

Design Proposal Template:

School: Early College High School State: Oregon

Division:

Middle School

High School

Team Members' Names: Andrew Curtis, Mia Curtis, Melody Ferch, Jonathan (Becket) Lush

Project Title: Should be creative and give readers a general sense of what the project is about and want to read more. (20 word maximum)

C.O.S.M.O - Collaborative Observing Social Management Object, a collaborative device for fostering social connection between special needs children.

Community Challenge Being Addressed: Describe the community challenge that you will attempt to address with your proposed solution. (75 word maximum)

"Special needs" classrooms are designed to help and support special needs students thrive and learn to their fullest extent. Before a student can thrive, however, trust needs to be built between classmates, and especially their teacher. For the first two years of class, the teacher devotes most of their time to this purpose. For these first two years, students have a difficult time communicating with one another, let alone learning skills to help them get ahead.

Community Research and User Identification: Explain the process used to identify the community challenge and select your user. Include any research done to identify issues in your community and understand which groups face challenges because of these issues. (150 word maximum)

All members of GTW have experience with special needs children, Becket was a summer camp counselor for children, Mia works at the boys and girls club, and Andrew volunteered to help a special needs classroom in elementary school. Because of this background, we decided to help a Special Needs teacher. We asked our counselor for contacts for Forest Ridge, a nearby elementary school that Andrew and Mia went to, and scheduled an in-person interview with one of the special needs staff there.

Our interview with our client resulted in her stating that "I want a way to make it easier for me to be approachable to new students, and to get people forming social connections they otherwise wouldn't". They mentioned important concepts like accessibility, child friendliness, and the desire for alternative pathways for learning. Because of this, we decided to build a game console for special needs kids.

User Profile: Provide a detailed description of your selected user. Include information about challenges they face, how those challenges impact their lives, and specific project needs based on user feedback. (150 word maximum)

Our Client, Liz Cavalle, is a special education teacher for Forest Ridge Elementary School. She teaches the only K-2 special education classroom for Forest Ridge, so it is a considerably large class with people from many different age groups.

During our interview, she discussed many challenges she faces involving social interaction with special needs kids: Behavioral problems, emotional regulation issues, and how many times she struggles to teach kids in her classroom how to regulate emotions. She told us that “many of (my) kids strive off socialization, it is the best motivator for them” She likes activities that bring color and excitement to the kids, to keep them engaged. Because of this, she said she wants something that will help foster connection between the kids so it takes “only a few months for them to get into their comfort zone, rather than years”.

Project Goals: List your project goals and explain how these goals will address the community challenge. Project goals should define the desired outcomes, not specific features of the proposed solution. (150 word maximum)

Our client wants to “Foster an environment for students to feel safe, connected, and loved”. To meet this desire, while keeping in mind the necessities of having a device handled by young, special needs children, we have composed a list of necessities to achieve the goals of our prototype.

- 1. Activities must be collaborative, yet not competitive.*
- 2. The product must be fun and engaging, but not stressful.*
- 3. The device itself must be designed to fit a child while also leaving the opportunity for the teacher to join the student as well.*
- 4. It must include textures and sounds that cultivate a stress-free environment, not being too overstimulating for children with Autism Spectrum Disorder in mind.*
- 5. Teachers feel safe with kids interacting with the object (no sharp corners, risk for harm, etc)*
- 6. Incorporation with Forest Ridge’s token economy reward system, to incentive interaction with the device and others.*

Proposed Solution: Describe your proposed solution, including any innovative and unique features, and explain how this solution will address your users’ needs and the challenges they face. (150 word maximum)

Our solution is the COSMO. It is a collaborative console device designed to foster community and social interaction. Powered by a raspberry pi, it will feature multiple games that can be chosen through insertable cards, as well as arcade inspired controls. The reasoning for this is to provide a more tactile experience, as to be more engaging and “real” for the children. It features two sides of an arcade-like console, where the kids will be able to face one another and play together while talking and communicating. It also rewards tickets for completing objectives, especially with each other.

Although the games are designed to cultivate learning, the most important aspect of them is to be relationship-building. This means the games themselves are collaborative and are designed without time limits or other constraints to induce stress.

Initial Design: A single graphic of your first design idea with key features adequately labeled. It should be easy to understand, and the reader should have a general understanding of how the prototype functions by looking at the graphic. Max size 8.5" x 11". May contain up to 4 views of the design.

