Ultimaker

Lesson 4
Potato Head Challenge

This project was inspired by an activity at the Garden Street Academy. It is a team/communication building activity where students are divided into teams of three. Once in teams, students use Tinkercad to create as many parts as possible that fit into a potato in a limited time. This project encourages students to problem solve and design quickly while also providing essential experience with the printer.

Recommended age range 10+

Category: Beginner lesson

Tags: 3D CAD, 3D printing, 3D printed, beginners, design, education

Software: Tinkercad, Openscad, Fusion 360

Lesson Duration: 90 or 135 minutes (including print time)

Estimated filament use (per person): ~2.60m/~21g

PROJECT OBJECTIVES

- Design and measure with precision
- Demonstrate how to align objects
- Understand and execute boolean operations
- Prepare a model for 3D printing
- Modify print job with Cura plugins
- Experiment, generate solutions, and solve problems
- Work within time constraints
- Collaborate with other designers
- Employ feature tests

See Lesson 4 for Instructor Slideshows, including Lesson Overview and Walkthroughs, Student CAD help sheets, and Example files.

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