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Mini Maker Challenge Montage

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EDCI 487

1. Who/where are you in your maker journey?

WEEK 1 / SEPT 9th

The prompt: Create a wearable artifact, using assorted craft materials and recycled objects, that showcases your identity as a maker- *and* moves

The process: I was so excited to participate in this challenge, because it exemplified the concept of "low floor, high ceiling" by being fully open to interpretation. The materials provided (including tools, recycled bits, and ribbon/fabric) and the prompt (identity, wearability) felt like a great response to the readings this week (Peleg & Levy, 2026), which highlighted the fact that students who are girls often don't reap the same benefits from makerspaces as boys due to their historical exclusion and underappreciation as makers.



2. Mid-tech maker challenges WEEK 2/ SEPT 16th

The prompt: Create a device to get the attention of your class, using only the pictured materials

The process: My partner and I initially felt a bit stumped by the random materials provided and by the prompt itself, and I think that was so important because it made us think more deeply about what catches student attention and how we can manage our classrooms.



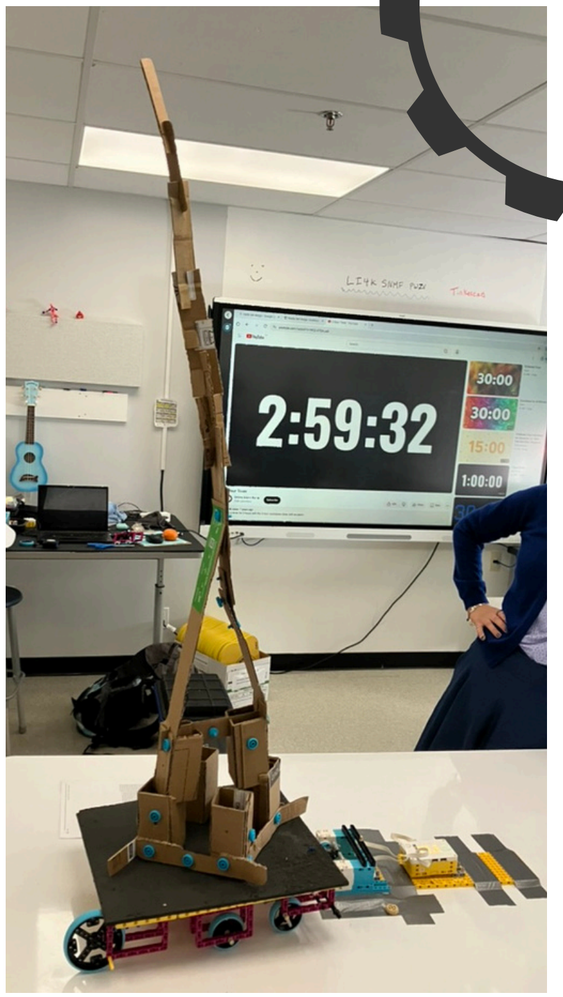
The readings this week (Cohen et al., 2016) touched on constructionist educational theory, and I felt this theory in motion as we built on our knowledge of classroom management (albeit in a fun and silly way) through the process of planning and making an artifact together.

3. Mid-tech maker challenges WEEK 2/ SEPT 16th

The prompt: Create the tallest possible tower that can withstand an earthquake simulation, using only cardboard and Makedo tools

The process: My group of four hopped right to the challenge, and worked furiously and passionately, rapidly swapping ideas, with all hands on the tower construction at all times.

What I believe made this such an effective activity is that there was a designated time period to plan the tower before beginning construction, and planned steps (after each test on the earthquake machine, the groups got a chance to revise). I would use this lightly-structured approach with my students, because it keeps the project moving and provides natural spaces for less participatory students to jump in.



4. Catapults @ YXC Makerspace

WEEK 3/ SEPT 23rd

The prompt: Use the pre-lasercut pieces to assemble a catapult, and experiment with the rubber bands (tension) to see how for the pompom (ammunition) can travel

The process: This maker challenge was unique, becuase I felt that in a way, the “challenge” began once the artifact had already been built, since the catapult was a step-by-step, pre-determined outcome project.



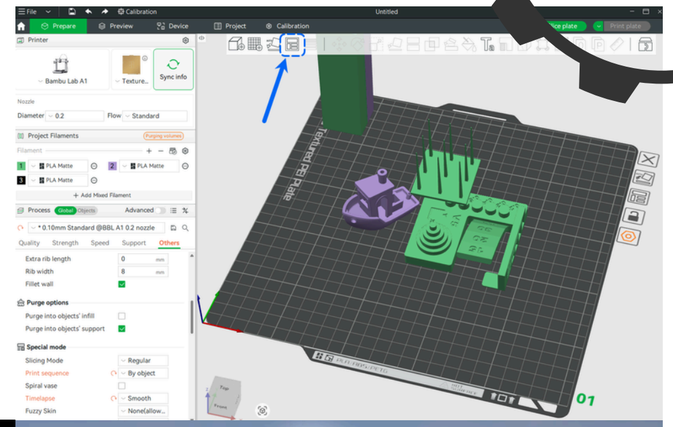
this made me think back to what my math instructor in the program told me once: A factor that determines whether something is a math *exercise* or a math *problem* depends on the skill and knowledge of the student doing it. So, while I initially felt this was too structured to be a true “maker challenge”, I realize that for many students, this would be the perfect level of structure to get them into making.

