

# Bolton School Trial the Raise3D E2 3D Printer

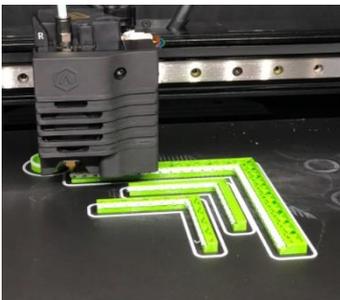
Raise3D Case Study

<https://www.raise3d.com/case/bolton-school-trial-the-raise3d-e2-3d-printer/>



Recently, the Bolton School Junior Boys (Park Road Junior School) used a [Raise3D E2 3D printer](#) to help students learn interdisciplinary design and production in art, design, and technology courses. Aaron Winstanley, head of design and technology implemented 3D printing into Bolton education using the Raise3D's [E2 IDEX desktop 3D printer](#).

## E2 printer is a Desktop 3D Printer with a Larger Build Plate



[E2](#) is a desktop 3D printer meaning it is a smaller machine. Having a small-scale printer like the [E2](#) is practical in schools because it does not take up too much space and can easily fit on a desk. While the E2 is a desktop printer, it has a large enough build plate (330mm x 240mm x 240mm) for students to create different types of projects. For example, Year 6 students created a mini green screen and used it for stop motion animation film production.

*The green screen brackets for stop motion animation printed by E2 printer.*

## E2 printer is a User-Friendly Printer

One of Winstanley's favorite features of the [E2](#) is printer's IDEX (Independent Dual Extruder). IDEX enables students to perform more advanced functions on the [E2](#). For example, IDEX enables the [E2](#) to perform Mirror Mode and Duplication Mode. Depending on the project's needs these functionalities can shorten a projects' completion time.

Aaron Winstanley was pleasantly surprised by the extent to which Raise3D made the 3D printing experience user-friendly. For example, when he turned the printer on for the first time, the step-by-step guides helped Aaron set the printer up, insert the filament provided with the [E2](#), and perform initial test prints on the 3D printer. Included with the [E2](#) is a range of tools. This type of attention to the 3D printing experience made it easy for Aaron to set up the printer. Since the printer is easy to operate the school's Year 6 students can set up and print model files via USB within minutes. Having such a user-friendly printer shortened the learning curve allowing Bolton students to start performing printing tasks quicker.

## Flexible Build Plate for Easy Part Removal



The [E2](#)'s heated build plate allowed Aaron to easily print tall and thin models without them falling, resulting in print failure. When slicing such objects, ideaMaker has always prompted Aaron to add further build plate adhesive structures, such as Raft to enhance the model's base. When finished printing, the [E2](#)'s build plate cools quickly, resulting in the quick and safe removal of the printed parts, without needing the heatproof gloves.

*The use of a flexible printing plate allows users to easily remove models.*

## Examples of 3D Printing Projects Performed on the E2



*Students print 3D scarab with E2 printers.*

Students used a 3D scanner to scan a scarab and print a plastic replica using the [E2](#) IDEX 3D printer. After Grade 4 learned the TinkerCAD unit in the design and technology course, they used TinkerCAD to design a key ring to print on the [E2](#).

Aaron was impressed by the 30-150 mm/s printing speed of the [E2](#) printer and the accuracy of the estimated time provided by the slicing software ideaMaker. Having such an accurate printing time estimate allows Aaron to arrange printing time according to the course plan.

## Excellent quality meets the high-precision printing



*Use preset slice templates and supports in ideaMaker to obtain stable model print quality.*

“Throughout the experience, the quality of every print was second to none.”

—Aaron Winstanley

Every sample Aaron printed on the [E2](#) was of excellent quality in terms of precision, filament performance, and printing success rate. When slicing, Aaron uses a series of different preset slicing profiles, but even after mixing different options, the print quality of [E2](#) remained stable. Aaron used the [E2](#) to print some models with complex curves. When Aaron imports the models into ideaMaker, the system will automatically generate support structures for the models. These support structures are designed to support the model and are easy to remove. After removing the supports, Aaron always gets a smooth contact surface.

## RaiseCloud-user-friendly, online supervision



*Students can use RaiseCloud to monitor the printing status online.*

One obstacle that Aaron faced is that it is very difficult for students in the entire class to start printing tasks with multiple printers at the same time. He decided to the best solution was to use RaiseCloud, a cloud-based online print management platform produced by Raise3D that students could use to control the design, slicing and printing of the [E2](#) 3D printers from their mobile devices. The link between RaiseCloud and the printer is simple and straight forward meaning printing can begin quickly as long as students log in to the platform. RaiseCloud itself is user/child friendly, with large and clear icons and buttons. Aaron can distribute printing tasks to each student's mobile devices online.

This case is originally posted in: <https://www.createeducation.com/blog/bolton-school-raise3d-e2-review/>

## Connect with Raise3D

Do you have a great 3D printing success story and think it would be cool to be featured on [www.raise3d.com](http://www.raise3d.com), we would love to learn more! Write to us at [inquiry@raise3d.com](mailto:inquiry@raise3d.com)

For more information about Raise3D printers and services, browse [our website](#), or [schedule a demo](#) with one of our 3D printing experts.