

Maker Camp



Making in the News

Sometimes when a baby is developing inside its mother, something goes wrong. One hospital in Florida is using 3d printing to help doctors perform surgery on babies

before they are born.

The doctors are able to use ultrasound to scan the developing child and then print a 3d model. The model

allows doctors to see bones, nerves, and more to better prepare for surgery. It makes it much easier for the doctors to anticipate problems that can happen during surgery, and so far the results are good. Babies that are operated on in the womb have fewer problems as they grow up. 3d printing can also help with older patients too. Michael Nicoletti, a veteran who spent a 30 year career designing medical devices, realized he was

having a hard time hearing. He noticed some straws on his kitchen table and came up with an idea. He used a small piece of straw to open up his ear canal, like a stent in a blood vessel, and was able to

hear better. He worked with a small tube that allows sounds to reach his eardrum better when inserted in his ear canal. Now he's able to hear the TV at home without turning it up too loud!

Questions:

...What kinds of things could be 3d printed to help people who are sick or injured?

...Can you think of any problems that could happen with 3d printed items used in hospitals?

...Do you think it's possible to 3d print medicines or healthy food for people?

Learn more about 3D Printing: [Here](#) & [here](#)



Cool Career: Welding

Do you like working with your hands to make things? If you see something made of metal, there's a good chance it was welded. Welding is the process of

joining metal,

and it can be

done using

electricity or

fuel. From the

cars and planes

we ride in, to the

buildings we live

and work in, welding is how things made of metal are

put together. Some welders even work underwater!

And because welding is used in a wide variety of

situations, welding careers can include almost any

other interest you have. Boilermakers work on rocket

boosters, Ironworkers build bridges and stadiums, and

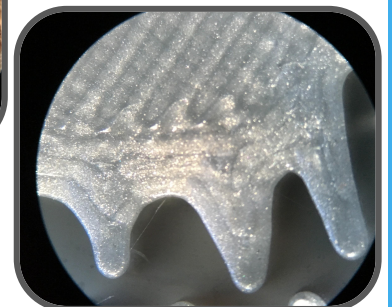
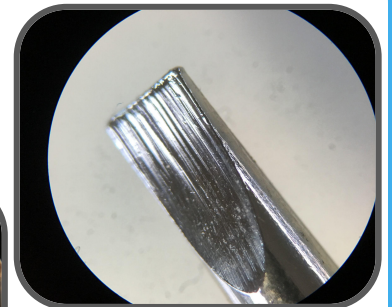
Shipfitters help make aircraft carriers! If you're looking

for a career that combines art and science, learn more about different jobs in [Welding](#)



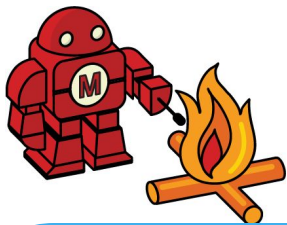
Mystery Photos

Can you identify the mystery fabrication items under the microscope?



Decode the answers
using K=C & L=D...

3LXZQVBMLBW
GKIZLJWIZLAKZ
MELZQDMZ



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How Things Get Made

Have you ever used a 3d printer? It's fun to design and print toys or other small items. Did you ever wonder what kind of

bigger things could be 3d printed? Some companies have created giant 3d printers that use cement instead of plastic filament.

These printers can make houses, swimming pools, or foundations for windmills in just a few days (it just takes the cement a little longer to dry than plastic).

Why would this be such a good idea?

Watch [the process](#)



Maker Camp Events

Maker Camp has online live events too! Ask your Maker Camp leader for the links to attend!

Mario the Maker Magician Wrap Party!

August 13th, 2021 at 10 am Pacific / 1 pm Eastern.
Streaming to [Make: Magazine](#) & [Maker Camp](#) Facebook channels. Everyone is welcome!

Maker Camp Fireside Chat

August 13, 2021 at 2 pm Pacific / 5 pm Eastern
Join your fellow Maker Camp Community Partners to share your favorite projects, best stories, biggest challenges, and more as we get together to wrap the official Maker Camp 2021 season! [Register online today.](#)

Maker Challenge

Have you tried all of the challenges for this Adventure? If not, ask your Maker Camp leader for info about these fun projects: [Sunglasses](#)

[Air Rocket Glider](#)

[Laser Cut This Slot-Together Raceway](#)



Q & A with a Maker

Brenda Shivanandan: Maker & Fabricator at [SteamLabs](#)

1) *When did you start making?*

I started making as a kid. I would make miniature buildings and communities out of scrap paper, cans and other things that I could find in our recycling bin. My mom and grandma also encouraged me to embroider & sew using the extra material and fabric they had. Once I got to university, I was introduced to woodworking equipment, and I fell in love with that practice. I love making wood pieces of different scales such as furniture and installation structures.

2) *What is your favorite part of making?*

My favourite part of making is learning new fabrication techniques and learning about different equipment and how they work. I also love making with others! When making as a team, you combine skills and experiences to create something together.

3) *What was your biggest "fail" when making something?*

My biggest "fail" would be when I was making a colour illusion installation with my friend. We envisioned that by using colour theory, the installation would display differently in red than in blue. That didn't work and it ended up looking the same in both colours. We decided to switch gears and made it a lighting installation using the lighting perspective and shadows. I think that ended up turning out a lot cooler than our original idea. I used to be really afraid of failing, and admittedly, I still do at times. When the fear of failure starts creeping in I remember to: validate those feelings first because that fear is normal, take a second to breathe and reflect, and always remember to ask for help. With this process in mind, I've gotten better at celebrating failure!

4) *What do you want to learn about next?*

I love plants and learning about sustainable farming, so I am excited to learn more about foraging as well as closed-loop hydroponic systems.

