



3D PRINTING CHALLENGE: SOLVING A REAL-WORLD PROBLEM



The 3D printing sector is projected to grow at a compound annual rate of 24.3% to become a 83 billion industry.



OVERVIEW

In this kit, students will learn to design structures to solve everyday problems. Using a variety of brainstorming techniques, students will identify a problem, empathize with someone affected by the problem, then prototype a solution. These solutions will be created using simple 3D-design software. Once the ideas are generated, students will use 3D printers to rapid-prototype and test their ideas. Creativity, problem solving, failure, and feedback are all part of this project. At the conclusion, students will pitch their ideas to the class using a version of NBC's "Shark Tank." The larger group will then vote on the best ideas. Winning products can be outsourced for final fabrication or rewarded in another creative way.

Minimum Instruction Time: 11.5 hours

IN THE KIT

- FlashForge Adventurer 5M 3D Printer
- Markers - Washable
- Tape - Scotch Magic
- Glue Sticks
- Pipe Cleaners
- Copy Paper
- Rulers
- Pencils
- Craft Sticks - normal size
- Scissors Adult
- Ballpoint Pens
- Crayons
- PLA Filament Rolls
- Flashdrives 16G
- Plastic Putty Knife Set
- Paper Plates
- Notebooks - blank
- Corrugated Cardboard
- Modeling Clay
- Sandpaper
- Nail Polish Remover
- Towels
- Needle Nose Pliers
- Arteza Acrylic Paint
- Paint Brushes - mixed sizes
- Cups

Device Compatibility: any device with internet capability