

GATE Newsletter

March 25, 2021

Dear Parents,

Thank you for encouraging your child to participate in GATE this year. I have enjoyed watching their imaginations grow. They started off with one task from me: modify an existing build to serve our Special Education Department. Many students have completed that task. Other students have gone on to build 2, 3, or even 4 more projects. I try to print those out as quickly as I can. A few projects are waiting in the front office of Copper Hills right now. If they belong to your child, swing by and pick them up.

As budding engineers, we have explored essential elements of 3D model design. The extruder deposits melted filament onto the printer bed in mid-air at some points. So, how do we accommodate for that? Will that work? Or, should we change our builds to make that a successful process?

We have also looked at drawing as a key element of engineering. When engineers set off on a task, it is helpful that they sketch out their initial design before they get started. How can they make that project work? What about feedback? Sketches help teams work together. If your child likes to draw, encourage that. They may become an engineer one day. Those drawing skills will help them.

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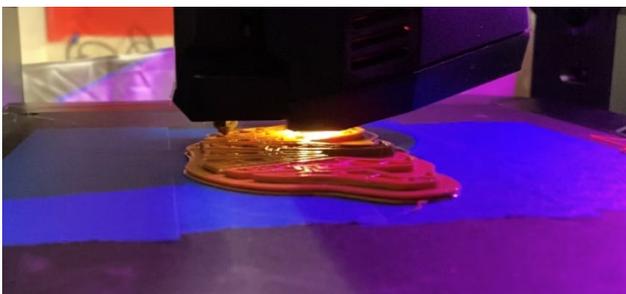


Figure 1: Filament is deposited onto the print bed one layer at a time.



Figure 2: These are student builds from this year.

Did you know that entire neighborhoods are now being constructed with 3D print technology? The structures shown here take 24 hours to build. The machines are quite large, and they deposit cement in lieu of filament. This type of innovation will continue to influence the jobs of tomorrow.

We only have 2 more GATE sessions: April 7 and April 21. We were supposed to have a Parent Showcase in May. But, I don't know that this will happen. If my GATE students are willing to record in Flipgrid, I'd love to make an end-of-year video. No videos are in there just yet.



Figure 3: Neighborhoods build by 3D printers - [LINK HERE](#).

Please take a few pictures of your child working on software we use in class (Tinkercad), watching any one of the lesson videos, or drawing a sketch related to our design tasks. CUSD Today may ask us for pictures related to the grant we are working on. The Special Education Department may ask us for pictures as we serve the Special Education population. The yearbook staff may ask us for pictures of our GATE program for the yearbook. And, the Toshiba Foundation of America would like a few pictures that showcase how we used their generous gift. Pictures that you share with me would help us reach each of these goals. Please email those pictures to me. If you have an iPhone, you can select multiple pictures and then copy the iCloud link. Then paste that link in an email to me (melissaculver@cusd.com). I can easily download all of those images to my computer. Thank you (in advance) for your help with this detail.

I am available via email, if your child has questions (melissaculver@cusd.com).

Parents, reach out with questions if you have any. Thank you for your support.

Kindly,
Melissa Culver
www.melissaculver.com

