

# Technology Explorations

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Rooms: 41 and 6

## Overview

This semester long course will focus on exploring 3D design and modern manufacturing. Students will begin by learning 3D modeling using TinkerCAD and Sketchup. Then, they will use this knowledge to engage in the design cycle through several design challenges. The final project for the semester is to assemble, calibrate, and print on a class made 3D printer.

## Goals

- Students will learn to measure for accuracy
- Students will work collaboratively in teams to accomplish design challenges/tasks
- Students will learn to model objects
- Students will learn Computer Aided Design software (CAD)
- Students will engage in the design cycle and product revisions
- Students will use their skills to design products of their own
- Students will become familiar with modern manufacturing tools, including 3D printers

## Requirements

Students will be required to work collaboratively in teams to solve problems and complete design challenges. Students must have a desire to engage with the content and be willing to do their part as a team member. Student who are unwilling to do their part or are unsafe in the makerspace will be given alternate assignments.

## Safety

Safety is first priority in the makerspace. Student who are behaving in an unsafe manner will be prohibited from working in the makerspace. One infraction is enough to cause serious harm to another student and will not be tolerated. There are tools and equipment in the room that are dangerous if not used properly. Safety overview and instruction will be provided to students before they are allowed to use a tool and instructions must be followed at all times.

## Grading and Evaluation

Students will be evaluated throughout the course by means of tasks and challenges. Specifically, students will be graded on how well they approach, engage, persevere, and complete given challenges.

## Please check and sign below

- Student - I have read the information and I fully understand what I'm expected to do in class.*
- Parent - I have read the information and I fully understand what my child is expected to do in class.*

*Student Signature:* \_\_\_\_\_ *Parent / Guardian Signature:* \_\_\_\_\_