Game On! Creating a Homemade Arcade in the Art Room

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Late one cold January evening over a cup of coffee at Perkins, I told my co-conspirator, Andrew McCormick , middle school art teacher at Holmes Junior High in Cedar Falls, of an idea that I had to make arcade games with my preservice art teachers at UNI with elementary children in the community. He jumped on board with this idea and before we finished our pot of coffee, we had a plan together to take a bus filled with middle school students and preservice teachers to Chuck E. Cheese! The end goal was that we each would create arcade games in our classrooms based around the idea of STEAM (Science, Technology, Engineering, ART, Math). Why STEAM? STEAM is "a way for students across the nation to stay competitive with an ever increasing flat, globalized economy" wrote Andrew on his recent blog post.

The Idea

This idea originated when I read a follow-up article on Cain of Cain's Arcade, the viral video that circulated to 4,136,473 views as I write this article. If you haven't watched it, this is a summary of the story. A young boy builds a cardboard arcade one summer in the front of his dad's auto shop in Los Angeles. His first and only customer that summer was a filmmaker, who was so moved by Cain's creativity and ingenuity, he creates a film and the whole world is practically invited to play his arcade. I fell in love with this idea because it really honored the child artist and showed a perfect connection between STEM and the arts.

Andrew and Holmes Junior High

On our field trip, Andrew's middle school students were assigned to measure games, sketch games, photograph the games, and of course… play the games. My preservice art education students partnered with them to see what kids are interested in, to keep them on task, and to observe how students explored the games and develop ideas in order to create their own games. Back at school, the middle school students worked in small groups to recreate a tabletop version of a game, based on one they liked or they were able to create their own. Andrew wrote, "Students measured, scaled down, reduced, cut, strengthened, glued, measured again, painted, improvised, weighed, tested, and drilled, all while asking the questions "Is this good? Do I like this? If not, what could I do so I might like it more?" These qualitative questions aren't asked with as much frequency in STEM education. STEAM forces kids to think in this increasingly important way."

UNI Art Education Students

On the field trip my students were to pick a game that functioned best and to find a game that was most visually appealing to them. In class, we reviewed simple machines and discussed basic physics. My students were given the assignment to create their own arcade games from recycled materials and a few supplies from the local hardware store. Creating their own games, helped them to problem-solve and trouble-shoot areas that may be difficult for the children they were preparing to teach. A week later, twenty children from the community our 2-day workshop on creating arcade games. At the end of the workshop, we held a carnival in the art building and kids handed out tickets to peers, their parents, and art faculty and students as they played their games. Everyone could turn their tickets in for small prizes and of course there was plenty of popcorn to go around!

Our results

Although we each taught this project differently based on time, space, and age of students, the results seemed similar. Students were excited and engaged and it showed. Figuring out the best materials to use, how to approach their designs, and trial and error were constant battles. We watched the students collaborate and share ideas and use skills from multiple areas and enjoy it. Students asked for measuring tapes, saws, duct tape, and hot glue. They needed help spelling things, and mixing colors, cutting out small parts and developing rules and intricate scoring systems.

One art education student wrote, "This was an art problem-solving experience like I have never had before. I have never been faced with mechanical problems that I have had to solve or help a student solve. This was the hardest part of the lesson. I took away so many strategies from this lesson that will help me in the future. The main strategy though, is how to push students to develop their own ideas. I've been lectured about this multiple times but was never in a situation to actually experience it. This whole experience making arcade games was one to remember and to continue to reflect on."

I know that is one experience that Andrew and I will continue to reflect on as art educators and will work to continue to use STEAM in our classrooms.

To view Cain's arcade, go to: http://cainesarcade.com/

We are not sharing our Google Slide presentation due to the privacy of our students in the photographs of the presentation. If you would like more information or to the presentation, please email:

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