December 2021

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December 2021 Newsletter About CVM

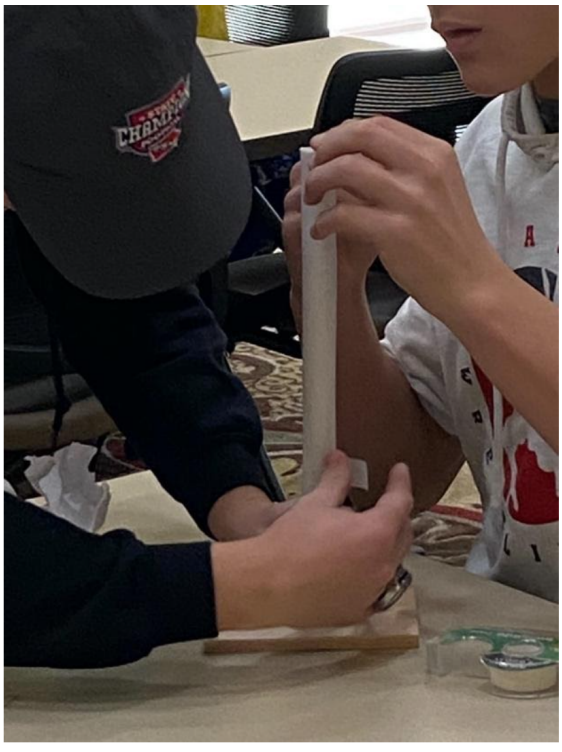
- FLL Season Celebrate!
- Rockets with AEA TAG
- ISU Extension needs design
- Top Ten Reasons plus support
- Tool of the Month
- Project of the Month
- Members Only Please Read!
- Volunteers
- Support our Mission

Robotics Season to Celebrate! Absolutely!

Teams have put in the hard work, maybe they have been invited to the State competition, maybe not. Regardless, there is a lot to celebrate. You are invited to have a celebration at the Fab Lab. Have pizza, learn how to make a Christmas ornament on the laser, decorate a Christmas ball on the eggbot, play a round of robot golf with your EV3.

Find out more: info@cedarvalleymakers.org

Paper Rocket Making at Central Rivers AEA



rockets. In the process everyone learned some things about Newton's First Law, air pressure, switches, gravity and drag. Our team took our rocket kit created by maker, Aaron Howard to Central Rivers Area Education Agency for TAG day. The rocket kit consists of paper rocket parts, rocket building tools and air pressurized launchers. Over fifty students and a handful of adult teachers participated in this interactive experience. Do you know of a group looking for an interactive STEM activity? CVM can provide ideas, activities and volunteers.

Fun project for the Community:

Hydroponic teaching cart's designed and built with the expertise of volunteers at Cedar Valley Makers. This was a fun project, and a lot was learned about how best to design 3 dimensional objects from sheet goods, which were cut using the CNC. Pieces were fit and glued to make super strong beam sub assemblies, which could quickly be assembled and disassembled for transport to the teaching location. Mission accomplished!!

Tool of the Month

IVAC Automation with Oneida

We keep making...making easier at the Cedar Valley Makers. Over the last few weeks, we have added automation to the Oneida Cyclone Central Vacuum,

by Black Hawk Gaming and half by subscription member support. What is it and how does it work? The IVAC system consists of sensors attached to each tool's cords. When powered on, the sensor sends a signal to a switch to turn on the vacuum and to open a gate assigned to the tool. There are lots of dip switches to be set to assign 12 tools, 12 gates, and two remotes, but it was worth it!!

Pictured below: Floor sweep Gaurd Fabricated bt Dick Zimmerman

In addition to the automation, we have 3 floor sweeps, which can be triggered with remotes hung by the router table and the black tool chest. Also triggered by remotes are the grey vacuum hoses, which conveniently vacuum any dust and debris left behind, but also connect to the hand sanders, promising to reduce the insidious dust that has been found...everywhere!

difference. Every dollar spent is leveraged several times by the volunteers that keep the maker space,, the best. The pictured custom floor sweep gaurd is only one example of our volunteers skill, but it continues with lots of sheet metal parts, hanging hooks, wire harnesses, custom designed and 3d printed parts, and a whole lot of vision and dedication.

Projects of the Month

Shop Improvements

Pete Lilja has become our weld shop plasma CNC design expert and when he is not building custom tools, brackets, hooks, holders, signs and stools that make his own life better, you will find him doing the same for Cedar Valley Makers.

Pete was tired of getting grinding dust in his ice cold pop, bought from the vending machine at CVM.. Well, no more. There is now a spot especially made to keep your can in the clear. Everywhere you look at CVM you will find these type of customized conveniences, that make CVM more then a shop. CVM is a destination.

Subscription Members. Come in Tuesdays and Thursdays evenings 7:00 - 9:00 for project and equipment support, or other times by appointment. Design tips and tricks. How to set-up and cut your first job on the CNC router or plasma cutter, and more. Please let us know you are coming on slack, or by e-mailing info@cedarvalleymakers.org.

Add On Storage Space now available: Longer term and large project storage s now available as an add on to your subscription membership. Mark out a spot and make it your own for around a $1.00 sq ft per month.

January 1 Deadline!!---

Short term active project storage will continue to be free. Active project means you are working on it at least once in a two week period. Project labels are available and should be used to mark projects with your name, date and contact information. Unmarked projects and materials will be going to the top shelf jail in the add on storage as of January 1.. On Feb 1, materials will be considered donated and available for member purchase.

Dust Collection - What you need to know-Keep reading

Under normal circumstances it just works. Power on a machine that has an IVAC sensor attached to its power cord, its gate will open and the vacuum gets powered. Turn off the tool, the system will run for 1 minute longer allowing for the lines to clear, but also to prevent too frequent starts and stops. If you use a remote to start the collector, that same remote must be used to turn it off.

What can go wrong?

- The system can overfill, which will cause the red sensor light to blink. If ignored, the system will pack the filters with chips, creating a maintenance nightmare. The planner generates the most chip by far, so a chip pre-collector has been placed in line*(pictured above right)*. It is easy to dump in the dumpster. Check it before operating the planner, and dump it after every use.

-If the building has a power outage, the magnetic switch has to be reset once power is restored. If the vacuum is not powering on as expected, hit the green button pictured above left.

Updated Member Checklist - Last Person in the shop:

1. Air compressor powered off
2. Laser vent fan turned off
3. Central Vac is not running
4. Doors are closed

Thank You for Your Membership!!!

Volunteer

Something for all talents and interests at CVM:

- Cleaning
- Planning
- Repairing
- Installing
- Organizing
- Teaching
- Mentoring
- Marketing
- Administration

Pictured: Heston helping us out by running the volunteer made battery operated shop vac: "The Zambonie".

Volunteer Opportunities:

- Attendants- Be a second in the shop, and support others as they learn new skills, while learning fun stuff yourself.
- Marketing: Share the space with others on your social Media. Schedule us to speak at your community group meeting. Schedule a field trip to tour the space, or organize a make activity as an educational event at the makerspace.
- Program Coordinator - Create, and or teach others maker skills by organizing and leading workshops. Workshops can be set-up to cover cost of materials and compensate Instructors.

The Board of Directors

machines and training inside our makerspace and by promoting and planning educational events that can forward scientific thinking, learning and entrepreneurial spirit for all members of our community.

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