

General Exploration/Maker 8

COURSE OUTLINE

COURSE OBJECTIVE:

The main objective of this course is to have students learn to make things using a variety of tools and equipment. Students will use several machines (drill press, scroll saw, band saw, disc sander, spindle sander) as well as different pieces of software, solder stations, 3D printers, vinyl cutter and a laser engraver. This introduction to the tools and equipment can then be used for project based assignments for other classes. This is a project-based course.

RESPONSIBILITY OF THE STUDENT:

- 1) Always show responsibility and maturity while operating in the shop. Unsafe or foolish behaviour is unacceptable and could result in removal from the class.
- 2) Treat tools carefully so that they will always work properly for you and for others.
- 3) If an accident occurs report it to the teacher immediately.
- 4) If a tool or machine is broken report it to the teacher immediately.
- 5) If you are ever in doubt, ask the teacher.
- 6) If a student is absent, it is his/her responsibility to make-up missed work. All materials and assignments can be found here Makerspace.lsfeldschool.com
- 7) You will need a NOTEBOOK, PENCIL and ear buds (NOT your cell phone) for most classes.

ASSIGNMENTS/PROJECTS:

- 1) Gumball Machine – Students will design and then make a gumball machine out of wood.
- 2) Vinyl Sign Cutter – Students will use Roland Cutstudio to cut out a sign that can be placed on glass, plastic or a T-shirt. There are endless possibilities for this project and it will be discussed with the students.
- 3) Laser Engraver – Students will learn to use the laser engraver and create a simple engraved project.
- 4) LED Lantern – Students will use Adobe Illustrator to design a lantern that will be laser cut. Once the lantern is complete, the students will make a small circuit board that will have an RGB fading LED on it to be placed in the lantern.
- 5) Extra projects – the teacher and students will discuss as the class progresses.

SHOP SAFETY

Safety in a shop and the proper use of tools is a very important part of this course. Therefore a number of demonstrations, quizzes and tests will be given throughout the course to ensure the proper and safe use of tools.

EVALUATION:

Assignments/Projects	100%
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