

**How might Seattle-area students ages 8-11
achieve learning about local marine wildlife and
how trash impacts them so that they can develop
a sense of connection to the natural world
through active learning?**

2.2 Problem Background

Context

Why does this problem matter? What is the need not being met? What is the impact of inaction?

The ocean makes up 70% of the earth surface and its "home to 80% of the planet's biodiversity, [the ocean] account[s] for more than 97% of [the earths] water. They produce nearly half the planet's oxygen too" (Time). The ocean is a vital part of our ecosystem, but humanity is destroying it through overfishing, polluting it with garbage, and contributing to global warming, which leads to the ice melt (Time). For example, "the ocean has absorbed about 90 percent of the heat generated by rising emissions. As the excessive heat and energy warms the ocean, the change in temperature leads to unparalleled cascading effects, including ice-melting, sea-level rise, marine heatwaves, and ocean acidification" (UN).

For this reason, people need to be better educated on the environmental impacts that humanity is making in order to take better action in the future. Education is critical to behavior and perspective change, so that people start taking action to treat the environment with more care and respect (UN). Our target audience is kids ages 8-11 because learning the fundamentals of respecting the environment when your young will mean you continue to take action and adapt to climate change as you become an adult.

However, climate change and humans impact on the earth is not adequately taught in schools in the US. Currently, 66% of teachers and parents think schools should teach about climate change and its impacts on the environment, but "most teachers aren't actually talking about climate change in their classrooms" (NPR). There is a clear gap between the need for education, and what is being provided by schools and teachers. To fill this gap, we hope to create a gamified educational platform where kids can learn about the impacts humanity has had on the ocean, and how they can take action to help.

Information Problem

What aspects of the problem can you solve through an information solution?

Developing knowledge and awareness about the problem at a young age will help them be mindful of their impacts on the environment around them. Learning by actively interacting with the information can help them dive deeper into the content and develop their thinking so that they can participate in discussions and activities that deepen their understanding. The core of active learning is curiosity, which children naturally have due to their inquisitive nature (Hudson, 2022). Therefore, presenting information in a way that piques their interest and allows them to engage with the material will help improve their knowledge of the problem and possible solutions so that they can have meaningful takeaways and expand their thinking. Giving them a way to interact with the information presented is the core of the solution, promoting the idea of active learning as a solution to the problem.

References

What evidence (articles, statistics, research, data etc.) supports the problem you have identified?

- Hudson, K. (2022, March 30). *The power of active learning*. Oxford Learning. Retrieved January 16, 2023, from <https://www.oxfordlearning.com/the-power-of-active-learning/>

This website gives a general idea of what active learning is, what it entails, and how it can be implemented to help students better engage with the material and how parents can play a role in their students' active learning.

- Time. (2019, August 14). *How humans are destroying the world's oceans*. Time. Retrieved January 17, 2023, from <https://time.com/collection/davos-2019/5502588/oceans-in-peril/>

This article gives information about what impacts humans have had on the ocean environment.

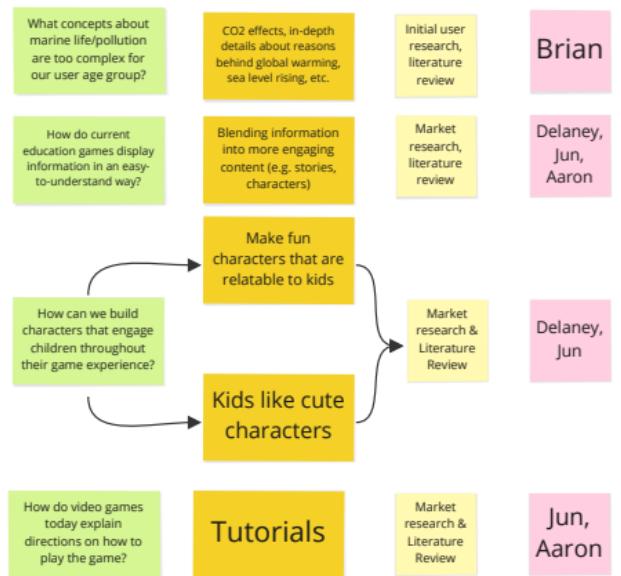
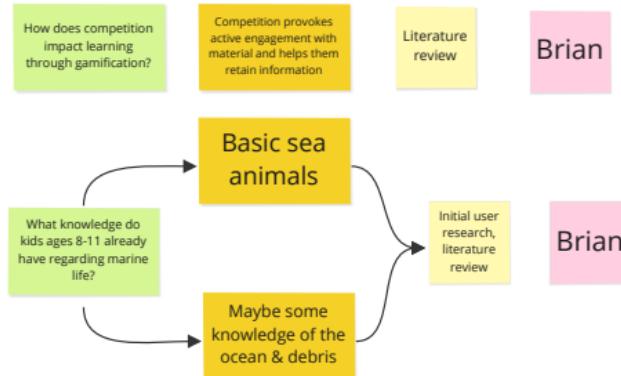
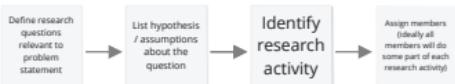
- United Nations. (n.d.). *Education is key to addressing climate change*. United Nations. Retrieved January 17, 2023, from <https://www.un.org/en/climatechange/climate-solutions/education-key-addressing-climate-change>

This article explains how important education is about climate change in shaping people to be more responsible with their actions towards the environment. It also discusses the curriculum that UNESCO has created about climate change.

