



MFL STEAM FELLOWSHIP

Teacher requirements for the MFL STEAM Fellowship for the 2017-2018 school year:

- All teachers must work for a CMSD school.
- Be able to coordinate 3-5 visits (minimum) over the course of the school year
- Attend summer PD and monthly cohort meetings during your season
- Document your work with pictures and possible written/video testimony
- Complete a weekly digital check in on what you're doing in your classes
- Be aware of which students cannot have their photo taken and use paper bracelets as an indicator.

MFL Fellowship Benefits: each teacher will receive the following for their classroom:

- 1 College Credit from CSU (more information tbd)
- A 3D printer + filament to get you started
- A design laptop with FabLab software
- Continuing support from the MFL in the future + priority scheduling

All teachers must complete the fellowship to be awarded the benefits.

Digital Signatures:

Name	Signature (how you sign your name in a fancy font)	Date
Anna Brier	<i>Anna Brier</i>	
Christine Campion	<i>Christine Campion</i>	6/30/17
Monica Grays	<i>Monica Grays</i>	
Karen Greenway	<i>Karen E. Greenway</i>	6/28/17
Kelly Lardi		
Diana Maher		
Tracey Muniak	<i>Tracey J. Muniak</i>	6/28/17

Name	Signature (how you sign your name in a fancy font)	Date
Sherri Pittard	<i>Sherri Pittard</i>	6.28.17
Diane Reeder		
Jordan Siegler		
Leora Sullivan		
Janet Wroblewski	<i>Janet L. Wroblewski</i>	
Tamera Zelwin		

Engineering Birdhouses Program

General Info: This program is perfect for math or science grades 3-8. Students will learn about the design process through iterative work on bird houses. This is interdisciplinary and teachers are expected to do work on the project outside of the time the MFL is at their school.

This project is designed for students to work in small groups of 2-4 students. It will be best if those groups stay consistent. If you teach multiple grades, you may have to choose which grade you want to focus this work on, depending on the number of students you teach.

This program will take place from September-November. Each visit will be one-two days and will be approximately 2/3 weeks apart.

Visit One: Students are exposed to the MFL and laser cutter and create cardboard pre-designed bird houses.

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Visit Two: students will create their own bird house design using cardboard construction and draw basic blueprints of their design. (no trailer)

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Visit Three: students will digitize their designs and create a prototype.

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Visit Four/Five: students will improve and iterate on their prototype before creating a wooden birdhouse for their community.

Digital Design Program

General Info: 3D printing is a growing field that can be introduced to students as young as second grade! In this program, students will create many 3d printed objects depending on your curriculum. For example, a history teacher might have their students design a replication of an ancient artifact from a culture they are studying, or design a building for a city they are creating. A Science teacher might have students design animal and plant cells that can be taken apart or a globe that shows the different layers of the Earth. A math teacher could have students create different polyhedra with the same volume or surface area. Or you can have students develop a new board game and design and 3d print pieces! The possibilities are endless! 3D Printing STEAM Teachers will work closely with the MFL team to develop projects for their students.

This project is designed for students to work in small groups of 2-3 students as well as do some work individually. It will be best if those groups stay consistent. If you teach multiple grades, you may have to choose which grade you want to focus this work on, depending on the number of students you teach.

This program will take place from November- March and will not include any trailer visits for 3D printing projects.

Visit One: Students are exposed to 3d printing by watching a short video, seeing a 3D printer in action and playing with tinkercad. Students will also design a Keychain with their names on it

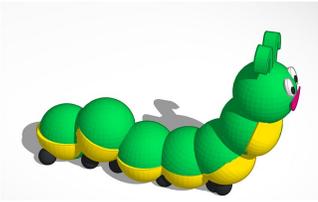
Activities are a great idea along with blueprints!

Visit Two: Tinkercad time to digital design their object + one-on-one time with sarah to go over it.

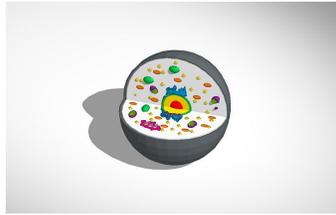
Visit Three: go over designs with sarah and start to print.... ETC.

Project Ideas:

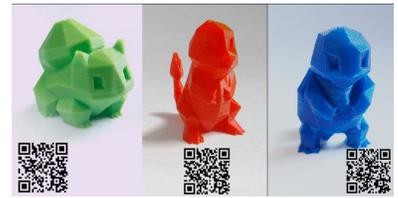
Insect Design



Cells



Pokemon



Cookie Cutter



Game Design



Bridges



Cultural Artifacts



Citizen Awards



Racers



Global Volcano



Class Pet Condo



LifeStraw



Monsters



jack-o-lantern



Gliders



Putting the A in STEAM Program

The art program is totally open to your imagination! Art teachers can choose to work with one specific group of students or one grade multiple times or can work with all their students once over the course of the year. We can bring a FAB component to some of your existing curricula or add to it with new projects.

Students can work independently or in small groups. Each visit will be 1-3 days depending on the activity and number of students. It is also suggested that for some projects you work with your school to treat the MFL visit day as a 'field trip' pulling kids for a full day.

Below are possible projects for a variety of grade levels. All will require differentiation for your students and planning with the MFL team.

Make your own Puzzle



Ornaments



Create your own Mask



Silhouettes



Tessellations



Vinyl Stickers



Stackform Sculptures



Design your own Tshirt



Personalized magnets



