

3D Printing @ Library

Instructor

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Program Overview

What: Beginning on Friday, January 13th the library will be holding a 3D printing program as part of its ongoing “After the Bell” program.

When: Every Friday from 3:00-5:00 participants will come to the library and learn skills to design their own 3D print files (STLs) and have their creations brought to life! If a child participates in every session of the program, they have the potential to build and receive seven (7) 3D printed projects.

Who: School-aged students

Why: This program is available due to a grant received by the Kuna Library from the Idaho Commission for Libraries, itself made possible by the Idaho State Board of Education, the U.S. Department of Education and the Idaho Out of School Network. The grant was provided with the goals to increase out-of-school learning opportunities.

The program is intended to introduce new children to 3D printing or work on the skills of those already familiar. The program will begin with introductory tutorials and each project created will increase in size, allowing participants to put more of their learned skills to the test.

Program Materials

The program will be utilizing the following 3D printing programs, materials, or machines. All materials/programs are provided by the library and are offered to participants free of charge!

- Ultimaker S5 3D printer
- Dikale 3D Pen
- PLA filament
- Tinkercad Design Website
- Pursa Slicer

Program Expectations

This program is offered to all school-aged children, regardless of learning level or experience with 3D printing. We want to offer kids a first glimpse into the world of 3D printing.

The following are expected of children participating in the program:

- Abide by the rules of the library

- Follow project size limits
- Completion of introductory Tinkercad tutorial
- Before, during, and after program survey

Course Schedule

Date	Subject	Tutorials
January 13 th	Intro Week	Let's Learn Tinkercad
January 20 th	Tutorials/Build	How Tos: Ring Heart Ring Button Skull Button Gear
January 27 th	Build (Create)	Complete previous (as-needed)
February 3 rd	Tutorials/Build	How Tos: Everyday Objects Pt. 1 Everyday Objects Pt. 2 Architecture Concepts
February 10 th	Build (Create)	Complete previous (as-needed)
February 17 th	Tutorials/Build	As needed
February 24 th	Build (Create)	As needed
March 3 rd	Tutorials/Build	As needed
March 10 th	Build (Create)	As needed
March 17 th	Tutorials/Build	As needed
March 31 st	Build (Create)	As needed
April 7 th	Tutorials/Build	As needed
April 14 th	Build (Create)	As needed
April 21 st	Tutorials/Build	As needed
April 28 th	Build (Create)	As needed

Print Schedule

Participants will have two weeks to design their project. After the completion of the second week, the library will print all projects which will be available for pickup as soon as they are completed (timing varies).

Project	Size limits	Start Build	Finish Build
Project 1	Base: up to 50x50mm Height: up to 40mm	January 20 th	January 27 th
Project 2	Base: up to 60x60mm Height: up to 50mm	February 3 rd	February 10 th
Project 3	Base: up to 70x70mm Height: up to 60mm	February 17 th	February 24 th
Project 4	Base: up to 80x80mm Height: up to 70mm	March 3 rd	March 10 th
Project 5	Base: up to 90x90mm Height: up to 80mm	March 17 th	March 31 st
Project 6	Base: up to 100x100mm Height: up to 90mm	April 7 th	April 14 th
Project 7	Base: up to 110x110mm Height: up to 100mm	April 21 st	April 28 th

Additional Information

Syllabus set to change as program progression. New versions will be available on the library's website.