Science & Technology

A Laboratory Fit for Lockdown

By
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What happens when a pandemic keeps engineering students away from campus, working in their homes instead of their laboratories? For professors at Columbia Engineering, the solution was obvious: you send the labs to them.

Yevgeniy Yesilevskiy / Columbia

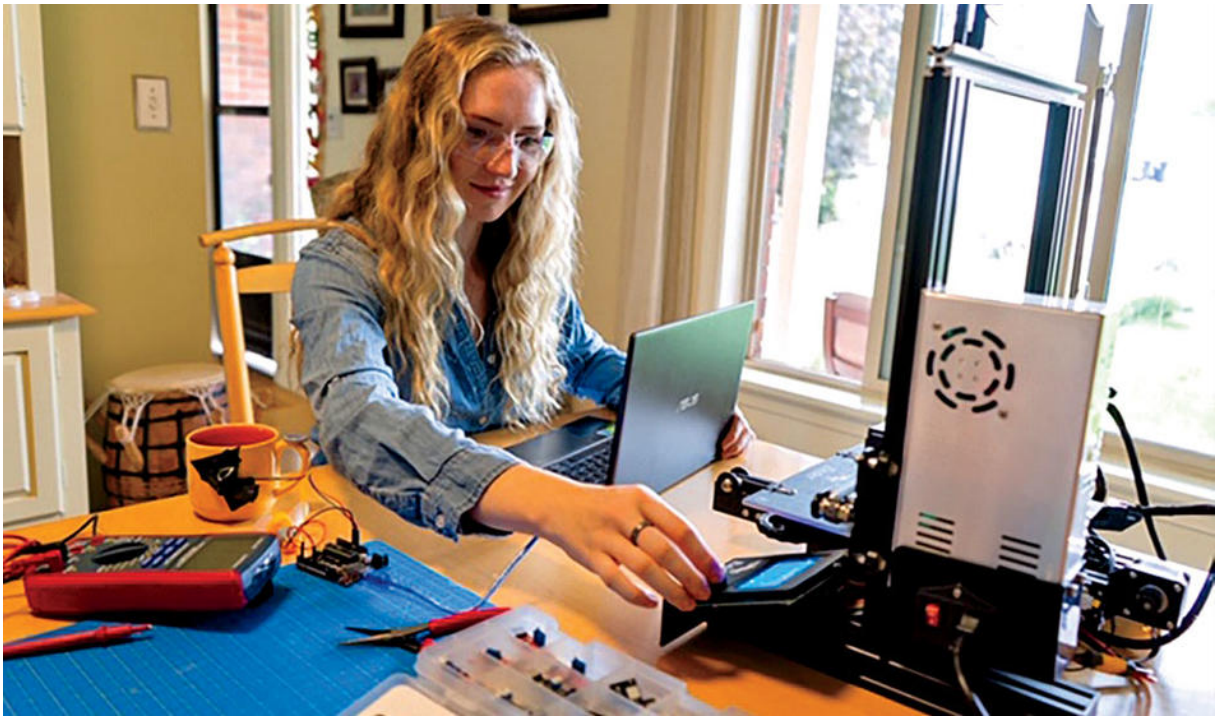
1. The Prep

At the start of the fall semester, faculty from across the engineering school prepared boxes of tools and materials to be delivered to students working remotely, so that they could conduct experiments and design projects at home. The contents differed depending on the student's year and major.

Yevgeniy Yesilevskiy / Columbia

2. The Kit

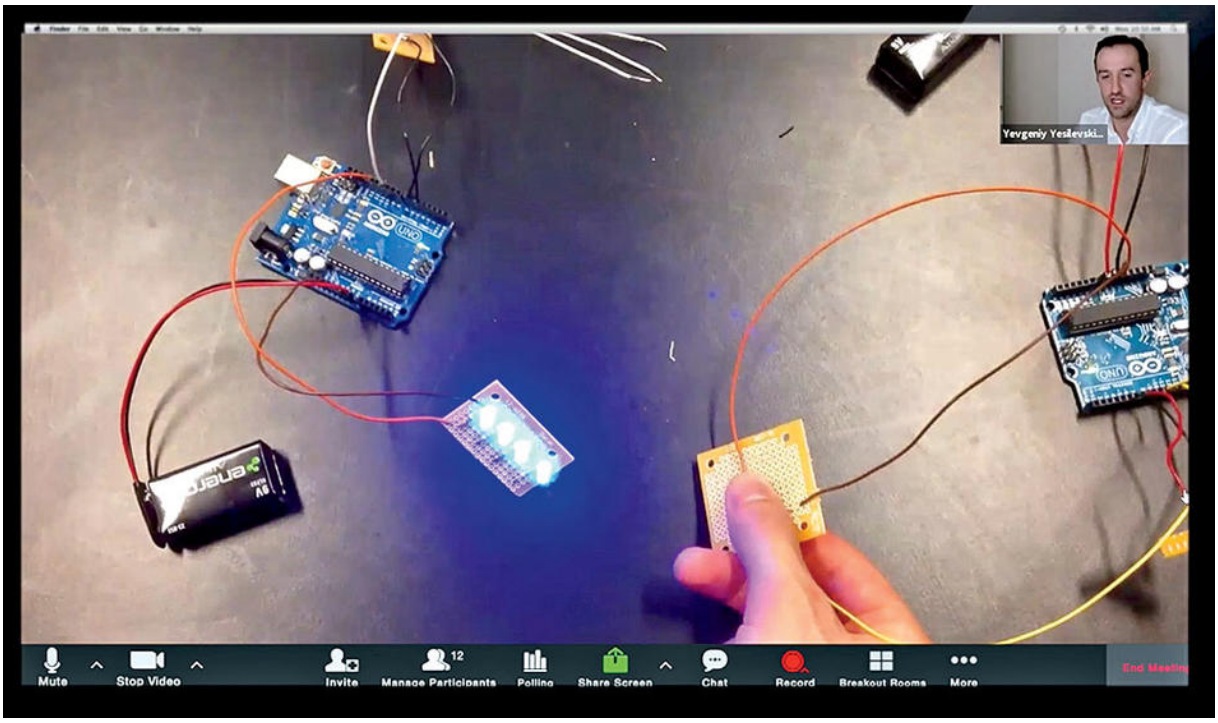
The package mailed to seniors in the mechanical-engineering program contained motors, electrical components, remote sensors, moldable plastics and clay, a variety of metals, a soldering iron, clamps, adhesives, and protective gear.



Yevgeniy Yesilevskiy / Columbia

3. The Home Lab

Many students also received a 3D printer, which they could use to produce any additional tools or parts their projects called for.



Yevgeniy Yesilevskiy / Columbia

4. The Results

Working in teams over Zoom, the students transformed the raw materials into inventions, ranging from water-testing systems to highly efficient rocket engines to medical devices.

This article appears in the Winter 2020-21 print issue of Columbia Magazine *with the title "Lab in a Box."*

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