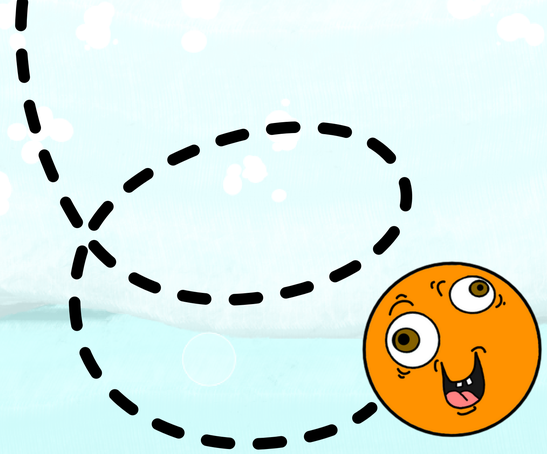
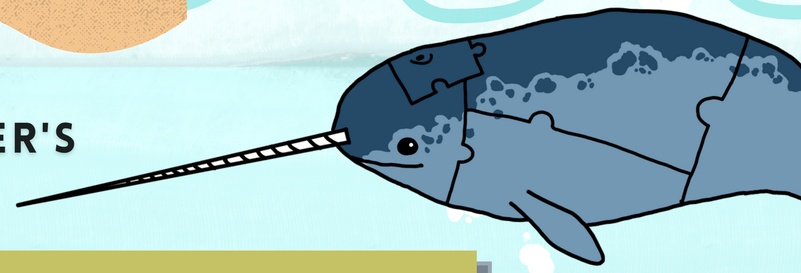
NottaFish the Game

LINDA LEE
UW MUSEOLOGY GRADUATE PROGRAM MASTER'S PROJECT THESIS





FRAMING

Evolution is the foundation to many scientific principles mentioned in natural history museum exhibits. Studies have shown that exposing young children to important STEM concepts, such as evolution, can leave a greater impression and make more complex concepts more accessible at a later stage of learning. As natural history museums have a history of inaccessibility, it is particularly important to advocate for DEAI practices when designing educational materials.

PURPOSE & IMPACT

The purpose of this research project is to provide the Burke Museum Paleontology Department with an educational video game that teaches small and large-scale evolutionary concepts with cetaceans as the main focus. The game content uses terminology and language taught to elementary school children in grades 3-5. Though the target audience is elementary school children, this project intends to make STEM concepts accessible to all visitors of the Burke Museum.

DELIVERABLE

The game will be available through a link or QR code that is free and publicly accessible. It includes two levels, with the first specific to small-scale evolution (microevolution) and the second focusing on large-scale evolution (macroevolution). Each level includes two games to teach foundational concepts and a third game specific to cetacean evolution. The lessons explain the microevolution of cetacean blowholes and the macroevolution of ancestral cetaceans from artiodactyls.

PROCESS

The process was broken down into three stages: research, feedback, and production. Research was conducted on game-based learning, the King County Public School System curriculum, STEM based learning at younger ages, and cetacean evolution. Several rounds of feedback was requested from experts in the education and cetacean fields on the game script before starting production. The game was created using Unity with the asset package Fungus, with graphics created using Krita.

NEXT STEPS

The game will be released at the Burke Museum in June of 2022. To improve the quality of the game, qualitative feedback will be requested from children in the targeted age group (grades 3-5) and their guardians. After final edits, the game will be published and available to IOS and Android devices using app development strategies. The game will then be advertised with a QR code so that guests can play the game on their mobile devices.

REFERENCES

Nadelson, L., Culp, R., Bunn, S., Burkhart, R., Shetlar, R., Nixon, K., & Waldron, J. (2009). Teaching evolution concepts to early elementary school students. *Evolution: Education and Outreach:*2(458-473)

Rosengren, K.S., Brem, S.K., Evans, E.M., & Sinatra, G.M. (2012). *Evolution Challenges: Integrating research and practice in teaching and learning about evolution.* Oxford University Press.

ACKNOWLEDGEMENTS

Meena Selvakumar, Katie Anderson, Travis Windleharth, Rachel Roston, Helen Reineke, and the Burke Education Department