## Incorporating Multi-Media Design, Science, with Game Creation to the Community

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**Abstract.** This presentation covered the work of Native Teaching Aids and Flathead Tech 4 Good by Rebecca Goff, one of the founders of the former organization. She discussed the need to address large problems facing the world, including global warming, pollution, food deserts, and many more challenges. She then addressed the inherent ability of games to help create solutions to these kind of problems, and shared examples of Game Jams that Native Teaching Aids and Flathead Tech 4 Good have sponsored.

Keywords. Game Jam, global warming, food deserts, water

## **1** Facing today's problems

In today's world we are facing many issues: global warming, pollution, food deserts, and many more challenges. It is our belief at Flathead Tech4Good and Native Teaching Aids, that if we all work together, defining this as the closest community, experts, incorporating youth, and any interested parties, taking on community issues, we have a strong motivation to get things done. Also, by collaborating on this level with the intent to face these problems head-on, there is much we can accomplish.

Native Teaching Aids, established in 2013, has worked these past five years working with tribes, schools, and other communities to create materials that teach indigenous language, culture and history. The company started in digital media design, creating online dictionaries, lesson systems, and mobile apps. Noticing that this had a limited access to the entire community, and interactivity between people is the best way to study and learn a language, Rebecca and Brandon Goff, the co-founders of the company, incorporated games into their inventory.

## 2 Using Game Jams to Solve Problems

By utilizing card games and board games in the language, or focusing on the culture and history, it not only aided in the learning of the language, but also brought conversation to the table and more opportunities for the community members to learn from their elders, and the learners were learning while engaging in a fun activity. When a student or learner is learning Spanish, French, or English for example, if they wanted to immerse themselves

in the language, they could go to Spain, France, the United Kingdom, or anywhere else that language was primarily spoken. Because of the genocidal efforts put into place by the early years of the United States Government such as the notorious "Trail of Tears," the "Kill the Indian Save the Man" movement where countless Native American and First Nations children were taken from their homes and striped of their identity to conform to the "colonial" identity. These people's language, and way of life were seen as "wrong, dirty, or stupid."

This movement was effective because elders stopped teaching their ways of life to their children, stopped speaking their language, and many languages were lost because of this. When people ask me why I do what I am doing since I am not Native, I answer, "because I am human." We are now in what many people call the Seventh Generation. This is the generation of change, not to go back to the old way, because there is no going back there, but taking control of the injustice that still continues to this day and changing to create a better world. Part of creating this better world is instead of competing with one another, we at Native Teaching Aids feel that it is important to work together, because we should all be working on problems that are bigger than ourselves if we are to make the impact we want.

By taking on these large problems, we have been able to involve and incorporate the community. A few years after our inception of Native Teaching Aids, myself, Brandon Goff, and Jonathon Richter formed Flathead Tech 4 Good(FT4G). Our organization takes a community issue and "gamify's" the problem in order to teach the community what the problem is, how can we stop it, and is there a long term solution. FT4G holds 3 game jams, but they are not like the traditional competitive game jam. The jam is patterned as Fall: information dump Friday, concepting ideas and prototyping Saturday, present to the experts on Sunday. Winter: Playtest, and activities revolving around the issue. Spring: celebration and present to the community. We hold them seasonally, Fall, Winter, and Spring.

For example, last year we chose the watershed issue. On Friday evening we had scientists from the Flathead Lake Biological Station come in and explain to the high school and junior high kids who were present about the importance of Clean, Drain, Dry, the threat of the Zebra Mussels, and other pollutants that could damage the lake. We also had the Flathead Lakers, which is a community run group that raises awareness and holds different clean-up events. We had someone from the Salish tribe come and speak about the cultural importance of the biological diversity of the valley. This information dump results in a lot of note taking, we wall paper the room with notes and information. On Saturday morning we meet and Native Teaching Aids takes the youth through game design techniques, we bring a stack of conventional games and show them how to design and create their own games. We bring poster board, markers, scissors, glue, tape, stickers, many things to get them creating and designing. This past fall we had two games designed by the end of Saturday night.

Sunday morning, the speakers from Friday and parents were in attendance as we had the youth present their games. They were play tested and then I met with the students and came up with a "what's next" to-do list. Then in January, FT4G utilized Native Teaching Aids' offices and had a mentorship month. We spent the first week talking about how to mix creative and technical writing together and wrote all the content for both games. The following 3 weeks were spent on graphic design, where we taught the students how to design in Adobe Illustrator.

For the Winter Gam Jam, we invited the EAGLES students, who are leaders in their high schools in the valley. We playtested the games, received feedback, and then performed some activities to start the Water is Life Treasure hunt that we are aiming to incorporate at all the public schools in Mission and Lake counties eventually. Making a plan for the scavenger hunt and making final steps plans for the two games that were created in the Fall game jam, we closed on Sunday with some fun VR activities.

Native Teaching Aids' offices were utilized once again to finish the games and perform a final print. In the Spring Jam in May, we presented the near-final copies of Mussle Hustle and Water Warriors with great interest from the community. Sci-Nation and SpectrUM from the University of Montana was there with their projects they had done with the junior high school students creating Rube Goldberg devices. This Spring Jam, was more of a celebration than creating anything, and by involving the community at large to experience and learn.

"Look deep into nature, and then you will understand everything better." -Albert Einstein Science is meant to raise curiosities and solve problems. If we do not incorporate and involve our communities, our youth, and experts working together to solve these problems, we will not be able to move forward in a positive light. "Education is the most powerful weapon you can use to change the world." - Nelson Mandela