make your visit both smooth and successful. A few items you may want to cover:

Pre-visit checklist:

- ☐ Thank them for their interest in the program and provide an overview of the program and activity ideas.
- ☐ Ask if there are any advance requirements or paperwork needed by the school office or afterschool club in order for you to visit.
- ☐ Learn about the setting of your visit, how many students you will be working with, and ask if there is anything that would be helpful to know in advance.
- ☐ Discuss how much time is available for your visit.
- ☐ Decide together which one of the activities will be used.
- ☐ Determine what the educator would like your role to be in facilitating the activity that day.
- ☐ Ask if the educator will be printing out the student worksheets or if he/she would prefer you to bring them with you that day.
- ☐ Learn what technology will be available and use that to determine together how the activity will be facilitated.
- ☐ Ensure the educator has the appropriate materials and determine who will bring any outstanding items.
- ☐ Ask for any tips! Educators have a honed expertise for connecting with students. Consider your assigned educator a valuable resource.

Virtual Participation

When a visit is requested by a group in an area not easily accessible to a volunteer, there may be an opportunity to participate virtually instead of going to the site. There are several free platforms, such as Google Hangout or Skype, that would allow you to share materials, visuals, and chat with students as they are working.

Work with your assigned educator to determine the applicable items from the checklist above, along with which platform will be used to connect online. Download all software in advance and test your connection to the computer in advance of your presentation. You may want to ask the educator, based on the set up in his/her learning space, how you can help by sharing your screen and walking students through the directions.

Regardless of whether your visit is virtual or in-person, practice a couple of times in advance. Walk through the information you will be presenting, and time yourself to help work within the time you have available for your visit that day.

The day of your visit

Many community centers and schools will require visitors to sign in and out at the main office and wear a visitor pass. To ensure an efficient sign-in, have your ID ready, and have a printout of the activity you will be facilitating on hand for reference when you need it.

Presenting to students

The resources have been designed to follow the below agenda. However, every group is unique and different factors, like available timeframe, will affect the exact nature of how Innovation Generation's resources are used.

Step 1: Volunteer Introduction (3–5 minutes)

Step 2: Activity (25–30 minutes)

Step 3: Wrap-up (3–5 minutes)

Volunteer Introduction

Take a few minutes to introduce yourself. Start off by telling students your name and why you are visiting their class. Tell them about your experience with the Maker movement, what your interests were at their age, and how that translated into the career you have today. Explain to them what you will be learning together and be sure to keep things brief, friendly, and relatable.

Students are going to be very interested and curious with having a special guest and will likely have a lot of questions! Work with the educator to determine the best method for inviting students to ask questions before, during, and throughout the activity.

Activity

When previewing the activity materials, note opportunities to share real-life stories that make connections to the topics. Some of the resources may exceed the amount of time allocated for your visit. You may need to select relevant information for the specific situations in which you will be interacting with students. Practice pacing sections of the activity and make note of areas to pause for questions, engage with a personal story, or point out parts of a visual.

Activities

Designed for grades 6–10—Science, Technology, Engineering, English Language Arts, Art, and Math courses, or for children ages 11–16. Each activity has an expected duration of 45-minutes and includes an overview, guiding question, student outcomes, materials, procedure, and capture sheets. You will want to review these activities with the educator or leader to determine which activity to facilitate.

Tensile Bubbles
Can you build a geometric bubble wand that mimics tensile structures?
In this activity, students will investigate tension-carrying, or "tensile," structures by building inverted architectural designs with three-dimensional bubble wands.

Angled Launch
What is the best angle for launching a catapult?
In this activity, students will utilize principles from geometry and physics to build and test their own catapults.

Inertia-l Impact
How are a magician's tablecloth trick and a vehicle's seat belt related?
In this activity, students will investigate the concept of inertia to brainstorm, design, build, and crash test a car.

Concept and Create Virtual Field Trip Educator Guide
The Stanley Black & Decker Virtual Field Trip introduces students to a one-of-a-kind Makerspace. Use this guide to host a viewing party with students to show them what it takes to solve problems using the design process. The educator guide includes a variety of activities you can facilitate before, during, or after watching the Virtual Field Trip.

Know Your Audience

The students you are working with are considered adolescent learners. They are intellectual, social, and emotional learners. They are very curious and enjoy interacting with peers during learning activities. They like to be active learners and are still experimenting with ways of talking and acting as they learn and grow.

A student environment may include a handful of students or up to 40! Sometimes educators will have students seated in small groups and others will have students in rows. Large groups can be challenging to effectively assess if students are engaged or understanding the information presented. It is also difficult to build relationships and visit with students individually in the short amount of time. Walking around the space and making eye contact with different students can help personalize the experience. As students enter the room, or as you enter, say hello and introduce yourself.