

FabLab Hawaii

3D Printing & Fabrication Lab

FabLab Hawaii, exclusively at Mary, Star of the Sea School, is a 3D design, fabrication and printing class held after school as an extracurricular activity.

We use computer programs to download designs as well as creating our own designs to print as 3D models. Students will learn how to 3D print, the limitations thereof and how to overcome them. They will build their own unique designs in TinkerCAD and Fusion 360 programs. Classes will include complex concepts such as print slicing, raspberry pi computers, Octoprint servers and much more. Where the concepts are relevant, we will also incorporate age appropriate introductions to aerodynamic designs and building machines.

FabLab Hawaii students have helped to build a 3D scanner and a drawing machine (polargraph) for our school to use. We have six 3D printers available during class times, including a custom designed and built 'delta' style printer. Mr. Marsh has completed design and construction of his major project, and 11' foot tall 'delta' style printer. Students can use this printer for special projects on request.

We are an approved 3D print facility for E-nable, a global non-profit organization that 3D prints and builds prosthetic hands/limbs for children and adults.

The class is taught by Aaron Marsh, parent to Sarah, class of 2021, and Abraham, class of 2018. Mr. Marsh is an Aircraft Engineer and Gulfstream Master Technician. 3D printing and building 3D printers has been his passion for the past 8 years. He has been teaching this course at Mary, Star of the Sea for 8 years.

You will be amazed what our students can do!

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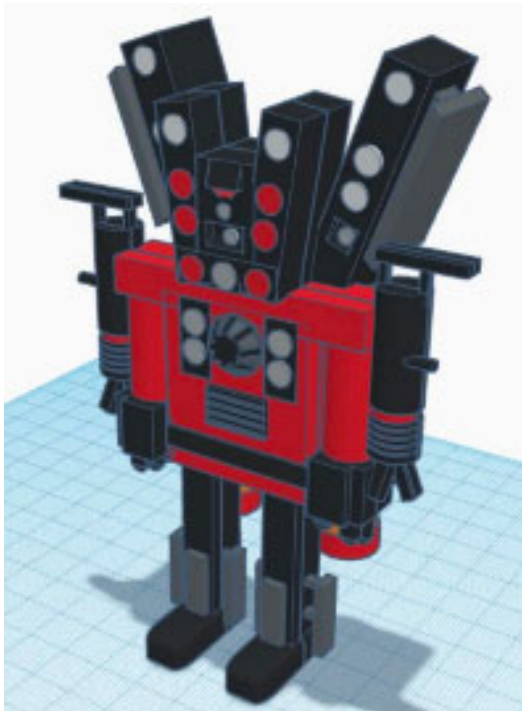
Students may attend the class of their grade level regardless of experience. New students are accommodated in all classes. Please carefully check the schedule for day changes to accommodate holidays and mini-days.

Class Schedules Available

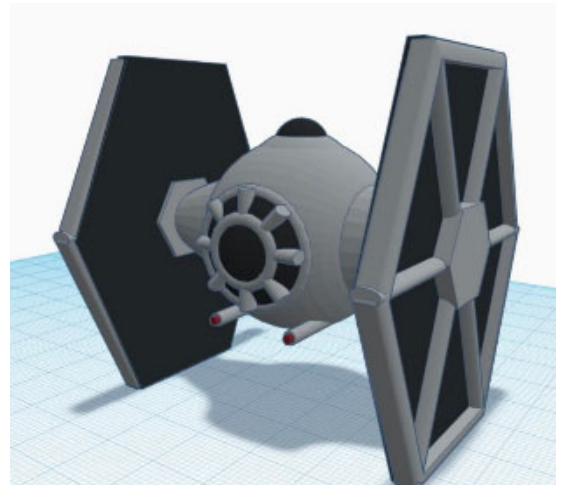
4th/5th GRADE – CLASS 1 - MONDAYS.....\$145

4th/5th GRADE – CLASS 2 - TUESDAYS.....\$145

- 3D Printers and parts
- Tinker CAD design program
- Slicing with Octoprint



(Designed and printed by Mason Hsu)



(Designed and printed by Evan Mars)

MIDDLE SCHOOL – WEDNESDAYS.....\$145

- Tinker CAD design program
- Fusion 360 design program
- Posting/sharing designs in Thingiverse

Special Project - "Nui Hana" Delta Printer

Our giant printer is up and running and is available for student projects on a request basis. Mr. Marsh continues to tinker with the design and is pleased to share his knowledge with interested students.

**Course cost includes all 3D printers/pens, plastics and hardware /software.
Class size is limited to 12 students per class to ensure adequate attention for all students.
No refunds for unused classes. Email instructor Aaron Marsh at fablabhawaii@gmail.com**