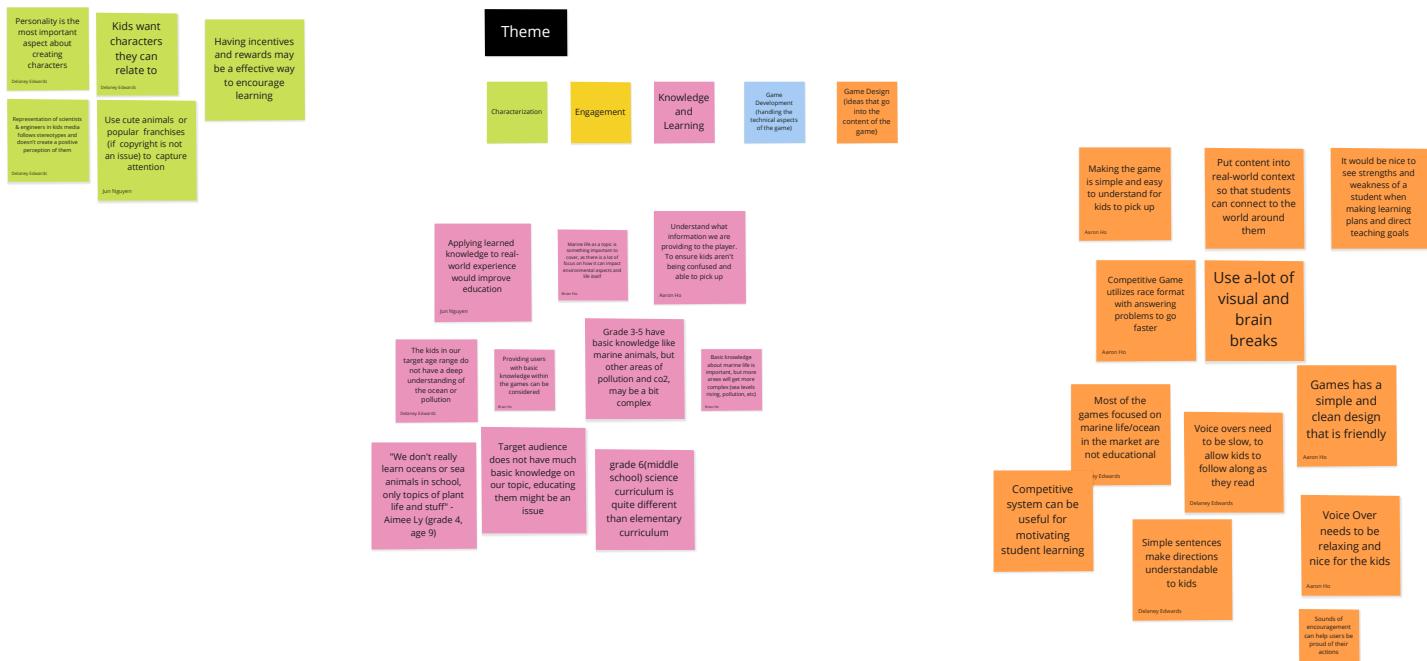
- Kamenetz, A. (2019, April 22). *Most teachers don't teach climate change; 4 in 5 parents wish they did*. NPR. Retrieved January 17, 2023, from <https://www.npr.org/2019/04/22/714262267/most-teachers-don-t-teach-climate-change-4-in-5-parents-wish-they-did>

This article discusses data about teacher and parent perspectives on climate change being taught in schools, and how much is actually taught.

2.3 Research Questions

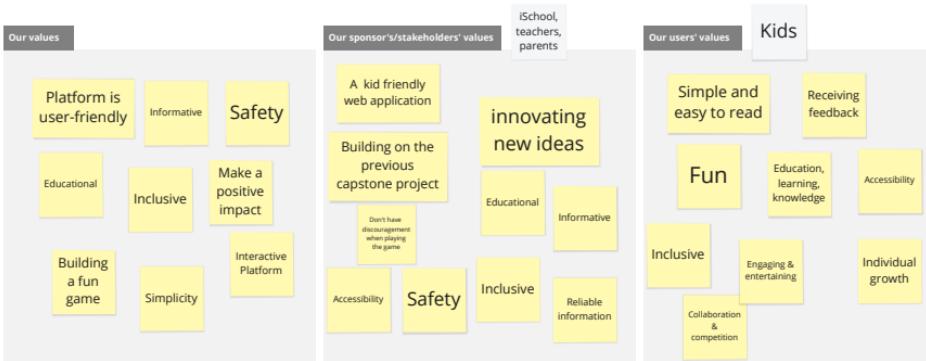


2.7 Affinity Map / Research Insights



2.8 Values & Ethics

Identify values held by your team, your sponsor or key stakeholders (this could be investors, an industry), and your users. Use the highlighter to note values that conflict. Conflicting values will alert you to potential ethical questions that you will need to resolve.



Ethical considerations

Identify one or more ethical considerations that threaten your project's potential for positive impact.

Online Safety

- Parents want kids information to be safe
- Parents are increasingly concerned about online safety as younger and younger kids are getting access to the internet
- Concerns about bullying or online predators (if there is the ability to interact with other users)

Worst case scenario

Informative

What is the worst that can happen?



Best case scenario

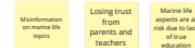
What is the best that can happen



Accurate and reliable information

- Parents and teachers want to ensure that their kids are not consuming fake information, they want their kids to be educated about what they are learning
- We need to be perceived as a reliable and trust worthy source of information
- Parents and teachers don't want to worry about having to fact check content

What is the worst that can happen?



What is the best that can happen



Balance of Fun and Learning

- Kids want to have fun, but parents want to make sure they are learning
- Many of the games that we found in the market research leaned either more fun, or educational, showing that striking a balance between the two is difficult
- Games that are too fun will not be used by teachers and will be viewed as a waste of time by parents

What is the worst that can happen?



What is the best that can happen