5. High-tech maker challenges

WEEK 5/ OCT 7th

The prompt: Explore and play with high-tech maker tools (I chose SculptVR, Tilt Brush, and Bambu Studio)

The process: I'm generally averse to bringing technology into the classroom unless necessary, but watching Anab Jain's TedTalk (2017) this week genuinely opened my mind. As I played with digital tools that my students could use to make prototypes for beautiful and exciting ideas, I realized that my lack of experience with tech seriously hindered my ability to translate my ideas onto the platforms I tried. I realized that a downside of avoiding classroom technology is that students may not develop the fluency that later allows them to use digital tools to their fullest potential.





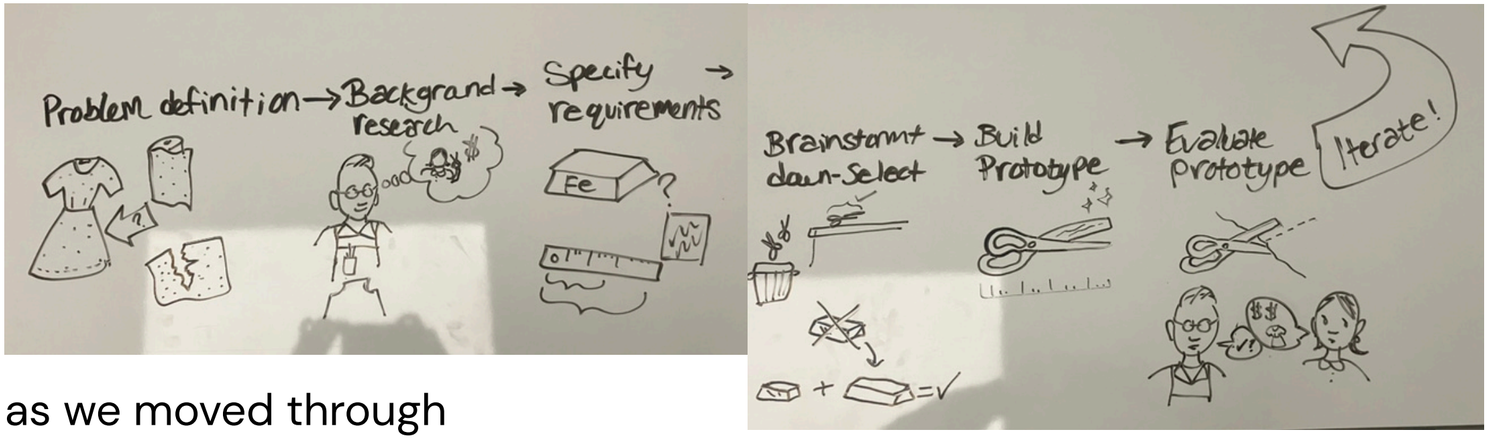


6. Prototype something! WEEK 7/ OCT 21st

The prompt: In rotation with other groups, participate in stages of prototyping: brainstorm problems, brainstorm any possible solutions, design and create a prototype of the solution

The process:

I included this drawing I did to record my group's ideas as we thought about the stages of prototyping before starting the maker challenge, because this warm-up reminded me that drawing is a huge part of my maker process. After this, I let myself draw my group's ideas



as we moved through the stations on the way to the final product we prototyped: a drone-attached hook that lifts long hair away from grabby backpack straps.

I connected this expereince to this week's readings on students' self-efficacy and interest in making (Vongkulluksn et al., 2018), because I wondered if, similar to my feelings about being able to draw my thoughts, student interest and participation in making would increase if they were given opportunities to leverage their strengths and interests (I imagine the answer is probably yes).

My "Aha!" moment...

My “Aha!” moment happened during the very first maker activity. Entering the makerspace, I felt nervous that the activities and goals we’d engage with would be reflective of the stereotypically tech-only, male-dominated makerspaces I had seen previously, and that I wouldn’t be able to feel successful in the course. Seeing that familiar materials were present, ones I even crafted with at home, and that go-with-the-flow , low-tech processes were welcomed, made me excited to start creating and let me feel happy with the silly, wacky, whimsical artifact I made. I realized that for reasons such as gender, culture, or ability, and my responses to this diversity, students could easily approach my future class’s maker challenges feeling either excluded or excited. Now, I know the importance of ensuring this is the latter.

A big idea I'll take with me...

Digital technology is not inherently bad or good for students and their learning, it is a set of tools. What *truly* matters, and what will determine how prepared my students are to survive an increasingly technological world, is how students are taught about and interact with those tools.

Citations

All photos included are either taken by the author or can be clicked to visit their original sources :)

Cohen, Jonathan D., Monty Jones, W., Smith, Shaunna, & Calandra, Brendan. Makification: Towards a framework for leveraging the maker movement in formal education | semantic scholar. (2016, March 21). https://www.semanticscholar.org/paper/Makification:-Towards-a-Framework-for-Leveraging-in-CohenJones/ce4c7dfb3e83ac3f1565430548b935a19eeb2fff

Jain, A. (2017, April). Why we need to imagine different futures. [Video]. TedTalk. https://www.ted.com/talks/anab_jain_why_we_need_to_imagine_different_futures

Peleg, A., & Levy, S. T. (2026). The Impact of Makerspaces in Early Childhood Education on Children's Creativity and Self-Efficacy. Journal of Research in Childhood Education, 40(3), 544–562. https://doi.org/10.1080/02568543.2025.2468489

Vongkulluksn, V. W., Matewos, A. M., Sinatra, G. M., & Marsh, J. A. (2018). Motivational factors in makerspaces: a mixed methods study of elementary school students' situational interest, self-efficacy, and achievement emotions. International Journal of STEM Education, 5(1), Article 43. https://doi.org/10.1186/s40594-018-0129-0